

# Patients *requesting* and *receiving* euthanasia for psychiatric disorders in the Netherlands

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## ABSTRACT

**Background** Euthanasia and assisted suicide (EAS) for patients with psychiatric disorders occupies a prominent place in the public debate, but little is known about the psychiatric patients requesting and receiving EAS.

**Objective** To compare the social demographic and psychiatric profile of the patients who make a request for EAS and those who receive it.

**Method** We carried out a review of records from 1122 patients with psychiatric disorders who have filed a potentially eligible request for EAS at Expertise Centrum for Euthanasia (EE) in the period 2012–2018.

**Findings** The majority of the patients requesting EAS were single females, living independently with a comorbid diagnosis of depression with a history of undergoing psychiatric treatment for more than 10 years. From the small number of patients who went on to receive EAS in our sample, the majority were also single women, with a diagnosis of depressive disorder. A small subgroup of patients whose diagnoses included somatic disorders, anxiety disorders, obsessive-compulsive disorders and neurocognitive disorders were over-represented in the group of patients receiving EAS compared with the applicant group.

**Conclusion** The average demographic and psychiatric profile of patients requesting and receiving EAS were found to be broadly similar. The majority of patients requesting EAS had received a comorbid diagnosis, making this a difficult-to-treat patient group. Only a small number of patients requesting had their requests granted. Patients from different diagnostic groups showed patterns in why their requests were not granted.

**Clinical implications** Many of the patients who withdrew their requests for EAS benefited from being able to discuss dying with end of life experts at EE. Health professionals can make a difference to a vulnerable group of patients, if they are trained to discuss end of life.

## BACKGROUND

An increasing number of countries legally permit the performance of euthanasia and assisted suicide (EAS) for psychiatric illnesses judged to be untreatable.<sup>1–4</sup> There is however a lack of knowledge regarding the clinical and social demographics of patients requesting EAS.<sup>5,6</sup> This study provides the first large-scale analysis of the social, demographic and psychiatric profile of 1122 patients who made a potentially eligible request for EAS to the Expertise Centrum for Euthanasia (EE). The EE is an

## WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Previous literature has provided a picture of patients whose requests for euthanasia or assisted suicide for psychiatric disorders were eventually granted. These studies were based on publicly available records that can be searched online.

## WHAT THIS STUDY ADDS

⇒ This article provides insights into the practices at an independent health organisation that handles over 80% of all requests for euthanasia made each year by psychiatric patients in the Netherlands. This is the first published article to benefit from access to this sample, providing an opportunity to learn about the social demographic and psychiatric profile of patients who seek to end their lives due to unbearable mental suffering in the Netherlands.

## HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Psychiatric patients making requests for euthanasia or assisted dying benefit from being able to discuss death openly with end of life experts. The wish to die is sometimes inconsistent pointing to the importance of carefully and sensitively probing patients for doubts and reservations.

independent professional healthcare organisation based in the Hague in the Netherlands. By 2018, EE was handling 84% of all requests for EAS from psychiatric patients in the Netherlands, with the remaining 16% of requests being administered by the patient's own physician.<sup>7</sup>

EE begins the process of evaluating requests for EAS for eligibility by examining the patient's file to determine if there are treatment possibilities available. The patient's request is rejected when options for treatment are available. Second, agreement is sought among the patient's practitioners as to whether the patient's request complies with due care criteria specified in the Dutch law. Advice is sought from independent psychiatrists and a Support and Consultation on Euthanasia doctor. If all parties are agreed, a last due diligence check is carried out before EAS is performed (see [figure 1](#) for a summary of the procedure for evaluating requests at EE).



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**Figure 1** Flow chart for EAS requests withdrawn, rejected and potentially eligible. EAS, euthanasia and assisted suicide; EE, Expertise Centrum for Euthanasia; SCEN, Support and Consultation on Euthanasia.

The data that form the basis for this article were collected in producing a report for the Dutch Ministry of Health that was compiled by conducting a retrospective study of patients' file relating to the period 2012–2018. Each file used in this study contained the patient's written request for EAS and their medical records. When a patient submits a request to EE, they are asked to also provide informed consent for their general practitioner to provide information about their medical history, including their psychiatric diagnosis and treatment history. Our aim in this study is to describe the demographic and clinical profile of psychiatric patients who request EAS, and to learn which patients from this group had their requests for EAS granted.

## METHODS

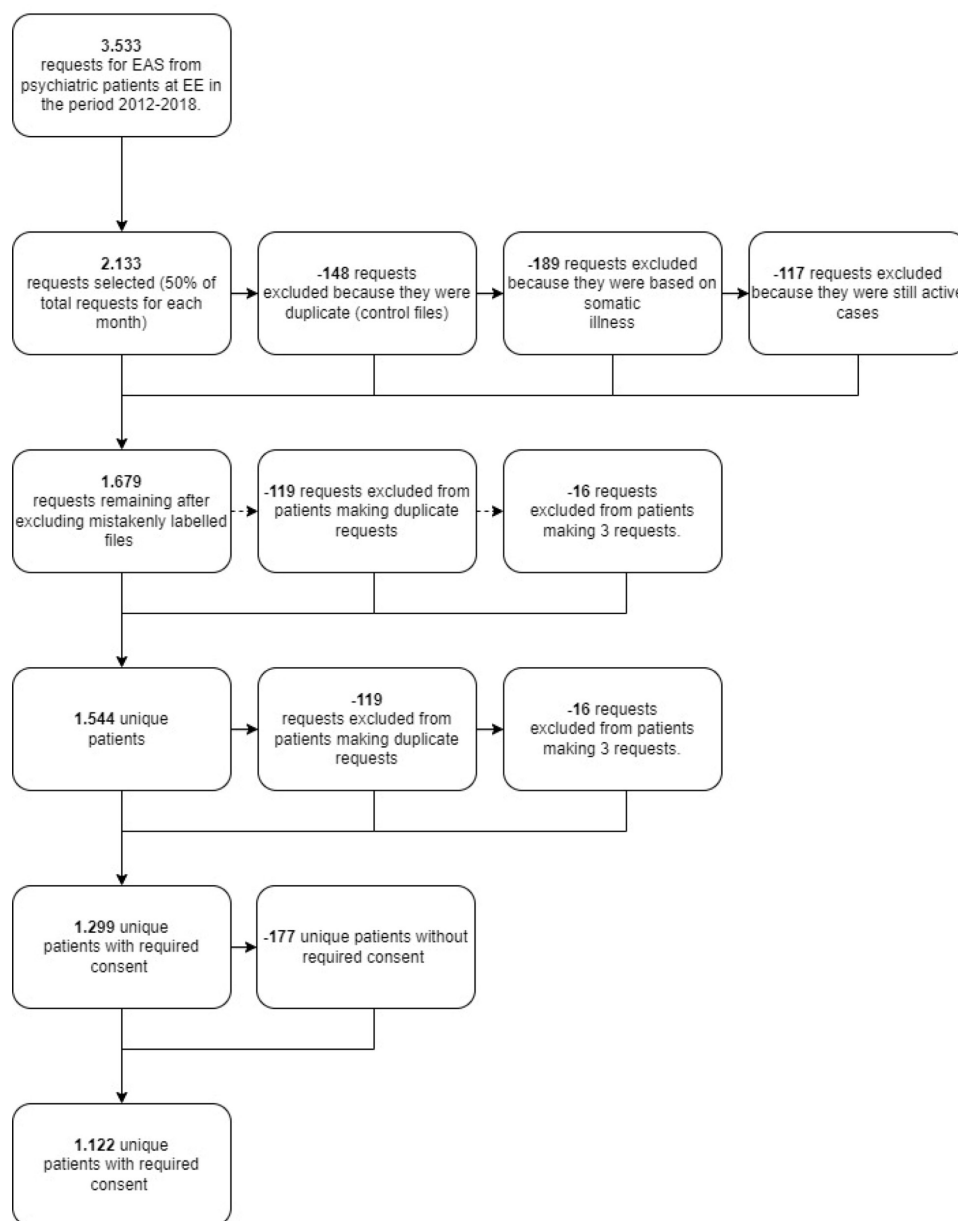
### Setting and study sample

From its founding in April 2012 until the end of December 2018, the EE has received a total of 11 952 potentially eligible requests for EAS. Each request has been documented in a database under a unique identifier. A total of 3530 of these requests were recorded as belonging to psychiatric patients because of the applicant's self-reported suffering from one or more psychiatric disorders. A randomised survey was taken from these 3530 requests because analysing all files proved too labour-intensive. In order to reduce external factors, such as seasonal influence and media attention, only 50% of the requests in each month of the year have been

added to the survey leading to 2133 requests. Multiple requests from patients were excluded, including requests from patients who did not provide written consent for their data to be used in scientific research, and patients currently under evaluation at EE. This resulted in a sample total of 1122 individual patients who made a request for EAS to EE (see figure 2 for an overview of how we arrived at this study sample).

Psychiatric diagnoses have been classified according to DSM (Diagnostic and Statistical Manual of Mental Disorders) IV criteria based either on referral letters or on the diagnostic evaluation of independent psychiatrists in the second opinion phase of evaluation (see figure 1). When this information was available in the patient's file, we also gathered data about the patient's treatment history, social demographic, gender and age.

Current Dutch guidelines do not require approval by the ethical board of the EE for a retrospective study of files.<sup>8</sup> All patients at the EE are informed that anonymised data might be used for scientific research or educational purposes. An announcement was also made on the EE website that their requests would be used for scientific research. Patients were given an opportunity to withdraw consent, and one patient did so. Details about the specific project were outlined, after a Data Protection Impact Analysis was carried out on the EE website. This ensured that the privacy of the patient's personal information was protected in accordance with European Union guidelines. Upon collection,



**Figure 2** Study sample of patients requesting euthanasia and assisted suicide (EAS) at Expertise Centrum for Euthanasia (EE).

data were anonymised for analysis and reporting by the team at EE, and accessed using a unique identifying number that allowed for data to be retrieved without the use of the patient's name or date of birth. Some of the findings reported in this article have been published earlier in a report for the Dutch Ministry of Health.<sup>9</sup>

### Procedure

Data from the patient's medical files were coded into a database using predefined variables of psychiatric diagnosis, gender, age, marital status, employment, housing situation and educational history. These variables were identified in the patient's files by eight nurses with professional psychiatric experience, under the supervision of a psychiatrist. During collection of the data, potential discrepancies about, for example, comorbid psychiatric diagnoses or changes in personal history were discussed by the team and resolved by the psychiatrist. The quality of the collected data was checked after data collection. All files of patients receiving EAS were reviewed by two nurses, and

148 files from the requestors. From the files that were double-checked, 10 discrepancies were found and resolved under supervision of the first author and a psychiatrist.

### Statistical analysis

Descriptive analyses were carried out to identify the social demographic and psychiatric characteristics of 1122 patients who made a potentially eligible request for EAS. Data were entered into IBM SPSS Statistics, V.26. Given the descriptive goals of the study, the analyses were carried out without testing any specific hypothesis.

### Role of funding source

The funding agencies involved in the support of this study played no part in the study design.

## RESULTS

### Outcome of requests

We have divided our sample of 1122 patients into the following five groups: (1) patients whose requests for EAS were rejected;

(2) patients who withdrew their requests; (3) patients who died from suicide during the application procedures; (4) patients who died from other causes and (5) patients whose requests were granted.

The first group (58%,  $n=653$ ) comprises patients whose requests were rejected on the grounds that the patients were not judged to be treatment refractory. This decision was reached based on the patient's treatment history at the first stage of the process, or later through interviews with the psychiatrists at EE, and external experts (see [figure 1](#)).

A second group of patients (22%,  $n=249$ ) withdrew their requests during the application procedure. Thirty-four per cent ( $n=84$ ) from this group gave as their reason that they no longer wanted to die. Three patients withdrew just before EAS was planned to be performed either because they had second thoughts about dying ( $n=1$ ); they decided to continue treatment ( $n=1$ ); or they were concerned about the impact of their death on family and friends ( $n=1$ ). A further 33% ( $n=82$ ) gave as their reason for withdrawing their request the decision to continue with therapy. Eight per cent ( $n=21$ ) withdrew because the procedure at EE took too much time. Due to a shortage of psychiatrists, it takes on average 2 years for EE to fully evaluate a patient's request for EAS. Seven patients (3%) withdrew because they now felt their wish to die was recognised. A further six patients (2%) did so for family reasons. Twenty per cent ( $n=49$ ) of patients declined to give a reason for withdrawing their application.

This left a third group of 20% ( $n=220$ ) potentially eligible patients. We did not analyse how judgements of eligibility were made, an important question for a follow-up study. Nineteen per cent ( $n=41$ ) from this group died from suicide. Eleven per cent ( $n=25$ ) were recorded as dying from a natural death. Seventy per cent ( $n=154$ ) of patients had their request for EAS granted. Seventeen per cent ( $n=26$ ) of these patients chose the method of physician-assisted suicide, and 83% ( $n=128$ ) opted for euthanasia.

### Social background

The majority of patients in all five groups were single, with a small number of patients being either married, divorced or widowed. Most patients whose requests were withdrawn or rejected had no children. A high number of those whose requests were granted (47%,  $n=72$ ) had children ([table 1](#)).

Our sample provided only incomplete information about employment (74%,  $n=828$ ) and income (37%,  $n=413$ ). From this sample, the majority of patients were unemployed. This percentage was markedly higher for patients whose requests were granted (91%,  $n=140$ ). From all groups, patients who provided information about income were receiving either social or disability benefits from the government.

Eighty-six per cent ( $n=961$ ) of our sample provided information about their educational background. The majority in all groups received a lower level of general secondary education with the exception of patients who withdrew their application. In this group, the largest number of patients by a small margin (20%,  $n=49$ ) had received a middle level of secondary education. The secondary education system in the Netherlands comprises three possible bands (higher, middle, lower). Individuals in the lower band typically receive between 4 and 5 years of secondary education.

Most patients in all groups lived in independent housing. A slightly larger proportion of patients whose requests were granted lived in protected housing (14%,  $n=21$ ) or in a

healthcare facility (15%,  $n=23$ ) compared with patients whose requests were rejected or withdrawn.

### Gender and age

The majority of patients from all groups were female. Patients came from all age groups. The largest represented group was between 51 and 60 years (24%,  $n=269$ ). The average age of the total sample was 48 (SD 17.1, range from 16 to 97) years. The largest male group was aged between 41 and 50 years (24%,  $n=102$ ), and the largest female group was between 51 and 60 years (25%,  $n=171$ ) ([tables 1 and 2](#)).

From the patients who were granted EAS, 65% ( $n=100$ ) were female. The largest group was between 51 and 60 years (27%,  $n=41$ ). The average age of the patients receiving EAS was 58 years compared with an average age of 49 years for the patients whose requests were rejected or withdrawn. The average age of patients who died from suicide was 42 years.

### Psychiatric diagnosis

Psychiatric diagnoses in our sample were based on the DSM (Diagnostic and Statistical Manual of Mental Disorders) IV. Twenty-four per cent of patients ( $n=271$ ) were diagnosed with a single disorder, while 76% of patients ( $n=851$ ) had a comorbid diagnosis. Main diagnoses were based on the most recent overview letter from the patient's last psychiatric treatment. Depressive disorder was the most common main diagnosis in all five groups. Schizophrenia, post-traumatic stress disorder (PTSD) and bipolar disorder, as well as anxiety disorders (ADs), somatoform disorders (SDs), obsessive-compulsive disorder (OCD) and neurocognitive disorders (NCDs), were represented in relatively greater numbers among the group of patients receiving EAS. Neurodevelopmental and addictive disorders were more common among male patients, while personality disorders, depression, and especially PTSD, were more common among females ([table 3](#)).

### Comorbidities

Personality disorders and depressive disorder were the most common comorbidities in all groups. Other common first main diagnoses were neurodevelopmental disorders and PTSD. From the group who received EAS, 74% ( $n=114$ ) had more than one diagnosis, of which 12% ( $n=19$ ) were diagnosed with four different diagnoses. Personality disorder was the most common comorbid diagnosis ([table 4](#)).

### Treatment history

The majority of patients in all groups have been treated by a psychiatrist for more than 10 years. This number was significantly higher in patients whose requests were granted (73%,  $n=113$ ) and among patients who died from suicide (56%,  $n=23$ ) ([table 5](#)).

Fifty-six per cent ( $n=628$ ) of patients from the total sample had attempted suicide once or several times, of which 67% ( $n=423$ ) were female. Fifty-four per cent ( $n=344$ ) of these patients had made between two and five suicide attempts, and 22% ( $n=139$ ) had made more than five attempts. Thirteen patients attempted suicide during the trajectory at the EE. Forty-one patients died from suicide before, during or after the review of their case by the EE (see [tables 1–3](#)). Sixty-nine per cent ( $n=106$ ) of patients who received EAS had previously attempted suicide on one or more occasions, of which, 68% ( $n=72$ ) were female.



**Table 1** Social demographics of psychiatric patients requesting and receiving EAS

Demographic variable	Rejected (n=653)	Withdrawn (n=249)	Died from other causes (n=25)	Request granted (n=154)	Died from suicide (n=41)
<b>Gender</b>					
Male	41.6% (n=272)	29.7% (n=74)	44.0% (n=11)	35.1% (n=54)	41.5% (n=17)
Female	58.3% (n=381)	70.3% (n=175)	56.0% (n=14)	64.9% (n=100)	58.5% (n=24)
<b>Marital status</b>					
Single	76.2% (n=498)	67.0% (n=167)	60.0% (n=15)	59.0% (n=91)	68.3% (n=28)
Married/living with partner	12.4% (n=81)	18.0% (n=45)	20.0% (n=5)	17.4% (n=27)	12.2% (n=5)
Divorced	3.8% (n=25)	5.2% (n=13)	4.0% (n=1)	7.1% (n=11)	14.6% (n=6)
Widowed	6.9% (n=45)	2.4% (n=6)	23.0% (n=3)	14.3% (n=22)	2.4% (n=1)
Unknown	0.6% (n=4)	8.8% (n=22)	4.0% (n=1)	1.9% (n=3)	2.4% (n=1)
<b>Parental status</b>					
Children	35.7% (n=233)	39.0% (n=97)	40.0% (n=10)	46.7% (n=72)	48.8% (n=20)
No children	62.0% (n=405)	59.0% (n=147)	56.0% (n=14)	51.3% (n=79)	48.8% (n=20)
Unknown	2.3% (n=15)	2.0% (n=5)	4.0% (n=1)	1.9% (n=3)	2.4% (n=1)
<b>Employment status</b>					
Employed	9.0% (n=59)	10.4% (n=26)	0% (n=0)	3.2% (n=5)	2.4% (n=1)
Unemployed	60.8% (n=397)	61.0% (n=152)	68.0% (n=17)	90.9% (n=140)	75.6% (n=31)
Unknown	30.2% (n=197)	28.5% (n=71)	32.0% (n=8)	5.8% (n=9)	22.0% (n=9)
<b>Income</b>					
Disability benefits	18.9% (n=124)	16.1% (n=40)	4.0% (n=1)	29.2% (n=45)	24.3% (n=10)
Various other benefits	11.9% (n=78)	10.8% (n=27)	20.0% (n=5)	23.4% (n=36)	2.4% (n=1)
Salary	4.7% (n=31)	8.0% (n=20)	0	0	2.4% (n=1)
Unknown	64.3% (n=420)	65.0% (n=162)	76.0% (n=19)	47.4% (n=73)	12.2% (n=29)
<b>Education</b>					
Low	20.5% (n=134)	17.6% (n=44)	20.0% (n=5)	47.4% (n=73)	14.6% (n=6)
Middle	19.4% (n=127)	19.7% (n=49)	28.0% (n=7)	29.2% (n=45)	19.5% (n=8)
High	14.1% (n=92)	15.7% (n=39)	12.0% (n=3)	13.6% (n=21)	14.6% (n=6)
Unknown	46% (n=300)	47.0% (n=117)	40.0% (n=10)	8.4% (n=13)	51.2% (n=21)
<b>Housing circumstances</b>					
Independent	75.3% (n=492)	71.9% (n=179)	64.0% (n=16)	61.7% (n=95)	68.3% (n=28)
Protected housing	6.6% (n=43)	11.2% (n=28)	8.0% (n=2)	13.6% (n=21)	4.9% (n=2)
With parents	4.7% (n=31)	2.4% (n=6)	0	3.9% (n=6)	7.3% (n=3)
Healthcare facility	9.0% (n=59)	11.6% (n=29)	24.0% (n=6)	14.9% (n=23)	14.6% (n=6)
Without permanent residence	1.4% (n=9)	0	0	0	
Other	0.4% (n=3)	2.8% (n=7)	4.0% (n=1)	4.5% (n=7)	4.9% (n=2)
Unknown	3.8% (n=25)	0		1.3% (n=2)	

EAS, euthanasia and assisted suicide.

## DISCUSSION

To our knowledge, there is just one earlier study, performed in Belgium, that provides a comparable analysis of psychiatric patients seeking EAS.<sup>10</sup> They reviewed the records of 100 patients (77 women, 23 men; mean age 47 years; range 21–80 years). Their findings were broadly congruent with those we report in our paper based on a larger sample. The most frequent diagnoses in the Belgian study were depression (n=58) and personality disorder (n=50). The number of patients with a diagnosis of autism spectrum disorder (n=13) in the Belgian study was however nearly double that of our study. The age–gender distribution and sociodemographic status were similar to our study with a majority of their patients being single women, living alone and medically unfit for work.

We found that more women than men submit requests for euthanasia, in line with the higher prevalence of women who make use of mental healthcare services.<sup>11 12</sup> Our finding contrasts with the robust finding that men are approximately twice as likely to die from suicide as women.<sup>13</sup> However, it is consistent with the finding that more women than men attempt

suicide,<sup>14 15</sup> suggesting that the availability of EAS in the Netherlands may render more effective the wish to die of women whose suffering from mental illness is unbearable. This raises an important question for future research, whether, and if so why, more women than men may have a non-treatable wish to die.<sup>15</sup>

The psychiatric profile of the patients in all groups appears to be quite similar. The majority of patients in all groups had depression among their diagnoses, and personality disorder was the most common comorbid diagnosis. Such a clinical picture is however significantly complicated by comorbid diagnoses, present in the majority (76%) of patients in our sample. Comorbidity has the consequence that each patient requesting EAS has a somewhat unique clinical profile.

Most patients had received treatment from a psychiatrist for a period of over 10 years. The gender and age distribution was also relatively similar with more women than men both requesting and receiving EAS. The average age of patients whose requests were withdrawn or rejected was mid to late 40s, while patients receiving EAS were on average the slightly older age of 58 years.

Table 2 Age categorisation and gender per group of patients

	Rejected (n=653)		Withdrawn (n=249)		Suicide (n=41)		Granted (n=154)		Died from other causes (n=25)		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
20 years and younger	0.7% (n=2)	4.5% (n=17)	1.4% (n=1)	2.3% (n=4)	5.9% (n=1)	16.7% (n=4)	1.9% (n=1)	1.0% (n=1)	9.1% (n=1)	0	2.8% (n=32)
21–30	19.1% (n=52)	18.9% (n=72)	8.1% (n=6)	13.7% (n=24)	11.8% (n=2)	20.8% (n=5)	3.8% (n=2)	10.0% (n=10)	9.1% (n=1)	0	15.5% (n=174)
31–40	18.0% (n=49)	13.9% (n=53)	20.3% (n=15)	10.3% (n=18)	17.6% (n=3)	16.7% (n=4)	3.8% (n=2)	7.0% (n=7)	0	7.1% (n=1)	13.5% (n=152)
41–50	25.0% (n=68)	19.9% (n=76)	21.6% (n=16)	23.4% (n=41)	17.6% (n=3)	12.5% (n=3)	25.9% (n=14)	11.0% (n=11)	9.1% (n=1)	7.1% (n=1)	20.9% (n=234)
51–60	22.1% (n=60)	22.0% (n=84)	24.3% (n=18)	27.4% (n=48)	35.2% (n=6)	29.2% (n=7)	18.5% (n=10)	31.0% (n=31)	36.4% (n=4)	7.1% (n=1)	24.0% (n=269)
61–70	8.8% (n=24)	10.7% (n=41)	12.1% (n=9)	14.2% (n=25)	5.9% (n=1)	4.2% (n=1)	24.1% (n=13)	17.0% (n=17)	18.2% (n=2)	14.2% (n=2)	12.0% (n=135)
71–80	3.7% (n=10)	6.3% (n=24)	10.8% (n=8)	4.6% (n=8)	5.9% (n=1)	0	11.1% (n=6)	12.0% (n=12)	0	28.4% (n=4)	6.5% (n=73)
81–90	2.6% (n=7)	3.1% (n=12)	1.4% (n=1)	4.0% (n=7)	0	0	9.2% (n=5)	11.0% (n=11)	18.2% (n=2)	35.5% (n=5)	4.5% (n=50)
91–100	0	0.5% (n=2)	0	0	0	0	1.9% (n=1)	0	0	0	0.3% (n=3)
Total	272	381	74	175	17	24	54	100	11	14	1122

The majority of patients in all groups were unemployed, single, living independently and with no children.

Why is it that very few of the patients from the largest diagnostic groups were found to meet the due care criteria by the team at EE? The main goal of the EE team is to determine if the patient's request is voluntary, carefully considered and stable and consistent over time. This is done by providing the patient with a non-judgemental space to openly explore, reflect upon and reconsider, when this is found to be necessary, their wish to die. The team aims to express respect for the patient's wish to die, while at the same time testing its clinical basis, sensitively probing the patient for doubts and reservations. Doubts about death often emerge, for instance, when the patient's family are introduced into discussions, and make known what the patient's loss would mean to them. The wish to die can also be inconsistent. For example, three of the patients whose requests were granted changed their mind just before EAS was due to be carried out.

The EE team does not have a therapeutic relationship with patients. The psychiatrists at EE follow existing treatment protocols used in the Netherlands to determine what further treatment possibilities may be available for a patient. Treatment possibilities, when they are found, are presented to the patient as a win-win scenario. If the treatment option works, the patient's suffering will be reduced, and they may no longer want to die. If the treatment option fails, and their suffering persists, patients are told that EAS may be granted, should this remain their desire. The decision to grant a request for EAS is reached when the patient, the EE team, the family and second-opinion psychiatrist conclude that no other treatment options are available that could lead to a better life.

Patients belonging to different diagnostic groups show some patterns in why their requests were *not* granted. For example, the requests of patients with depressive disorder were frequently rejected because the treatment protocol was not yet exhausted and the team at EE were able to find alternative treatments (43.4%, n=132). From the 249 patients to withdraw their requests, 72% (n=179) had a diagnosis of a personality disorder. The request for EAS from this patient group could be interpreted as a demand for help. Taking their suffering seriously seems to help patients with personality disorders to cope better with their suffering and realise they do not wish to die. New treatment options were found for a number of patients with schizophrenia as their main diagnosis (n=16). A number of patients (n=9) had their requests rejected because their psychosis interfered with their capacity to make a rational well-considered decision to end their lives, even though the suffering of this group was considered to be unbearable.

A close look at the patients whose main diagnosis was OCD, AD, SD and NCDs shows a small group of patients making requests, but a proportionately high number of these patients received EAS. The number of patients whose requests were granted was well above 10% for each of these disorders, and as high as 37% for patients with OCD as their main diagnosis, and 47% for patients with NCD. The latter group tended to be elderly patients in late stages of cognitive decline, suffering from severe Alzheimer's. The patients with SD experienced extreme chronic physical and emotional pain. Finally, the patients with OCD and AD have lived with their disorders for a large part of their lives and have a long history of failed treatment.

There are many difficult medical ethical dilemmas that confront clinicians in evaluating whether a patient can be legally granted the right to EAS.<sup>16–18</sup> It is necessary for instance to distinguish a patient's well-considered wish to die from the

**Table 3** Main diagnosis of psychiatric patients receiving EAS

DSM (Diagnostic and Statistical Manual of Mental Disorders) IV classification	Rejected (n=653)	Withdrawn (n=249)	Died from other causes (n=25)	Request granted (n=154)	Died from suicide (n=41)
Depressive disorder	30.6% (n=200)	29.3% (n=73)	48.0% (n=12)	30.5% (n=47)	24.4% (n=15)
Personality disorder	12.6% (n=82)	11.6% (n=29)	8.0% (n=2)	5.8% (n=9)	7.3% (n=3)
Schizophrenia	11.8% (n=77)	3.4% (n=22)	8.0% (n=2)	11.0% (n=17)	4.9% (n=2)
Neurodevelopmental disorders*	11.9% (n=78)	3.1% (n=20)	4.0% (n=1)	5.8% (n=9)	7.3% (n=3)
Post-traumatic stress disorder	9.2% (n=60)	3.1% (n=20)	0	11.7% (n=18)	17.1% (n=7)
Bipolar mood disorder	5.7% (n=37)	12.4% (n=31)	8.0% (n=2)	8.4% (n=13)	12.2% (n=5)
Substance-related addictive disorder	4.3% (n=28)	4.8% (n=12)	8.0% (n=2)	1.3% (n=2)	0
Food and eating disorder	2.6% (n=17)	6.8% (n=17)	4.0% (n=1)	2.6% (n=4)	0
Anxiety disorder	2.8% (n=18)	1.2% (n=3)	4.0% (n=1)	24.4% (n=10)	9.8% (n=4)
Somatoform disorder	2.6% (n=17)	2.4% (n=6)	4.0% (n=1)	4.5% (n=7)	2.4% (n=1)
Obsessive-compulsive disorder	1.1% (n=7)	1.6% (n=4)	4.0% (n=1)	5.2% (n=8)	0
Dissociative disorder	1.4% (n=9)	2.4% (n=6)	0	1.9% (n=3)	0
Neurocognitive disorder†	1.1% (n=7)	0.4% (n=1)	0	4.5% (n=7)	0
Other‡	2.5% (n=16)	2.0% (n=5)	0	0	2.4% (n=1)

\*Examples of neurodevelopmental disorders are attention deficit hyperactivity disorder, autism spectrum disorder, pervasive developmental disorder—not otherwise specified.

†Examples of neurocognitive disorders are Alzheimer's, Lewy body disease and Huntington's disease.

‡For example, psychosocial problems (axis 4), paraphilic disorder, disruptive, impulse control and other behavioural disorders, sleeping disorder, gender identity disorder. EAS, euthanasia and assisted suicide.

wish to no longer live, which may be a treatable symptom of a patient's mental disorder. Many patients who withdrew their requests for EAS (34%, n=84) did so because they no longer wished to die. Talking with end of life experts at EE, who listen openly and without judgement, can help the patient to feel they are taken seriously, which is sometimes enough for them to no longer wish to die.<sup>19–22</sup>

Limitations of our study were inevitable. First, a randomised survey was performed on 3533 files from psychiatric patients because extracting data from the entire sample proved too labour-intensive. Second, all collected data were based on the available data in the medical files and therefore data could be missing, especially on what happened to the patients who withdrew their requests. The question of what happens to patients whose requests are rejected is investigated in a recent paper by van den Ende and colleagues.<sup>22</sup> Third, only 10% of the data

were double-checked. Double-checking all the files would have further improved reliability. Finally, we have focused on comparing the social demographic and clinical characteristics of patients making requests for EAS at EE. Although we have provided some discussion of the decision-making process at EE, we did not analyse in detail for each diagnostic group the reasons why patients' requests were granted.

In conclusion, our study found that patients whose requests were withdrawn or rejected had broadly similar sociodemographic and clinical characteristics to those whose requests were granted and to patients who died from suicide or other causes. The majority of the patients from all groups were single females, living independently and who had received psychiatric treatment for more than 10 years. Depressive disorder was the most common main diagnosis, but personality disorder was the most frequent disorder when including comorbid diagnoses.

**Table 4** Comorbid diagnoses of requestors and receivers

DSM (Diagnostic and Statistical Manual of Mental Disorders) IV comorbid diagnosis	Rejected (n=653)	Withdrawn (n=249)	Died from other causes (n=25)	Request granted (n=154)	Died from suicide (n=41)
Depressive mood disorder	20.2% (n=132)	18.9% (n=47)	16.0% (n=4)	20.8% (n=32)	12.2% (n=5)
Personality disorder	46.6% (n=304)	59.0% (n=147)	48.0% (n=12)	52.6% (n=81)	56.1% (n=23)
Substance addiction disorder	11.0% (n=72)	6.8% (n=17)	12.0% (n=3)	5.8% (n=9)	14.6% (n=6)
Anxiety disorder	7.8% (n=51)	8.4% (n=21)	12.0% (n=3)	11.0% (n=17)	7.3% (n=3)
Neurocognitive disorders	1.7% (n=11)	3.2% (n=8)	8.0% (n=2)	6.5% (n=10)	0
Post-traumatic stress disorder	11.0% (n=72)	11.2% (n=28)	12.0% (n=3)	11.0% (n=17)	12.2% (n=5)
Neurodevelopmental disorders	6.7% (n=44)	6.4% (n=16)	0	5.2% (n=8)	7.3% (n=3)
Obsessive-compulsive disorder	2.5% (n=16)	2.4% (n=6)	4.0% (n=1)	2.6% (n=4)	4.9% (n=2)
Bipolar disorder	1.5% (n=10)	1.6% (n=4)	0	0.6% (n=1)	2.4% (n=1)
Somatic symptom disorders	3.4% (n=22)	2.8% (n=7)	8.0% (n=2)	3.9% (n=6)	12.2% (n=5)
Dissociative disorder	2.3% (n=15)	0.8% (n=2)	0	1.9% (n=3)	4.9% (n=2)
Food and eating disorder	4.3% (n=28)	2.4% (n=6)	0	5.8% (n=9)	2.4% (n=1)
Schizophrenia spectrum	3.5% (n=23)	2.4% (n=6)	4.0% (n=1)	1.3% (n=2)	4.9% (n=2)
Other psychiatric disorders	4.7% (n=31)	6.0% (n=15)	0	1.9% (n=3)	0
No comorbidity	1.4% (n=9)	0.0% (n=1)	0	1.3% (n=2)	0

**Table 5** Comparison of years in treatments for requestors and receivers

Years of contact with health professionals	Total sample (n=1122)	Request for EAS rejected (n=653)	Request for EAS withdrawn (n=249)	Request for EAS fulfilled (n=154)	Patients who died from suicide (n=41)
0–5 years	20.1% (n=225)	24.3% (n=159)	12.9% (n=32)	14.9% (n=23)	12.2% (n=5)
6–10 years	15.6% (n=175)	17.5% (n=114)	14.5% (n=36)	9.1% (n=14)	19.5% (n=8)
>10 years	54.6% (n=613)	47.0% (n=307)	63.0% (n=157)	73.4% (n=113)	56.0% (n=23)
Missing	9.7% (n=109)	11.2% (n=73)	9.6% (n=24)	2.6% (n=4)	12.2% (n=5)

EAS, euthanasia and assisted suicide.

The majority of patients making a request for EAS present with comorbid diagnoses, making this a difficult-to-treat patient group. Patients *receiving* EAS tended to be single women, aged between 51 and 60 years and living independently, with a long history of psychiatric treatment and previous attempts at suicide. A small subgroup of patients whose diagnoses included SDs, ADs, OCDs and NCDs were over-represented in a group of patients receiving EAS compared with the applicant group. This suggests that mental suffering can be especially severe in these groups of patients leading to a consistent and well-considered wish to die.

Many of the patients who withdrew their requests for EAS benefited from being able to discuss dying with end of life experts at EE. This suggests that health professionals could make a difference to a vulnerable group of patients, if they were trained to discuss death with patients.

Only a small group of patients from our sample were found to meet the due care criteria, indicating that the Dutch law is largely successful in identifying the patients whose psychological suffering is unbearable with no prospect of further treatment. This is confirmed by a careful audit by an independent Regional Euthanasia Review Committee that found that all 154 patients who received EAS satisfied the due care criteria.

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