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## Believing in dissociative amnesia relates to claiming it: a survey of people's experiences and beliefs about dissociative amnesia

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#### **ABSTRACT**

Dissociative amnesia is one of the most controversial categories in the field of psychiatry and clinical psychology. Self-reports of dissociative amnesia in the general population, and beliefs about this topic, have so far not been subjected to empirical scrutiny. Here, we surveyed a sample from the general population (N = 1017), revealing that about a tenth (n = 102) claimed to have experienced dissociative amnesia. Some claims pertained to amnesia for traumatic autobiographical experiences (e.g., sexual assault), while other claims reflected memory loss for experiences that can be regarded as non-traumatic or non-stressful (e.g., dissociative amnesia for an anniversary). Importantly, many participants believed in the existence of dissociative amnesia, and those who claimed dissociative amnesia indicated even more belief in this phenomenon than the rest of the sample. Finally, many participants indicated to have at least once claimed to have feigned memory loss in their life, and that they experienced some form of forgetting when trying to retrieve events for which they lied upon. Overall, our findings suggest that claiming dissociative amnesia goes hand in hand with believing in dissociative amnesia.

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#### **KEYWORDS**

Dissociative amnesia; occurrence; beliefs; feigned

Dissociative amnesia refers to an inaccessibility of autobiographical memories with an ostensibly traumatic (dissociative) cause, and it is a controversial psychological phenomenon. One of the primary reasons for its debateable status is that it runs counter to research showing that emotional events are generally well remembered (McNally, 2003; Merckelbach et al., 2003). Furthermore, Mangiulli and colleagues (in press) recently argued that the majority, if not all, of dissociative amnesia cases reported in the literature during the last twenty years (i.e., 2000-2020) could be better explained by other differential diagnoses (e.g., transient global amnesia; TGA) and alternative interpretations (e.g., ordinary forgetting, malingering). They postulated that most cases did not meet all the requirements of dissociative amnesia that the Diagnostic and Statistical Manual of Mental Disorders has set (DSM-5; American Psychiatric Association, 2013) (Mangiulli et al., in press).

The definition of dissociative amnesia bears many similarities to the controversial concept of repressed memories (Otgaar et al., 2019). Although the concept of repressed memory is contested in the scientific literature, many people continue to believe in it (e.g., Dodier et al., 2021; Otgaar, Howe, Dodier, et al., 2021; Patihis et al., 2014). At present, we do not know, as is the case with repressed memory, how many people strongly believe in dissociative amnesia. In the current study, the chief aim was to examine people's claims of dissociative amnesia and contrast this with claims of other types of memory loss (i.e., feigned). Moreover, our interest was whether claims of dissociative amnesia were related to also believing in dissociative amnesia.

## What do we know about dissociative amnesia?

According to the DSM-5 (APA, 2013, p. 298), dissociative amnesia consists of an "inability to remember autobiographical information" that is (i) "usually of traumatic or stressful nature", (ii) "successfully stored", (iii) "inconsistent with ordinary forgetting", (iv) "involves a period of time when there is an inability to recall", (v), "is not attributable to the physiological effects of a substance (e.g., alcohol or other drug of abuse, a medication) or a neurological or other medical condition (e.g., traumatic brain injury)",

and (vi) "always potentially reversible because the memory has been successfully stored". Dissociative amnesia can occur in three forms, namely localised, selective or generalised. Localised amnesia reflects memory loss for a specific life-time period (e.g., abuse that occurred during childhood), while selective amnesia refers to memory loss for some details of a given event. Finally, generalised amnesia refers to a complete memory loss, usually temporary, for one's autobiographical past.

Data regarding the prevalence of people suffering from dissociative amnesia is limited. The DSM-5 (APA, 2013) reported a prevalence of 1.8% for dissociative amnesia among adults in a small U.S. community study. Spiegel and colleagues (2011) estimated that dissociative amnesia may vary between 1.8 and 7.3% in the general population, and Ross et al.(2002) estimated this type of amnesia to occur in 7.3-13.4% of psychiatric patients. Also, some authors argued that dissociative amnesia can afflict as far as 30% of trauma survivors (Brown et al., 1999).

Furthermore, the duration, as well as the recovery rate from dissociative amnesia, remains unclear. That is, even though the DMS-5 posits that dissociative amnesia can last from minutes to decades (APA, 2013, p. 299), there is not a precise estimation on whether dissociative amnesia consists more of a temporary or long-lasting memory impairment. Similarly, the recovery from dissociative amnesia is said to be sudden, but some people seem to gradually retrieve their memories after years (APA, 2013, p. 299). As a matter of fact, objective indications regarding the number of people who recovered their memories is virtually unknown. Still, the DSM-5 (APA, 2013) suggests that sometimes people's forgotten memories are restored quite rapidly, while in other cases people never fully recover them. Despite the use of some pharmacological treatments (e.g., benzodiazepines; Seo et al., 2013), some authors posited that skilful psychotherapeutic interventions might assist in the recovery from dissociative amnesia (Brandt & van Gorp, 2006). Interventions, specifically, with those people vary from "gentle suggestion" to hypnotic techniques (e.g., Kritchevsky et al., 2004; Lee et al., 2011).

## Controversial aspects surrounding dissociative amnesia

The debate surrounding the concept of dissociative amnesia touches upon the controversy concerning repressed memory, in a debate so-called "memory wars" (Crews, 1995; Otgaar et al., 2019; Otgaar, Howe, et al., 2021). The term dissociative amnesia, as embedded in the DSM-5 (APA, 2013, p. 298), shares many similarities with the idea of repressed memory. Both concepts have in common the assumption that people can block traumatic memories from accessing consciousness in order to cope with a distressing experience (Chu et al., 1999; van der Kolk & Fisler, 1995). Furthermore, dissociative or repressed memories are assumed to be retrieved into

throughout consciousness, sometimes frequently employed interventions (e.g., hypnosis; Kritchevsky et al., 2004; Lee et al., 2011). Of importance, despite being highly criticised (e.g., Otgaar et al., 2019; Otgaar, Howe, et al., 2021), the idea and related beliefs concerning unconscious repressed memory are intrinsically widespread. Survey studies have found that both laypeople and professionals believe that the human mind is able to unconsciously block memories for traumatic events and that repressed memories can be accurately retrieved in therapy (see Ost et al., 2013, 2017; Otgaar, Howe, Dodier, et al., 2021; Patihis et al., 2014). However, these survey studies have not specifically asked about the existence of dissociative amnesia and instead focused more on the belief of repressed memory.

Importantly, some scholars have indicated that (i) traumatic memories are seldom, if ever, genuinely forgotten (McNally, 2005), (ii) many trauma survivors sometimes prefer not to think of or talk about their traumatic past episodes (e.g., Goodman et al., 2003), and (iii) lack of disclosure surrounding traumatic experiences does not necessarily correspond to an inability to remember the trauma (e.g., McNally, 2003, 2007). Other academics argued that dissociative symptoms arise when people with unclear mental health issues are subjected to media exposure (e.g., books, movies), ambiguous beliefs (e.g., "dissociation reflects abuse"; "people might develop multiple personalities") and suggestive procedures (e.g., leading questions, hypnosis, journaling; see Lynn et al., 2015). In this latter respect, several studies have demonstrated that techniques such as hypnosis or Eye Movement Desensitization and Reprocessing (EMDR) might be inherently suggestive, leading to increased susceptibility to form memory errors (e.g., Houben et al., 2018; 2020; Leer & Engelhard, 2020; Lilienfeld, 2007; Lynn et al., 2003). Take, for instance, the case of Meredith Maran (Maran, 2010), a woman who retrieved during therapy the memory for being sexually abused by her father, after decades of an incapability to remember this trauma. Prior to discovering that this memory was actually false, her claim led to an accusation against her father ruining her whole family. Thus, it is not so hard to figure how, in certain circumstances, claims regarding the inability to remember highly traumatic autobiographical experiences might have far-reaching consequences to the courtroom (e.g., wrongful conviction).

Relatedly, there is reason to believe that dissociative amnesia claims are sometimes malingered. That is, malingered (or feigned) amnesia is described as a deliberate act of simulating memory loss in order to achieve ownoriented goals both in the criminal and civil settings (e.g., Rogers & Bender, 2018). For instance, sometimes defendants claim amnesia for their violent deeds (e.g., sexual assault, homicide; Cima et al., 2002; Jelicic, 2018) to obstruct police investigations or be declared incompetent to stand trial (Mangiulli et al., 2018; Tysse & Hafemeister, 2006), while other people might malinger symptoms such as memory loss to gain financial compensation in personal injury claims (Rogers & Bender, 2018). However, malingering is oftentimes not considered as an alternative explanation for dissociative amnesia claims, even though some cases might hint at the possibility of an intentional act of simulation (Mangiulli et al., in press). For instance, Kumar and colleagues (2007) did not forensically assess their patient for malingering although he claimed severe anterograde amnesia for failing to return money borrowed from a friend. Apart that malingering is often not ruled out as an explanation for claiming dissociative amnesia (Mangiulli et al., in press; Merckelbach et al., 2009), another alternative explanation for this type of amnesia is that memory loss is organic in nature. Specifically, organic amnesia refers to a memory impairment due to brain dysfunction (Bayley et al., 2003; Kopelman, 2002) and is sometimes not considered in dissociative amnesia claims (see Lucchelli et al., 1998; Lucchelli & Spinnler, 2002; Mangiulli et al., in press).

#### The current survey

To date, diagnostic information about dissociative amnesia is not clearly and fully defined, such as its occurrence and duration, as well as its recovery rate. Furthermore, taking into account the issues surrounding dissociative amnesia, one might wonder how people get to learn about memory loss in the first place, and also if wrongful beliefs concerning dissociative amnesia are widespread alongside those about repressed memories. Finally, it is virtually unexplored whether, and to what extent, people feign amnesia on daily basis. Note that, interestingly, several studies showed that when people are asked to simulate amnesia but eventually come forward with the truth, they tend to omit more details for the mock crime than those who are not asked to simulate memory loss (i.e., the memory-undermining effect of simulated amnesia; Christianson & Bylin, 1999; Mangiulli et al., 2018, 2019; Van Oorsouw & Merckelbach, 2004). However, although that effect is frequently observed in experimental work, we currently do not know whether such a memory impairment manifests itself in real-life situations. Therefore, considering all those issues, in the present study our purpose was to explore, among the general population, claims of different types of memory loss (i.e., dissociative, feigned, and organic), and relate these claims with beliefs about dissociative amnesia.

## Method

## **Participants**

Drawing on previous surveys on beliefs and knowledge about repressed memories among the general population (e.g., Patihis et al., 2014), we aimed to reach at least one thousand participants. A total of 1218 people took part in our survey. Approximately 82% of them were recruited

through Amazon Mechanical Turk (MTurk). MTurk is a sourcing model website often adopted in psychological science (Buhrmester et al., 2018) to hire people to perform tasks remotely. Participants recruited via MTurk for the current survey had a HIT approval rate (i.e., proportion of completed tasks that are approved by requesters) of 98% and more than 5000 HITs approved, and were rewarded with 1 dollar for their time. The remaining participants were reached using social media (e.g., Facebook, Twitter).

Following checks on data quality, we excluded 201 participants who either did not complete the survey or failed at least one of the three attention checks embedded in it (e.g., "For the following question, please answer false"). The final data set comprised 1017 participants ( $M_{age}$ = 36.1, SD = 12.5, range = 18–74). Demographic information is shown in the supplemental materials (i.e., Appendix A). The current survey was approved by the Ethical Review Committee Psychology and Neuroscience (ERCPN) at Maastricht University (ERCPN-211 03 08 2019), and it was pre-registered. The survey, along with the raw dataset, can be found on the Open Science Framework (OSF; https://osf.io/8vbz5/).

#### **Procedure**

The survey, conducted in English, was constructed using Qualtrics and distributed among participants through an internet link. After providing the informed consent and their demographic information, participants filled in the survey consisting of three main parts. Finally, all participants were thanked and debriefed.

## Part 1: self-reports of amnesia

We gathered information concerning participants' (i) experience with memory loss (i.e., "Did you ever experience amnesia in your life?"). Note that if participants never experienced memory loss in their life, they were re-directed to the second part of the survey (i.e., "Acquired Knowledge about Memory Loss, and Dissociative Amnesia Beliefs"). Subsequently, participants were asked about (ii) reported cause of amnesia (i.e., head injury, stroke, alcohol intoxication, emotional shock or traumatic event, others, e.g., stressful events), (iii) form of amnesia (i.e., localised or generalised), (iv) type of amnesia (i.e., anterograde, retrograde, or a combination of both), (v) duration of amnesia (i.e., less than 1 day, 1 day, from 2 to 6 days, 1 week, or more), (vi) frequency of amnesia (i.e., once, twice, three times, or more), and (vi) recovery (i.e., "Did the memory, for which you had amnesia, recover?"). In this latter case, we additionally investigated in which way the recovery took place (i.e., spontaneously, via visual, verbal or other sensory cues, talking to family and/or friends, discussing the memory during psychotherapy). Of importance, if the recovery occurred during therapy, we took note of the psychotherapeutic orientation (i.e., attachment-based therapy,



behavioural therapy, EMDR, internal family systems, hypnosis, survivor groups, psychodynamic, or other).

## Part 2: acquired knowledge about memory loss, and dissociative amnesia beliefs

We investigated the primary ways through which our participants learned about memory loss (i.e., during school and/or university/college, reading newspapers and/or science magazines and/or scientific books, browsing the Internet, through movies and/or crime fictions, or via novels and/or short stories). Finally, we asked participants to rate four<sup>2</sup> statements pertaining to heated aspects of dissociative amnesia (e.g., "People who experienced traumatic events during their childhood (e.g., sexual abuse) are likely to suffer from amnesia for those events"). Participants' responses were anchored on a 5-point Likert scale ranging from "strongly disagree" (=1) to "strongly agree" (=5) (see Table 2).

## Part 3: reported feigned amnesia

We first examined whether (i) participants had feigned memory loss at least once in their life (i.e., "Did you ever pretend to have amnesia for an event in your life?"). If so, we consequently examined participants' (ii) form of feigned amnesia (i.e., localised or generalised), (iii) duration of feigned amnesia (i.e., less than 1 day, 1 day, from 2 to 6 days, 1 week, or more), and (iv) frequency of feigned amnesia (i.e., once, twice, three times, or more). Moreover, we asked those who feigned memory loss whether they actually struggled in remembering events for which they previously feigned amnesia (i.e., "Did you encounter any difficulties in retrieving the event(s) for which you had previously pretend to have amnesia?"). If that was the case, we further questioned for how long they experienced difficulties in retrieving such events (i.e., less than 1 day, 1 day, from 2 to 6 days, 1 week, or more).

## **Results**

Prior to computing the analyses, we categorised participants' causes of their purported amnesia based on their responses (i.e., head injury, stroke, alcohol intoxication, emotional shock or traumatic event, etc.). Specifically, we grouped physical causes (e.g., head injury) under the label "organic", while under the label "dissociative" we gathered emotional shock or traumatic events, and stressful events. Furthermore, when participants provided more than one response including both organic and dissociative factors, we categorised them under the label "combination of both". Yet note that we slightly deviated from the preregistration, meaning that here we mainly analysed frequencies pertaining to dissociative amnesia claims as well as reports of feigned memory loss. However, for completeness' sake, we reported all the other information in the supplemental materials (e.g., details concerning selfreported organic amnesia claims; Appendix B – D.2).

## Part 1: self-reports of amnesia

Among all the surveyed participants (N = 1017), 40.8% (n =415) reported at least one episode of amnesia in their life. The age for those participants ranged from 20 to 72 years (M = 34.97; SD = 11.24), and majority of them were men (65.3%, n = 271).

## Reported cause of amnesia

The majority (64.6%, n = 268/415) of participants who reported amnesia indicated that the main cause for their purported amnesia was due to physical causes (e.g., head injury, etc; which we will call "organic"), while 24.6% (n = 102/415) claimed it was due to psychological causes, indicating purported dissociative amnesia. Also, 10.8% of participants (n = 45/415) indicated a combination of both organic and dissociative causes for their amnesia (see Figure 1). More specifically, people who claimed to have suffered from dissociative amnesia experienced traumatic events (89.2%, n = 91/102) or, in the minority (10.8%, n = 11/102) of cases stressful experiences.

#### Form of amnesia

The majority (88.2%, n = 366/415) of those who claimed amnesia indicated that their memory was partially lost (e.g., localised amnesia), while the remaining (11.8%, n =49/415) reported experiencing complete memory loss (i.e., generalised amnesia). That former form of amnesia occurred in 87.3% (n = 89/102) of people whom amnesia was reported to be dissociative.

## Type of amnesia

40% (n = 166/415) of people who claimed to have had amnesia seemed to suffer from retrograde memory loss, while 19.3% (n = 80/415) indicated experiencing anterograde memory loss. Interestingly, the majority of those participants (40.7%, n = 169/415) claimed to have experienced both retrograde and anterograde memory problems. Furthermore, people who claimed to have suffered from dissociative amnesia seemed to mostly report both retrograde and anterograde memory issues (44.1%, n = 45/102), or purely retrograde impairment (40.2%, n = 41/102). Yet a non-trivial percentage of participants (15.7%, n = 16/102) claimed anterograde memory issues, a condition sometimes labelled as "continuous" dissociative amnesia (e.g., Staniloiu et al., 2018).

## **Duration of amnesia**

The majority (25.1%, n = 104/415) of participants claimed to exhibit memory loss from 2 to 6 days, 20.5%, (n = 85/415) for either 1 week, 1 day, or less than 1 day, respectively. Only the minority of our subsample reported amnesia for more than 1 week (13.5%, n = 56/415). More specifically, those who reported dissociative amnesia claimed to exhibit amnesia from 2 to 6 days in the majority of the cases (25.5%, n = 26/102), followed by 24.5% (n = 25/102) 102) of those who claimed amnesia for less than 1 day,

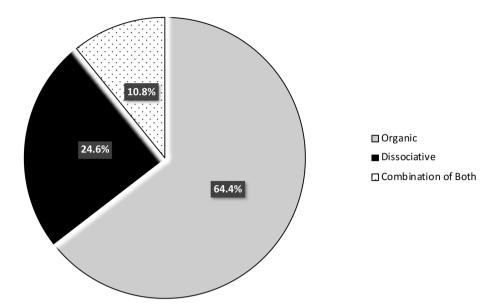


Figure 1. Distribution of participants' (n = 415) self-reported explanations for claims of memory loss. The label "organic" refers to participants claiming physical causes for their memory loss (e.g., head injury), while the label "dissociative" indicates people self-reporting emotional shock or traumatic events, and stressful events as primary cause for their amnesia. Finally, the label "combination of both" indicates participants who indicated explanations for memory loss as a combination of both "organic" and "dissociative". Percentages shown are raw.

23.5% (n = 24/102) for more than 1 week, 17.6% (n = 18/100102) for 1 entire week, and 8.8% (n = 9/102) for only 1 day.

## Frequency of amnesia

Almost half of the people who reported amnesia (49.2%, n = 204/415) claimed such a memory deficit only once in their life, while 28% (n = 116/415) twice, 12.8% (n = 53/415) 415), and 10.1% (n = 42/415) reported amnesia at least three or more than three times, respectively. When crosstabulating participants' self-reported amnesic causes with its frequency, the majority of those who reported dissociative amnesia (46.1%, n = 47/102) had it once in their life, followed by 27.5% (n = 28/102) of participants who claimed it twice, 16.7% (n = 17/102) for more than three times, and 9.8% (n = 10/102) for three times.

## Recovery

The majority (69.2%, n = 287/415) of people who reported having had amnesia claimed to have recovered their memory. Interestingly, among those participants, 52.6% (n = 151/287) retrieved their memory by talking with family or friends, 26.1% (n = 75/287) spontaneously, 10.8% (n = 31/287) during psychotherapy, and 10.5% (n = 31/287) = 30/287) through visual, verbal, or other sensory cues. When looking at participants' self-reported amnesic cause and its recovery, a similar pattern of findings was observed among those who claimed having had dissociative amnesia. That is, 63.7% (n = 65/102) of those who reported dissociative amnesia recovered their memories. More specifically, 58.5% (n = 38/65) recovered their memories by talking to family or friends, 30.8% (n = 20/65) spontaneously, 7.7% (n = 5/65) via psychotherapy, and 3.1% (n = 2/65) due to sensory cues.

Next, we further explored the psychotherapeutic interventions involved in the recovery of memories among all the participants who claimed to have experienced amnesia (n = 31/287). Overall, the majority (29.9%, n = 9/31) underwent cognitive-behavioural therapy, 22.6% (n = 7/31) attachment-based therapy, 9.7% (n = 3/31) psychodynamic, 6.5% (n = 2/31) EMDR, and hypnosis, respectively (see Appendix C for the remaining frequencies). Moreover, among people who claimed to have suffered from dissociative amnesia and recovered from it during psychotherapy (n = 5/65), 60% (n = 3/5) underwent attachment-based therapy, and 2 participants were treated with either hypnosis or a combination of cognitive-behavioural therapy and survivor group sessions (20%, respectively). Table 1 sums up the features concerning participants' self-report claims of dissociative amnesia.

## Part 2: acquired knowledge about memory loss, and dissociative amnesia beliefs

## Acquired knowledge

Almost one fourth of our entire sample (24.5%, n = 249/ 1017) learned about amnesia during school and/or university, 15.2% (n = 155/1017) while browsing the internet, 14.4% (n = 146/1017) through movies and/or crime fictions, 9.5% (n = 97/1017) reading newspaper and/or science magazine and/or scientific books, and .6% (n = 6/ 1017) via novels and/or short stories. Furthermore, a similar pattern of results was also observed among people who claimed to have suffered from dissociative amnesia. That is, 33.3% (n = 34/102) of those participants acquired knowledge about memory loss during school and/or university, 24.5% (n = 25/102) while browsing the

**Table 1.** Summary of the features of amnesia revealed across our sub-sample of participants (*n* = 102) who claimed to have suffered from memory loss following emotional shock or traumatic events, and stressful events (grouped as dissociative amnesia, i.e., DA).

Form of DA	Partial	Complete	
	87.3% ( <i>n</i> = 89)	12.7% (n = 13)	
Type of DA	Anterograde	Retrograde	Combination
	15.7% ( <i>n</i> = 16)	40.2% ( <i>n</i> = 41)	44.1% ( <i>n</i> = 45)
Duration of DA	One Day or Less	From 2 to 6 Days	One Week or More
	33.3% ( <i>n</i> = 34)	25.5% ( <i>n</i> = 26)	41.1% ( <i>n</i> = 42)
Frequency of DA	Once	Twice	Three or More Times
	46.1% ( <i>n</i> = 47)	27.5% ( <i>n</i> = 28)	26.5% ( <i>n</i> = 27)
Recovery from DA	Yes	No	
	63.7% ( <i>n</i> = 65)	36.3% ( <i>n</i> = 37)	

Notes: Dissociative amnesia (DA) statistics are self-reported claims of psychogenic amnesia, and not confirmed to meet all criteria for the disorder. Percentages shown are row.

**Table 2.** Participants' (*N* = 1017) frequencies and percentages of agreement/disagreement/neither agree nor disagree with four statements concerning dissociative amnesia.

	Agree (somewhat or strongly)	Disagree (somewhat or strongly)	Neither Agree Nor Disagree
<ol> <li>People suffering from dissociative amnesia can develop one or more new identities</li> </ol>	47.5% ( <i>n</i> = 483)	23.1% ( <i>n</i> = 235)	29.4% ( <i>n</i> = 299)
<ol><li>People who experienced traumatic events during their childhood (e.g., sexual abuse) are likely to suffer from amnesia for those events</li></ol>	65.1% ( <i>n</i> = 662)	14.8% ( <i>n</i> = 151)	20.1% ( <i>n</i> = 204)
<ol><li>People suffering from amnesia for traumatic events have their memories unconsciously blocked for many years prior to recovering them</li></ol>	62.3% ( <i>n</i> = 634)	15.8% ( <i>n</i> = 161)	21.9% (n = 222)
4. People suffering from amnesia for traumatic events can accurately restore their lost memories in therapy	48.1% ( <i>n</i> = 490)	18.8% ( <i>n</i> = 191)	33.1% ( <i>n</i> = 336)

Notes: Participants answered to each statement on a fully anchored 5-point Likert scale with the following anchors: Strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly disagree. Participants who chose strongly agree and somewhat agree were collapsed as agreeing with a statement, while those who chose strongly disagree and somewhat disagree were counted as disagreeing. Percentages shown are row.

internet, 12.7% (n = 13/102) through movies and/or crime fictions, 11.8% (n = 12/102) reading newspaper and/or science magazine and/or scientific books, and 1% (n = 1/102) by reading novels and/or short stories. The very few remaining participants who reported having had dissociative amnesia (16.7%, n = 17/102), learned about memory loss due to two or more sources.

#### Dissociative amnesia beliefs

Table 2 shows the overall percentage of participants' agreement and disagreement with each of the four statements about dissociative amnesia. In general, participants rates of agreement were very high for all the statements about dissociative amnesia. For instance, the majority (65.1%, n = 662/1017) of participants agreed with the idea that people can develop amnesia after experiencing traumatic events during childhood (e.g., sexual abuse). In a similar vein, 62.3% (n = 634/1017) agreed with the dubious notion that people who suffer from dissociative amnesia have their memories unconsciously blocked for many years prior to recovering them.

Next, we cross-tabulated beliefs about dissociative amnesia and self-reported occurrence of dissociative amnesia. That is, we examined whether rates of agreement with those beliefs were more pronounced among participants who self-reported to have suffered from dissociative amnesia (n = 102) as compared with participants who did

not make such a claim (i.e., the rest of the sample, n = 915). A contingency table analysis plotting self-reported occurrence of dissociative amnesia against dissociative amnesia beliefs showed a statistically significant association between the two variables, for three out of the four proposed statements (see Table 3). Post-hoc tests were conducted using Bonferroni correction (i.e., p = .008; Beasley & Schumacker, 1995; Garcia-Perez & Nunez-Anton, 2003).

Of relevance, participants who self-reported dissociative amnesia (3.9%, n = 4/102) disagreed to a lesser extent than the rest of the sample (16%, n = 146/915) with statement "People who experienced traumatic events during their childhood (e.g., sexual abuse) are likely to suffer from amnesia for those events", p = .001,  $OR^3 = .24$ . Furthermore, those who claimed to have had dissociative amnesia (75.5%, n = 77/102) agreed to a higher extent than the rest of the sample (60.9%, n =557/915) with the statement "People suffering from amnesia for traumatic events have their memories unconsciously blocked for many years prior to recovering them", p < .001, OR = 1.24. Finally, and interestingly, people who self-reported dissociative amnesia (5.9%, n = 6/102) disagreed to a lesser extent than the rest of the sample (20.2%, n = 185/915) with the statement "People suffering from amnesia for traumatic events can accurately restore their lost memories in therapy", p < .001, OR = .29.

Table 3. Cross-tabulation of self-reported occurrence (vs. no occurrence) of dissociative amnesia (i.e., DA) and beliefs in dissociative amnesia.

	Agree (somewhat or strongly)		Disagree (somewhat or strongly)		Neither Agree Nor Disagree	
	Self- reported DA (n = 102)	No Claim of DA (n = 915)	Self- reported DA (n = 102)	No Claim of DA ( <i>n</i> = 915)	Self- reported DA (n = 102)	No Claim of DA (n = 915)
1. People suffering from dissociative amnesia can develop one or	43.1%	48%	25.5%	22.9%	31.4%	29.1%
more new identities	(n = 44)	(n = 439)	(n = 26)	(n = 209)	(n = 32)	(n = 267)
	$\chi^2 = .89, p = .639, Cramer'$			Cramer's V =	.03	
2. People who experienced traumatic events during their childhood	76.5%	63.9%	3.9% <sup>a</sup>	16%ª	19.6%	20.1%
(e.g., sexual abuse) are likely to suffer from amnesia for those	(n = 78)	(n = 584)	(n = 4)	(n = 146)	(n = 20)	(n = 184)
events*		$\chi^2 =$	11.26, $p = .004$ ,	.004, Cramer's V = .105		
3. People suffering from amnesia for traumatic events have their	75.5% <sup>a</sup>	60.9% <sup>a</sup>	3.9% <sup>b</sup>	17.1% <sup><b>b</b></sup>	20.6%	22%
memories unconsciously blocked for many years prior to	(n = 77)	(n = 557)	(n = 4)	(n = 156)	(n = 21)	(n = 201)
recovering them*		$\chi^2 =$	13.26, $p = .001$ ,	Cramer's V =	.114	
4. People suffering from amnesia for traumatic events can	50%	47.9%	5.9% <sup>a</sup>	20.2% <sup>a</sup>	44.1%	31.8%
accurately restore their lost memories in therapy*	(n = 51)	(n = 438)	(n = 6)	(n = 185)	(n = 45)	(n = 291)
		χ-=	14.32, $p = .001$ ,	cramers v =	.119	

Notes: For each cross-tabulation of dissociative amnesia beliefs and participants self-reported claims of dissociative amnesia and not [n = 102 vs. n = 915 (i.e., participants who did not claim dissociative amnesia)] Chi Square is shown underneath the percentages of agreement/disagreement/neither agree nor disagree. The \* marks statistical significance of the corresponding cross-tabulation. Same letters on the same row indicate statistical significance difference between percentages (p < .008). Participants answered to each statement on a fully anchored 5-point Likert scale with the following anchors: Strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly disagree. Participants who chose strongly agree and somewhat agree were collapsed as agreeing with a statement, while those who chose strongly disagree and somewhat disagree were counted as disagreeing. Percentages shown are row.

## Part 3: reported feigned amnesia

Among all the people who took part in our survey, 16.9% (n = 172/1017) admitted having feigned memory loss at least once in their life, of which 62.8% (n = 108/172) previously reported to have also suffered from amnesia (i.e., organic, dissociative, or a combination of both). Table 4 summarises the main characteristics of feigned amnesia as reported by these participants.

## Form of feigned amnesia

Almost all (91.3%, n = 157/172) of those who admitted to falsely have suffered from amnesia claimed that their memory was partially lost (i.e., localised amnesia). The remaining participants (8.7%, n = 15/172) claimed complete amnesia (i.e., generalised amnesia).

**Table 4.** Summary of the characteristics of feigned amnesia (i.e., FA) revealed across the sub-sample of participants who admitted to have feigned memory loss at least once in their life (n = 172).

teigned memory loss at least once in their life $(n = 1/2)$ .						
Form of FA	Partial 91.3% (n =	Complete 8.7% ( <i>n</i> = 15)				
Duration of FA	157) One Day or Less 59.8% (n =	From 2 to 6 Days 19.2% (n =	One Week or More 20.9% (n =			
Frequency of FA	103) Once 55.8% (n = 96)	33) Twice 29.7% (n = 51)	36) Three or More Times 14.6% (n = 25)			
Memory Impairments following FA	Yes 54.1% ( <i>n</i> = 93)	No 45.9% (n = 79)	23)			
Duration of Memory Impairments (n = 93)	One Day or Less 53.8% (n = 50)	From 2 to 6 Days 24.7% (n = 23)	One Week or More 21.5% (n = 20)			

Note: Percentages shown are row.

## **Duration of feigned amnesia**

The majority (36%, n = 62/172) of those who had admitted to feigning amnesia did so for 1 day, 23.8% (n = 41/172) for less than 1 day, 19.2% (n = 33/172) feigned memory loss from 2 to 6 days, 15.7% (n = 27/172) for 1 week, and finally 5.2% (n = 9/172) for more than 1 week.

## Frequency of feigned amnesia

55.8% (n = 96/172) of people who had admitted to feigning amnesia did so only once in their life, 29.7% (n = 51/172) twice, 10.5% (n = 18/172) three times, and the remaining (4.1%, n = 7/172) had pretended to suffered from amnesia more than three times.

## Memory impairments due to feigned amnesia

Among participants who had admitted to feigning amnesia, more than half (54.1%, n=93/172) claimed having experienced some difficulties in eventually retrieving the memory for which they pretended amnesia. More specifically, the majority of them (40.9%, n=38/172) reported that they experienced genuine forgetting for 1 day, 24.7% (n=23/172) from 2 to 6 days, 18.3% (n=17) for one week, 12.9% (n=12/172) for less than 1 day, and finally 3 participants (3.2%) for more than 1 week.

#### **Discussion**

By surveying a large group of participants from the general public (N = 1017), we aimed to gather information surrounding the diagnostic category of dissociative amnesia, participants' beliefs about it, and the occurrence of feigned amnesia. Our main findings can be summarised as follow. First, self-reported claims of dissociative amnesia are quite common. Second, beliefs about the existence of



dissociative amnesia are overall quite widespread, particularly among those who claimed to have forgotten emotional shocks or traumatic autobiographical events. Finally, some people claimed to have feigned amnesia during their everyday life, which appeared to eventually lead to some sort of memory impairments.

## Self-reported occurrence of dissociative amnesia

Among the entire sample, 10-14.4% (i.e., n = 102-147; 6.5– 12.% male, 4.4-12% female) claimed to have suffered solely from dissociative amnesia, or in concurrence with other organic memory impairments. This prevalence is higher than previous reports on the prevalence of dissociative amnesia in a non-clinical sample (e.g., 1.8-7.3%, see Spiegel et al., 2011). Interestingly, claims of dissociative amnesia appeared to occur even multiple times. That is, rather than being a singular and peculiar episode, up to 54% of those who claimed to have had dissociative amnesia, reported to have experienced it at least more than once. Thus, we agree with Staniloiu and Markowitsch (2012) that claims of dissociative amnesia might not be rare. However, when we looked at the responses of some of our participants' description<sup>4</sup> regarding their purported dissociative amnesia experiences, we noticed a discrepancy with respect to the nature of their aetiology. That is, while some participants reported that their dissociative amnesia was due to traumatic experiences such as assault, sexual abuse, war combat, or sudden death of family members, others instead referred to quite common experiences that are difficult to be ascribed as traumatic or stressful. For instance, some other participants reported that they suddenly could not remember their home addresses, the content of an exam, their birthday, or a job's task due to "mental stress".

Those latter answers reflect three complementary issues. First, it is evident that some people confuse what is said to be a rare type of memory loss with instances of an ordinary lapse of memory. Second, to some degree, those responses might resemble some of the dissociative amnesia cases described in the literature (e.g., Fujiwara et al., 2008; Staniloiu et al., 2018), in which alleged patients' traumatic onsets were quite dubious (e.g., memory loss due to "unfulfilled wishes for love"). One of the major critiques against the idea of dissociative amnesia relates to the fact that many of those claims are actually misinterpreted. As mentioned above, several scientifically-based alternative explanations (e.g., TGA, normal forgetting or failure to disclose, malingering) have been put forward to better explain instances of retrograde memory loss in the absence of any organic disfunction (e.g., McNally, 2003; Merckelbach et al., 2006). However, as long as those alternative interpretations are not fully ruled out in case studies on dissociative amnesia to begin with (see Mangiulli et al., in press; McNally, 2003), a general confusion concerning what dissociative amnesia might consist of could easily arise even among the general

public. Third, the fact that people sometimes confused traumatic events with perhaps ordinary stressors is in line with the expansion of the trauma narrative. This latter aspect is also referred to as "concept creep" in the area of post-traumatic stress disorder (Haslam, 2016; Rosen, 2004). Specifically, in the past decades, there has been an increase of what can be called a traumatic stressor and this might underlie people's explanation for why they claim "traumatic" memory loss.

Of course, one might still counterargue that our data on dissociative amnesia self-reports reflect some sort of "proof" that people might develop autobiographical memory loss following emotional shocks or traumatic experiences. However, our data are not in favour of such an interpretation because claims of (dissociative) retrograde memory loss are oftentimes based on a subjective metacognitive judgment (i.e., self-reports) and thus may be inaccurate. Furthermore, given the debateable validity of the construct of dissociative amnesia, we do not have solid evidence to assume that traumatic events lead to dissociation, and consequently to memory loss (e.g., Merckelbach & Patihis, 2018). For instance, Goodman and colleagues (2003) showed that forgetting was an uncommon experience among survivors of (documented) child sexual abuse. Additionally, some authors raised fundamental concerns related to the qualifier "dissociative". In essence, because the label "dissociative" could conceivably refer to different phenomena (e.g., from absent-mindedness to derealisation and depersonalisation; Briere et al., 2005; Lynn et al., 2019), scholars seldom find a common ground in entailing what is exactly "dissociative" in these instances of memory loss (Mangiulli et al., in press). In sum, it appears that some people might confound normal mnemonic mechanisms (e.g., ordinary forgetting) with dissociative amnesia. This, moreover, could be even amplified by a widespread idea about what might be considered as (dissociative) traumatic event.

Still, based on the entire sample (N = 1017), the prevalence of people who claimed to have suffered from dissociative amnesia and eventually recovered their memories ranged from 15.7 to 22.9% (when in concurrence with other organic memory impairments, i.e., combination of both dissociative and organic self-reported amnesia). When looking at how people recovered their memories, psychotherapeutic interventions helped in a minority of the cases, namely in 7.7–11% of participants who claimed to experience dissociative amnesia, or this latter issue also in combination with organic memory loss. Interestingly, this proportion of participants who recovered memory during psychotherapy is quite similar to that revealed by Patihis and Pendergrast (2019) about people indicating that they came to remember being abused as a child during the course of therapy (i.e., 11.3%). A variety of psychotherapeutic orientations was observed, particularly extending the range of those indicated so far as primary support to recover dissociative memories (e.g., hypnosis; Kritchevsky et al., 2004; Lee et al., 2011). For instance, attachment-based therapy was far more often reported than traditional orientations such as psychodynamic, or even "popular" approaches like EMDR. Yet based on the entire sample (N = 1017), in the majority of the situations (58.5-63.7%; when in concurrence with other organic memory impairments, i.e., combination of both dissociative and organic self-reported amnesia), talking with family members and/or friends appeared to be the most successful way for some participants to recover their purported dissociative memories. Of course, because we do not know the ground truth concerning the amnesic content claimed by participants, it would be speculative questioning how well those memories were accurately restored in such contexts. Still, some indications from recent work on recovered memory for traumatic events outside the therapeutic setting (see Dodier et al., 2019), suggests how, most of the time, those recovered memories might have nothing to do with repression or dissociation, but in fact simply reflect continuous memories. Perhaps, the fact that majority of people, who selfreported dissociative amnesia, has claimed to have recovered their memories outside this setting might have led them to also disagreeing to a lesser extent, than the rest of the sample, with the idea that traumatic experiences can accurately be restored in psychotherapeutic settings.

## On the relationship between claiming and believing in dissociative amnesia

In general, participants displayed high levels of belief in dissociative amnesia. Notably, more than 60% of our entire sample agreed with controversial notions concerning both the cause and the underlying mechanism of dissociative amnesia. That is, our participants believed that being exposed to trauma during childhood would increase the likelihood of developing amnesia for those events. In the same vein, they also strongly agreed that the humans' mind is capable to unconsciously block traumatic memories prior to recovering them. As it stands now, beliefs concerning dissociative amnesia were widespread and in line with recent work showing strong beliefs in repressed memory (e.g., Ost et al., 2013, 2017; Otgaar, Howe, Dodier, et al., 2021; Patihis et al., 2014). Indeed, by roughly matching our items with those usually used in previous research (e.g., "Traumatic memories are often repressed"; Otgaar et al., 2020), one can reach the conclusion that beliefs in repressed memory and dissociative amnesia are, to some extent, very much alike. These ideas, which lack empirical evidence (Merckelbach & Patihis, 2018; Otgaar et al., 2019; Otgaar, Howe, Dodier, et al., 2021; Patihis et al., 2014), can have severe consequences outside the academic setting. For one thing, they can lead people from the general population to believe and interpret instances of normal memory gaps as a reflection of hidden traumatic memories (e.g., sexual abuse; Dodier & Tomas, 2019; Otgaar et al., 2019).

Moreover, the readers should notice that, despite the high rate of agreement with statements in "nonamnesic" participants, some of those beliefs in dissociative amnesia seemed to be more prevalent among people who actually claimed to have experienced traumatic and/or stressful memory loss. In other words, we found that some beliefs (e.g., "People suffering from amnesia for traumatic events have their memories unconsciously blocked for many years prior to recovering them") were more pronounced among those who self-reported suffering from dissociative amnesia, as compared with other people who did not make such a claim. Even though it might seem obvious at first glance, this relationship leads to further questions that deserve some consideration. From our data, it is not possible to establish a causal link between those two factors. Yet as contended by some scholars (McNally, 2004; Pope et al., 2007), the construct of dissociative amnesia might not reflect a natural, innate people's psychological ability to dissociate from traumatic memories, but rather a "culture-bound" disorder. That is, Pope and colleagues (2007) argued that dissociative amnesia is a product of our modern Western culture flourished from the cultural background of Romanticism (Ellenberger, 1970), fed by writers like Freud and Janet (Young, 1995), and survived until nowadays. Hence, one might wonder whether self-reported claims of dissociative amnesia are, so to say, encouraged by strong beliefs in this phenomenon. Or, conversely, whether it is an initial strong belief in dubious mechanisms concerning dissociative amnesia that leads people to interpret and consider memory gaps, even those following traumatic autobiographical experiences, as being dissociative in nature.

Critics also suggested that dissociative amnesia may be created, and perhaps unintentionally fulfilled, by social pressure originating from therapists, media, and books (e.g., Lilienfeld et al., 1999; Pope et al., 2006). Perhaps not surprising, thus, regardless of having reported any type of amnesia in their life, our participants indicated that they learnt about memory loss mostly during the course of their education (i.e., approximately one fourth of the entire sample). Yet internet was a source of knowledge as relevant as the latter one, especially when taking in consideration those who claimed to have suffered from dissociative amnesia. Needless to say, our data restrict us to draw a causal relationship between high beliefs in dissociative amnesia and how participants gained knowledge about it. Still, another empirical question herein might be whether those erroneous beliefs might be corrected when providing people with current knowledge on the aspects of dissociative amnesia. Recent findings, for instance, showed that students who initially strongly agreed with statements such as "Traumatic events can be unconsciously blocked", eventually correctly changed those beliefs after taking a course about the science of (eyewitness) memory (Sauerland & Otgaar, 2021).



## Self-reports of feigned amnesia in everyday life

A compelling number of participants had admitted to feigning amnesia in their life (16.9% of the entire sample), and, interestingly, the majority (62.8%) of those who did so had also claimed to have experienced memory loss in their life. Overall, our participants feigned amnesia mostly once during their life, usually for a short period of time (e.g., 1 day), exacerbating retrograde memory impairments. Interestingly, when looking at the descriptions (see Footnote 4) reported by participants concerning the content of their feigned memory loss, some participants claimed that they pretended not to remember some periods of their life (e.g., childhood), while others lied in order to avoid embarrassing or awkward situations and arguments, duties at work, and even some occurring situations, such as anniversary or birthday. Once again, even when pretending, some participants apparently mixed up what should actually reflect a memory deficit (i.e., amnesia) with instances of more ordinary mnemonic mechanisms (e.g., normal forgetting). Moreover, and of importance, we found that more than half of those participants who had pretended to suffer from amnesia, eventually encountered some difficulties in retrieving genuine memory for the same event for at least a short period of time (e.g., 1 day or less). These findings are not only in line with experimental studies on the memory-undermining effect of simulated amnesia (e.g., Mangiulli et al., 2018, 2019; Van Oorsouw & Merckelbach, 2004), but also with very recent work on the prevalence of lying among the general population. That is, Riesthuis and co-workers (in press) recently observed that 41% of their participants admitted that they once simulated memory loss, and the majority of those eventually came forward with the truth. Of that latter sub-sample, 64.1% claimed to have difficulties in retrieving the original event, likely because of initially having pretended memory loss. Hence, even though we cannot know whether those participants experienced full or partial genuine forgetting for the original experience(s), our data suggest that the detrimental effect due to the act of feigning amnesia for an event might not be just a laboratory artefact.

#### **Limitations**

Some limitations concerning our survey need be addressed. To begin with, our data might bear limited relevance to the clinical setting. For instance, Qualtrics failed to record our participants' location information through MTurk. For that reason, even though MTurk users are primarily from the United States and India (Casey et al., 2017; Paolacci et al., 2010), we cannot fully relate our results to a specific population. Second, and perhaps more importantly, we did not ask our participants whether they received a diagnosis of amnesia, irrespective of its nature. It might well be the case that some people claimed to have suffered from memory loss even though

they were never assessed for it. Third, we revealed that also other psychotherapeutic orientations (e.g., attachment-based therapy) might be involved in the process of restoring participants' ostensibly dissociative memories. However, we do not know whether our participants underwent treatment because of the nature of their memory deficit, or perhaps were already in therapy for other psychological issues prior to purportedly retrieving memories. In this latter respect, furthermore, we cannot fully infer the temporal relationship between the moment in which emotional shocks or traumatic experiences have taken place and participants' onset of amnesia. Even though the amnesic onset is said to be sudden when triggered by such events, especially in localised dissociative amnesia cases their onset may be delayed for hours, days, or longer (APA, 2013, pp. 299-300). It would be worth it in future research to investigate the temporal relationship between the amnesic onsets and traumatic or stressful triagers.

Fourth, participants' memory loss claims were selfreported, and it was us, the researchers that grouped their responses under specific labels (e.g., dissociative amnesia) in alignment with definitions of dissociative amnesia (e.g., in the DSM-5). In future studies, it would be interesting to see if participants would self-chosen the label dissociative amnesia in addition to answering relevant questions accordingly, and to further examine participants' amnesic self-reports of the aetiology of their memory loss. Moreover, our data regarding the occurrence of (dissociative) amnesia among the general population should be tempered by the fact that self-reported memory impairments are not always accurate, and that it might be difficult for participants to estimate the duration of their memory loss retrospectively. This is equally valid for people's feigned amnesia claims and possible duration of their consequent memory impairments (i.e., the memory-undermining effect of simulated amnesia).

Finally, it should be noticed that our set of questions referring to participants' acquired knowledge about memory loss was quite broad. For instance, we did not specifically ask whether participants learned only about dissociative amnesia. Although we might assume that, for instance during the course of their education, participants learnt about both organic and dissociative memory loss, future studies could strictly narrow down the questions concerning only the knowledge about dissociative amnesia. By doing so, it could be examined whether controversial beliefs about dissociative amnesia (and repressed memory too) might be driven by some particular sources of information (e.g., media and books) and/or specific knowledge acquired during education (e.g., teaching of Freudian theories during high school/university).

## **Conclusion**

In the current article, we demonstrated that a non-trivial number of people claimed to have suffered, even more than once, from retrograde dissociative amnesia, albeit largely different psychological causes triggered their amnesic onsets (e.g., amnesia for war combat vs. forgetting an anniversary). As a matter of fact, even when pretending, participants tended to claim memory loss following situations that would not always resemble a proper inability to remember autobiographical information usually of traumatic or stressful nature. Perhaps the occurrence of dissociative amnesia that we found was amplified by a quite broad idea concerning memory loss for traumatic or stressful autobiographical information (Mangiulli et al., in press), and by a confusion between what is meant to be dissociative amnesia and other normal instances of forgetfulness.

Our data imply that beliefs in dissociative amnesia are quite prevalent among the general population, and particularly among those who reported to have suffered from it, despite the elusiveness of dissociative amnesia in itself (Mangiulli et al., in press; Otgaar et al., 2019). Given the prevalence, as well as the repercussions, that beliefs in both dissociative amnesia and repressed memory might have in real-life situations (Dodier & Tomas, 2019; Otgaar, Howe, Dodier, et al., 2021; Patihis et al., 2014), a logical step forward would be to empirically compare those two concepts. Undoubtfully, this will likely emphasise the already existing feeling that "memory wars" are far to be over (McNally, in press; Otgaar et al., 2019; Patihis & Pendergrast, 2019). In this regard, thus, memory scholars and clinicians are called to keep contributing to the debate surrounding the existence of dissociative amnesia.

## Notes

- Qualtrics is a business operating system that captures and stores data from customers in a single system of record (www.gualtrics.com).
- We originally included 3 additional statements concerning, to some extent, the overall amnesic functioning (e.g., "People suffering from amnesia forget how to use common objects, such as forks, computers or cars"). Frequencies analyses concerning those statements are shown in Appendix E in supplemental materials.
- All ORs indicate the odds ratio of the two variables calculated as dichotomous form (yes, not yes).
- 4. We also asked our participants to freely describe the cause for which they experienced amnesia. The answer to this open question was not required (i.e., non-mandatory answer), so not all participants responded to it.

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#### **ORCID**

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