NEMESIS

Netherlands Mental Health Survey and Incidence Study

Netherlands Mental Health Survey and Incidence Study-3 (NEMESIS-3): fieldwork of the second wave

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Introduction

The main aims of the third Netherlands Mental Health Survey and Incidence Study (NEMESIS-3) are to provide up-to-date information on prevalence, incidence, course and consequences of mental disorders, their risk indicators, and to study time trends. In a previous paper we described the objectives, methods and characteristics of the sample at baseline (Ten Have et al., 2023a). In this short report we describe the design and some results regarding response and interview characteristics of the second wave of this third study.

NEMESIS-3 is a population-based cohort with a multistage, stratified random sampling procedure. For the baseline wave, a random sample of municipalities was drawn, of which a random sample of individuals aged 18–75 years was drawn from the Dutch population register for these municipalities. Individuals with insufficient command of the Dutch language as well as institutionalized individuals (i.e., those living in hostels, hospices or prisons) were excluded. Individuals temporarily living in institutions were contacted for an interview upon returning home, if applicable.

The interviews were almost all held at the respondent's home. In the first wave (November 2019 to March 2022) 6,194 persons were interviewed (response rate: 54.6%; average interview duration: 91 min). Respondents reflected the Dutch population reasonably well, but younger people, higher secondary educated people, those not living with a partner, people living in bigger towns, and people of non-Dutch origin were somewhat underrepresented. A comprehensive description of the design and results of the first wave of NEMESIS-3 can be found elsewhere (Ten Have et al., 2023a; 2023b).

Between the first and second interview, contact with respondents was maintained by sending birthday and Christmas cards and a flyer with information about first study results. The website for respondents was also regularly updated with news about the progress of the fieldwork of the second wave and messages about new study results. After each website update, respondents received an email.

Methods

Fieldwork

Recruitment

The fieldwork of the second wave was carried out by the agency Ipsos I&O Research, as was in the baseline wave. All 6,194 respondents who participated in the baseline wave were approached again to participate in the second wave, except for those that passed away (n=59). The fieldwork for this wave was carried out approximately three years after that of the baseline wave, from the end of January 2023 to the end of November 2024. A relatively long fieldwork period was chosen to have sufficient time to re-contact potential respondents.

To optimize response, the fieldwork comprised three phases. In the first phase, initial contact attempts were made. Potential respondents were sent an invitation letter and brochure explaining the goals and procedures of the second wave. The letter and brochure included a free phone number for additional information, a QR code if people preferred to watch the content via video instead of reading it, and referred to the study website which contained further information such as answers to frequently asked questions and details about the processing of personal data.

Shortly after the invitation letter was sent, interviewers contacted the selected individuals in person or by phone to seek permission for an interview and to make an appointment. In principle, the respondents were contacted by the same interviewer with whom they already had the first interview. In this first phase, interviewers tried to complete up to 10 visits or phone calls on different days of the week and different times of the day.

In the second phase, “soft refusers”, those unable time-wise or those who could not be reached in the first phase, were re-contacted. Before re-contact was made by the interviewer, a postcard was sent. Four different postcards — two for refusers (no interest in study or long interview duration as reason), one for those unable time-wise, and one for those who were not reached — were developed. After the postcard was sent, interviewers preferably contacted the selected individuals personally. Refusers were approached by another interviewer whenever possible. In this phase, again up to 10 visits or phone calls were made.

In the third phase, the remaining potential respondents were re-contacted. Again, a letter was sent to the individuals before the interviewer attempted to contact them in person or by phone. We selected 25 interviewers with high response rates in the previous phases for these last interview attempts and renumerated these interviews an additional amount. In this last phase, up to four visits or phone calls were made. Potential participants who had previously explicitly refused were not approached again.

To minimize a tendency to focus on easy-to-recruit people, interviewers were not given too many addresses at a time.

All interviews were conducted face-to-face and were held at the respondent's home, but in some cases (n=170) interviewers were allowed to conduct a video-interview. Only specially trained interviewers were allowed to do so and only with respondents who were considered suitable for this medium. A previous small pilot study showed that it was possible to perform such interviews and that good contact was possible (Ten Have et al., 2023a).

Interviewers

The fieldwork of the second wave started with 82 professional interviewers headed by three supervisors from the fieldwork agency Ipsos I&O Research. Of the 82 interviewers, 62 had also conducted interviews at the baseline wave. Interviewers were selected based on their experience with systematic face-to-face data collection, experience with sensitive topics, and ability to achieve a good response in other studies. Depending on their previous experience with the study, interviewers received a 1- or 2-day training. During these instruction days interviewers were trained in administering the diagnostic instrument and additional questionnaire, and in motivating potential respondents to participate in the study. Interviewers had to perform a series of test interviews with semi-scripted responses before starting their fieldwork. During the fieldwork, the fieldwork agency kept contact with the interviewers on a regular basis. In addition, five newsletters were sent to interviewers to keep them motivated and to inform them about the study's progress.

In August 2023, a half day meeting was organized for the interviewers to refresh their knowledge on the fieldwork procedures, diagnostic instrument and additional questionnaire. In addition, any fieldwork problems were discussed and tips on making contact with and motivating potential respondents were exchanged. In June 2024, a half day meeting was organized for interviewers to keep them informed of some preliminary results of the second wave and to give them the opportunity to exchange experiences.

Participant incentives

In return for the respondent's time and cooperation, an incentive was given after the interview. The average incentive of all participants interviewed at the second wave was €29.4 per respondent.

Quality control

The NEMESIS-team and the fieldwork agency monitored the fieldwork over the entire data collection period. Every month, the sex and birth date of all newly interviewed respondents were checked to establish if the right persons had been interviewed. Moreover, comments that interviewers added to the questionnaire responses as well as the response pattern on certain key questions were reviewed. Per interviewer, several items were monitored, such as response rate, interview duration, number of affirmative answers to the diagnostic screener, recency of symptoms and respondent's interview evaluation. Interviewers were given additional instructions if necessary.

Furthermore, within two weeks after the interview all respondents received a short questionnaire to check whether an interview had taken place, whether a laptop and answer card booklet were used, what the length of the interview was and how they evaluated their interview.

No indications for doubting the interview quality were found.

Measurements

Diagnostic interview

The assessment of mental disorders at the second wave was based on the diagnostic instrument that was used at the baseline wave (a slightly adapted version of the Composite International Diagnostic Instrument (CIDI) 3.0; see for more information: Ten Have et al., 2023a) with the exception that the baseline interview asked about lifetime symptoms (shortly referred to as lifetime CIDI) and the second wave interview asked about symptoms since the previous interview (three-year CIDI). The

following disorders were assessed: mood disorders (major depressive disorder, persistent depressive disorder, bipolar disorder); anxiety disorders (panic disorder, agoraphobia, social anxiety disorder [social phobia], specific phobia, generalized anxiety disorder); substance use disorders (alcohol and drug use disorders). Attention-deficit hyperactivity disorder was no longer assessed in the second wave. Compared to the first wave, a few questions have been removed – ADHD symptoms in childhood (i.e., SC31, SC32) and (age of) recency of DSM-IV alcohol and drug symptoms (i.e., AU16, AU17, AU25, AU26, IU28, IU29, IU45, IU46), as (age of) recency of DSM-5 alcohol and drug symptoms was already included in the diagnostic instrument – the wording of two questions was adjusted (AU1 and AU2) and nitrous oxide has now been explicitly added as an example to the question about use of other drugs. A small error in the routing was also corrected so that people who could not read remained in the alcohol section.

Additional questionnaire

In addition to the CIDI, other topics were also asked during the interviews. The topics included in this additional questionnaire are described in Table 1. New topics compared to the baseline wave included compulsive behaviour, gambling, psychological, physical and sexual abuse, mental health problems of parents, discrimination, informal caregiving, spiritual well-being, positive resources, conspiracy and social concerns (e.g., about the climate, costs of daily living and the housing market). Positive resources refer to how people deal with every day and stressful life events. In addition, some existing topics were examined in more detail, such as by asking about change in household income, material deprivation and debt.

Based on five pilot interviews, conducted in November 2022, only minor changes in the newly programmed additional questionnaire were made.

Results

Response

Of the 6,194 participants at baseline (T0), 4,688 (76.4%; the 59 subjects who were deceased were excluded in the calculation of this percentage) were reinterviewed at the second wave (T1). In the fieldwork phases 1, 2 and 3, the response was 67.2%, 34.3% and 33.3%, respectively (Table 2). Of the 4,688 respondents, 4,100 were interviewed in phase 1, 411 in phase 2 and 177 in phase 3. If we limit the calculation of the response to those with whom contact could be made and who could therefore actually be approached for a second interview, the response is higher: 79.9% (4,688/(6,194-59-264).

We examined to what extent respondents differed per fieldwork phase. Those who were interviewed in phase 2 were more often employed than those who were interviewed in phase 1. They also were less often 58 years or older. Compared to phase 1, interviewees in phase 3 were more often employed, lived without a partner, and lived in urban areas. They also were less often 58 years or older. No differences were found between phase 2 and 3 respondents.

More importantly, respondents interviewed in the different fieldwork phases did not differ in prevalence of 3-year and 12-month mental disorder, after controlling for differences in sociodemographic characteristics (i.e., sex, age, education, living situation, employment situation, urbanicity of place of residence) between the groups.

Partial non-response was negligible due to the computer assisted face-to-face interview method.

All participants at baseline, with the exception of the deceased, were approached for follow-up, on average two years and 310 days after baseline (1.041 days; standard deviation=147).

Interview characteristics

Almost all interviews were held at the respondent's home. Although it was stated at recruitment that the interview should be held privately, in 10.3% of the interviews another person was present. In 73.2% of these cases (n=353; 7.5% of all respondents) this was for at least half of the time. A lower prevalence of any mental disorder was found among those interviewed with another person present for at least half of the time compared to the other respondents (any 3-year disorder: 17.0% versus 21.7%, p=0.04; any 12-month disorder: 13.0% versus 17.1%, p=0.05). However, this was not significant after adjustment for demographic characteristics (i.e., sex, age, education, living situation, employment situation, urbanicity of place of residence; any 3-year disorder: adjusted odds ratio (aOR) = 0.78; 95% confidence interval (CI) = 0.57–1.05; any 12-month disorder: aOR = 0.78; 95% CI = 0.56–1.09).

Most interviews were face-to-face (laptop computer-assisted). 170 interviews (3.6%) were done via a video call. A higher prevalence of any mental disorder was found among those interviewed via video calls compared to those interviewed face-to-face (any 3-year disorder: 28.8% versus 21.1%, p=0.02; any 12-month disorder: 23.5% versus 16.5%, p=0.02). However, this was not significant anymore after adjustment for demographic characteristics (i.e., sex, age, education, living situation, employment situation, urbanicity of place of residence; any 3-year disorder: aOR = 1.04; 95% CI = 0.72–1.49; any 12-month: aOR = 1.09; 95% CI = 0.74–1.60).

The average interview duration was 76 min: 23 min for the diagnostic instrument and 53 min for the additional questionnaire. Interview duration varied widely, mainly depending on the number of mental disorders a respondent had experienced since the baseline interview. It was not significantly associated with the interview mode: video-interviews lasted on average 73 min.

After the interview, respondents were asked to evaluate their interview: 89.0% rated it positively, 10.8% neutrally and 0.2% negatively. Compared to those with a positive evaluation, those who were negative or neutral were more often female, living without a partner, unemployed, living in urban areas, more often had a video call, more often had any 3-year or 12-month mental disorder, and had a longer interview duration. No differences were found for age and education.

If possible, the respondents were interviewed by the same interviewer with whom they had the first interview. This was realised in more than half of the interviews (56%).

Discussion and conclusion

The fieldwork of the second wave of NEMESIS-3 comprised a relatively long period and the interviewers were intensively supervised. This resulted in a high response rate and high-quality dataset. By using multiple fieldwork phases, people who previously did not have time, could not be reached or had doubts about participation could be re-contacted, ultimately resulting in a response rate of 76.4%. An encouraging finding was that the vast majority of the respondents evaluated the interview positively, even though it lasted an average of about one hour and a quarter. Now that we have conducted two interview waves within our study, many more research questions can be answered than with one wave. Important research topics that will be described first are (trends in) the onset and course of common mental disorders in the adult population.

Tables

Table 1. Topics included in the additional questionnaire of the baseline wave and first follow-up wave of NEMESIS-3

	Instrument	T0	T1
1. Demography			
Sex	As in NEMESIS-2	X	X
Age	As in NEMESIS-2	X	X
Education	As in NEMESIS-2	X	X
Living situation (also number and age of children)	As in NEMESIS-2	X	X
Employment situation (also of partner)	As in NEMESIS-2	X	X
Income (also of partner)	As in NEMESIS-2	X	
Change in income (also of partner)	As in NEMESIS-2		X
Material deprivation	As in NEMESIS-2		X
Debt	As in NEMESIS-2		X
Subjective social-economic status	As in NEMESIS-2	X	
Country of origin	As in NEMESIS-2	X	
Religion	As in NEMESIS-2	X	
Urbanicity of place of residence	As in NEMESIS-2	X	X
2. COVID-19			
Having been ill because of COVID-19	As in other studies (RIVM, NESDA)	X	X
Impact COVID-19 pandemic on work situation	As in other studies (RIVM, NESDA)	X	
Impact COVID-19 pandemic op worries about keeping one's health, work and income	As in other studies (RIVM, NESDA)	X	X
Impact COVID-19 pandemic on lifestyle behaviours	As in other studies (RIVM, NESDA)	X	
Impact COVID-19 pandemic on mental wellbeing	As in other studies (RIVM, NESDA)	X	
Impact COVID-19 pandemic on relationships with partner and children	As in other studies (RIVM, NESDA)	X	
3. Mental health			
Subclinical depression and anxiety	CIDI 3.0	X	X
Alcohol consumption (in mean number of glasses per week)	As in GE of CBS	X	X
Drug consumption (in mean frequency)	CIDI 3.0	X	X
Major depressive disorder	CIDI 3.0 (DSM-IV en -5)	X	X
Persistent depressive disorder/dysthymia	CIDI 3.0 (DSM-IV en -5)	X	X
Bipolar disorder	CIDI 3.0 (DSM-IV en -5)	X	X
Panic disorder	CIDI 3.0 (DSM-IV en -5)	X	X
Agoraphobia	CIDI 3.0 (DSM-IV en -5)	X	X
Social phobia	CIDI 3.0 (DSM-IV en -5)	X	X
Specific phobia	CIDI 3.0 (DSM-IV en -5)	X	X
Generalised anxiety disorder	CIDI 3.0 (DSM-IV en -5)	X	X
Alcohol disorder	CIDI 3.0 (DSM-IV en -5)	X	X
Drug disorder (including medications)	CIDI 3.0 (DSM-IV en -5)	X	X
ADHD	CIDI 3.0 (DSM-IV en -5)	X	

Psychotic symptoms	Based on CIDI 1.1	X	X
Autism spectrum symptoms	Autism Spectrum Quotient, short version	X	
Suicidal thoughts, plans and attempts	CIDI 3.0	X	X
Compulsive behaviour	SOCS		X
Gambling	Inspired on similar questions in NEMESIS-2		X
4. Physical health			
Chronic physical disorders (also perceived burden, use of home care or district nurses)	As in NEMESIS-2	X	X
Physical activity and exercise/sport	Based on the International Physical Activity Questionnaire	X	X
Body Mass Index (BMI)	Based on height and weight	X	X
Smoking (including use of e-cigarettes)	As in NEMESIS-2	X	X
Insomnia	Women's Health Initiative Insomnia Rating Scale	X	X
5. Facilitating and impeding factors			
Childhood adversities	As in NEMESIS-2	X	
Recent life events	Brugha Life events section	X	X
Loneliness	De Jong Gierveld questionnaire	X	X
Abuse	As in NEMESIS-2		X
Mental health problems of parents	As in NEMESIS-2		X
Discrimination	As in NEMESIS-2		X
Informal care	As in NEMESIS-2		X
6. Functioning			
Days out of role	WHO Disability Assessment Schedule	X	X
Emotional exhaustion (on T1 also job insecurity, bullying and aggression at work)	Utrecht Burnout Scale	X	X
Physical, social and mental health functioning (also cognitive functioning)	Medical Outcomes Study Short Form-36	X	X
Functional limitations related to mental disorder	CIDI 3.0	X	X
Psychological wellbeing	Brief INSPIRE	X	X
Spiritual wellbeing	SAIL-SF		X
Positive resources	Self-developed questions		X
Quality of life in different areas of life	Inspired on MANSA and similar questions in NEMESIS-2	X	X
7. Service use			
Professional treatment for one's own emotional or alcohol or drugs problems in primary care and specialised mental health care (also number, duration of visits per provider/service; on T1 also evaluation of the care received)	As in NEMESIS-2	X	X

Professional treatment related to mental disorder	CIDI 3.0	X	X
Psychotropic medication use	As in NEMESIS-2	X	X
Unmet need of care	As in NEMESIS-2	X	X
8. Other			
Volunteer work	As in NEMESIS-2	X	X
Self-ascribed femininity or masculinity	Based on Bockting e.a., 2009	X	
Sexual orientation	As in NEMESIS-2	X	
Conspiracy	Conspiracy Mentally Questionnaire		X
Social concerns (on climate, energy supplies, costs of daily living, housing market, international tensions/wars)	Self-developed questions		X

Table 2. Response at the second wave of NEMESIS-3 across fieldwork phase, 2023-2024

	n	%
Respondents at baseline	6,194	100.0
Deceased	59	1.0
Respondents at first follow-up	4,688	76.4[1]
Response across fieldwork phase		
Phase 1 (N=6,144/6,194-50 deceased)[2]	4,100	66.7
Phase 2 (N=1,199/1,203-4 deceased)[3]	411	34.3
Phase 3 (N=532/537-5 deceased)[4]	177	33.3

1= Those deceased excluded in the calculation; 2= All participants at baseline those deceased excluded enrolled in this phase; 3= The "soft refusers", those unable time-wise or those who could not be reached in the first phase, were re-contacted in the second fieldwork phase; 4= The remaining respondents, excluding those who had previously explicitly refused, were re-contacted.

References

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