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Laypeople's Prevalence Estimates of Malingering: Survey Data from the Netherlands

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Objective: Noncredible symptom claims not only occur in a sizable number of forensic cases, but also in clinical contexts. Health providers and forensic experts are confronted with the question of whether individual symptom claims are genuine, grossly exaggerated, or even invented. We investigated laypeople's prevalence estimates, their attitude and beliefs about malingering. **Method:** Extending a survey format from a previous Swiss study, we analyzed responses from 975 adult Dutch nationals who responded to an online structured interview on their assumptions and attitudes about malingering (in Dutch language sense of intentional symptom fabrication with an external goal). **Results:** Participants estimated that a sizeable minority of cases in different prototypical situations feigned symptoms to achieve external goals. They estimated that malingering most commonly occurs in offenders seeking diminished criminal responsibility. One in every seven participants admitted having malingered themselves, and many were confronted with malingering by family members, work colleagues, friends, or neighbors. Although the majority morally condemned malingering, a sizable minority admitted that malingering might be an option for themselves. Participants generally favored an adaptational and a criminological explanatory model of malingering (35% each). **Conclusions:** The high prevalence of noncredible symptom claims suspected by laypersons in diverse clinical and legal contexts corresponds to base rate estimates derived from numerous other surveys and group studies. Myths perpetuated by some clinical and forensic workers are seriously challenged by laypersons' opinion, based on their very personal social perceptions of the reality, and on their admission of having feigned symptoms in the past themselves.

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Public Significance Statement

Noncredible symptom presentations (malingered symptomatology) are a major problem both in health care and in forensic referral contexts where significant gain expectations are usually present. Some experts maintain that the problem is negligible, but growing evidence demonstrates the opposite. The results of this survey show that malingered symptom presentations appear to occur on an everyday basis, they are an option for many people, and they should be ruled out proactively by health providers and forensic examiners alike.

Keywords: malingering, symptom invention, forensic assessment, attention deficit hyperactivity disorder, survey

Problematic illness presentations, such as factitious disorder, symptom exaggeration, and malingering, pose an enormous burden not only on treatment resources and costs but also on national economies, social security, and welfare systems (e.g., Chafetz & Underhill, 2013; Horner et al., 2014). Among problematic illness presentations, malingering is the one that has attracted most attention in the psychological and medical literature in the last three decades, since the beginning of the era of modern symptom validity assessment. In its early phase, validity assessment was treated as equivalent to malingering assessment, an equation that has been revised on a conceptual level (e.g., Merten & Dandachi-FitzGerald, 2022).

Malingering is the deliberate invention or gross exaggeration of health problems (symptoms), motivated by external incentives (such as monetary compensation, avoidance of punishment, sick leave, early retirement, etc.). In contrast to *pure malingering*, *partial malingering* refers to an exaggeration of symptoms of a condition that, in fact, exists. In English language conceptualization, *false imputations* are also included in the term malingering. A false imputation is “the attribution of actual symptoms to a cause consciously recognized by the individual as having no relationship to the symptoms” (Resnick et al., 2008, pp. 111–112).

In contrast to other problematic illness presentations (in particular, to factitious disorder), malingering is well-known by laypersons, so much so that it appears to be safe to say that (nearly) *everybody knows what malingering is*. The predecessors of feigned behavioral manifestations are even known in the animal kingdom (such as “injury feigning” by birds, e.g., Cruickshank et al., 1936, or malingering-like behavior in monkeys, e.g., Byrne & Stokes, 2003).

Base rate estimates of malingering continue to be discussed in the literature and they continue to be subject to controversy. Empirical research, survey data included, yield a highly heterogeneous picture, with estimates of malingering, noncredible symptom presentations or invalid test profiles varying from numbers of about 5% in some patient groups (e.g., Martin & Schroeder, 2020; Ruff et al., 2016; Schroeder et al., 2022) to above 50% in some critical forensic referral samples (e.g., Ardolf et al., 2007; Chafetz et al., 2007; Grills & Armistead-Jehle, 2016; Schmand et al., 1998; Streppel & Brusis, 2010). In a review article, Young (2015) judged that “it is difficult to arrive at one percentage or range of percentages that are definite about the proportion of malingering found in forensic disability and related examinations” (p. 196). He proposed a number of about 15% as the most appropriate estimate of malingering, in disability, forensic, and clinical contexts combined. Why it is so difficult, if not impossible, to arrive at reliable prevalence estimates for malingered symptom presentations was discussed in some more detail by Merten and Merckelbach (2020). All we know for sure, it may be said, is that noncredible, invalid symptom presentations occur in a sizable proportion of cases where external gain expectations are an issue.

However, despite all evidence from different regions of the world and a variety of cultural and social-welfare contexts (e.g., Arin, 2012; Quezada-Ortega et al., 2006; Weiss & Rosenfeld, 2010), false myths about malingering prevail in some professional groups and seem to be repeated without accepting evidence from the last three decades of intense research (e.g., González Ordi et al., 2013; Jelicic et al., 2017, for related misconceptions and myths). One of those long-living myths is that “pure malingering” be a rare phenomenon

(e.g., Widder et al., 2016), while, in truth, nobody knows how often it occurs. Rather, evidence from large-scale criminal networks with high numbers of invented disability claims reveals that the presentation of deliberately false health problems constitutes a real challenge to social security systems (e.g., Deutsche Rentenversicherung, 2017; Hoffmann, 2019; Kleideiter, 2017, for publicized large-scale organized social security fraud networks). What can be said with some confidence is that gross exaggeration of current or past symptoms is likely to be more frequent than pure malingering of nonexistent illness or injury (e.g., Nies & Sweet, 1994).

In a series of studies, Rogers and his coworkers conceptualized three distinct explanatory models of malingering to which practitioners and researchers may adhere (e.g., Rogers, 1990; Rogers et al., 1998). First, a *pathogenic* model, most prevalent in the early psychodynamic literature, tries to explain malingered symptom presentations as attempts to control actual, underlying psychopathology.

Thus, Klumbies (1980) described a process in which malingered symptom production, which initially constituted a conscious, reflected, goal-directed behavior, may transform into self-deception. For this process, he coined the term “simulative autosuggestion.” At the end point, when autosuggestion was fully functional, Klumbies assumed it to be unconscious and no longer under control by the person’s volition. He thought that those cases described by Sigmund Freud as conversion neuroses could be explained by such transformation.

The second model was called *criminological*. It primarily conceived malingering as an expression of antisocial behavior. The criteria of the *Diagnostic and Statistical Manual of Mental Disorders*, ever since its third edition, *DSM-III* (American Psychiatric Association, 1980), follow such a conception without notable modification. In contrast to these two models, the seminal work by Rogers (1990) or Rogers et al. (1998) appears to favor an *adaptational* model to explain (and possibly comprehend) the majority of attempts to feign health complaints. Following this model, malingering is understood as a result of a risk-benefit analysis by the person in question, as their constructive effort to obtain benefits in a given situation while avoiding potential negative consequences.

Because of their high adherence to mostly subjective and unverifiable patient report, clinical

expert opinions in psychotraumatology, pain assessment, and psychosomatic medicine as well as in cases of mild traumatic brain injury and claimed chronic fatigue appear to be particularly vulnerable to mistake invented or grossly exaggerated symptom claims as truthful (e.g., Rickards et al., 2018). Accordingly, Aita et al. (2020) listed chronic pain and posttraumatic stress disorder as “high-risk conditions” for malingering, next to traumatic brain injury, attention deficit hyperactivity disorder (ADHD), and severe psychiatric illness (also cf. Martin & Schroeder, 2020). Clinicians tend to believe the subjective symptom claims and reported history without carefully checking its plausibility, consistency, and possible hidden agendas. Consequently, many diagnoses are primarily, sometimes exclusively, based on self-reported symptomatology. However, such a truth bias is not only costly to health providers and social security systems, but can also cause direct harm to the patient in question (e.g., van der Heide et al., 2020). Against the background of a continued controversy in the German-speaking countries about how to best assess feigned symptom presentations (cf. Schmidt et al., 2011), Schlicht and Merten (2014) performed a pilot study to investigate public opinion about malingering. First, an analysis of 67 newspaper reports available through the Internet revealed a large coverage of cases of malingered health complaints. The articles analyzed for that study frequently resorted to pejorative language and combat rhetoric, apparently aiming to arouse indignation or outrage in the readership. Indeed, as far as German language psychiatric literature is concerned, it appears to continue to significantly adhere to pathogenic models of malingering, but the vocabulary and style used by some authors of published resources also reveals adherence to criminological models (e.g., Hoffmann-Richter et al., 2012).

Second, a small convenient sample of 15 healthy German participants underwent a structured interview with regard to their personal experience with malingering. While the newspaper articles were rated to mostly adhere to the criminological explanatory model, the participants favored an adaptational model of malingering. Laypersons admitted to be largely acquainted with feigned health presentations, either from their own personal experience or from friends, family members, or colleagues. Base rate estimates of malingering in five prototypical contexts (sick leave, early retirement, compensation after a

motor vehicle accident, reduced criminal liability, and compensation after criminal assault) yielded mean scores between 46 and 67% of all cases. This means that the participants judged that roughly half to two-thirds of all (German) individuals would try to grossly exaggerate or invent symptoms when being involved in those situations.

Merten and Giger (2018) extended these estimates to a sample of 39 adult Swiss nationals, with very similar results. The prototypical situations were extended to false claims crime-related amnesia and attempts to be exempt from military service (which continued to be compulsory in Switzerland, but not in Germany). Again, participants favored an adaptational model for understanding feigned symptom presentations. Base rate estimates of patients or claimants feigning symptoms in prototypical contexts ranged from 39% (early retirement cases) to 63% (exemption from military service).

Cartwright and Roach (2016) reviewed the responses of 197 laypeople from Britain to the research question of “how likely participants were to engage in different types of malingering” (p. 451), following a hypothetical road traffic accident scenario. Because of a different methodological approach, numbers cannot directly be compared to those of the two studies cited above. Nonetheless, the results showed that a substantial percentage of the participants admitted they might be tempted to engage in either pure or partial malingering or false imputation when claiming depression, posttraumatic stress or whiplash injury as sequelae of an accident. Thus, 20.3% of the participants responded that they were willing to exaggerate insurance claims. In contrast, 9.1% of participants reported that they would be likely to engage in *pure malingering*.

The present study sought to replicate and extend the results of the earlier surveys by Schlicht and Merten (2014) and Merten and Giger (2018) to a larger sample from the Netherlands. Using current online survey methodology, a large sample from the general population could be investigated with a limited employment of resources. The core survey was identical with that used in the two pilot studies, but a supplemental set of items concentrated on feigned ADHD which is one of the main research foci of the research group involved in this study (e.g., Fuermaier et al., 2021; Tucha et al., 2015). With the set of items detailed below, the study aimed to

gain more insight into the picture of feigned health complaints from the perspective of nonexperts. This was thought to complement a growing number of studies in which expert views on malingering were surveyed (e.g., Dandachi-FitzGerald et al., 2013; Martin et al., 2015; Mittenberg et al., 2002).

Method

Sample Recruitment and Selection Procedure

Participants were recruited from a pool of panel members registered at *PanelInzicht*, a Dutch online platform which invites interested members of the public to take part in online studies in exchange for financial reward. Participants received 0.93 Euros (an equivalent of roughly 1 U.S. \$ at that time) for their participation. The questionnaire was designed and implemented with *Qualtrics* survey software and invited adults aged 18–65 years from the Dutch community between 18 June and 5 July, 2021. An initial sample of 1,339 participants accepted the invitation and started working on the survey. Eighty participants from this sample were excluded from further analysis because they completed less than two-thirds of the survey questions. This exclusion resulted in 1,259 participants with a majority of responses given which were considered in further analyses.

Because online survey responses are known to be particularly vulnerable to careless responding (e.g., Ward & Meade, 2022), three experimental compliance checks were implemented into the survey at different points. Participants were given three basic mathematical items (e.g., assume that 20% of a total group of 200 persons feign symptoms. How many persons would feign symptoms?). This type of percentage problems was chosen because they had to yield part of their estimates in percent, so a basic understanding of the mathematics was a prerequisite for valid responding. It turned out that a substantial number of participants gave nonsense or highly suspect or inconsistent answers (e.g., “30,000,000,” “I am unable to calculate anything,” or “ijhgfrtyjk”). Thus, as an inclusion criterion, participants were required to solve at least two of the three tasks. On this basis, 213 of the 1,259 participants were excluded, resulting in a sample size of 1,046. Finally, the individual times to

complete the survey was checked. It varied between less than 3 min to more than 6 days, with a highly skewed distribution and a (plausible) medium score of 11.6 min. On this basis, all response times below 5 min and above 120 min were judged to be suspect of an unreliable response

behavior. This led to the exclusion of the fastest 3.8% and the slowest 3.0% of the sample.

After the selection procedure, we had full response patterns for the first part (Table 1) and incomplete responses in the second part (ADHD questions, Table 2) for nine participants.

Table 1
Questions Presented to the Participants in Online Format

No.	Contents
1.	What percentage of all Dutch people, do you think, malinge symptoms (make up symptoms ^a)?
2.	Have you ever been in contact with people who malingered symptoms, such as family members, friends, colleagues, neighbors, etc.?
3.	Have you ever malingered any symptoms yourself?—Specify: physical, mental, or both kinds of symptoms. —Specify: which symptoms?
4.	What percentage of all Dutch people, do you think, would malinge symptoms to obtain an advantage in the following situations: <ol style="list-style-type: none"> 1. Asking for a sick leave certificate from the general practitioner? 2. In an independent medical examination, seeking early pension. 3. Having been victim of a motor vehicle accident and seeking compensation for presumably associated health problems. 4. Having been victim of a crime and seeking compensation for presumably associated health problems. 5. Having committed a criminal offence and seeking diminished legal responsibility or exemption from punishment. 6. Seeking prescription of a medical drug.
5.	Do you believe that you may feign symptoms in the following situations? (a to f from Question 4)
6.	[Only for participants who reported having feigned health problems.] How do you feel when you feign symptoms? [Only for participants who reported not having feigned symptoms in the past.] How would you feel in a situation where you feigned symptoms? <ol style="list-style-type: none"> 1. I feel or would feel guilty. 2. I feel or would feel thrilled. 3. I feel or would feel satisfied with the result. 4. I feel or would feel neutral. (multiple responses possible)
7.	In the following situations, how would you judge the act of malingering symptoms to achieve a certain goal, in moral-ethical terms? <ol style="list-style-type: none"> 1. In general 2. To get a sick leave from the general practitioner. 3. In an independent medical examination, seeking early pension. 4. Being victim of a motor vehicle accident and seeking compensation for presumably associated health problems. 5. Being victim of a crime and seeking compensation for presumably associated health problems. 6. Seeking diminished legal responsibility or exemption from punishment, after having committed an offence. 7. Seeking prescription of a medical drug. Chose one responses for every situation: very bad—bad—no opinion—good—very good
8.	Now, imagine persons who are malingering symptoms. What percentage of attempts to malinge symptoms can be explained by the following constellations? (The three given number must sum up to 100.) <ol style="list-style-type: none"> 1. It is an act of fraud committed in a cool and unscrupulous manner. % 2. The behavior of the person in question reveals a mental disorder (because a healthy person would not do something like this). % 3. The person in question is in a situation in which this appears to be the best behavioral option. %
9.	In some situations (such as early pension claims, compensation seeking, claimed diminished criminal responsibility), experts are employed to examine the physical and mental health of the claimants. Now imagine that a patient who is making up symptoms is examined by an expert. How often, do you think, experts will be able to detect the malingering? %
10.	Now imagine that a patient is suffering from genuine symptoms. How often, do you think, experts will misdiagnose the real symptoms as feigned symptoms? %

^a See Footnote 1 in the text for understanding that only one aspect of *malingering*, symptom invention or fabrication, is grasped by the Dutch *simulatie*.

Participants

After application of these steps of plausibility and reliability checks of the data set, the resulting final sample comprised $N = 975$ respondents. These were 370 men (38%) and 605 women with a mean age of 50.6 years ($SD = 11.1$) and an age span between 18 and 65 years.

Education was assessed with self-reported highest level of achievement based on the Dutch Education System. Eleven participants (1.1% of $N = 975$) reported having completed primary education as highest educational degree, 104 (10.7%) participants indicated prevocational education, while 329 (33.7%) participants additionally completed vocational training. Ninety-four (9.6%) participants successfully completed higher secondary general education, and 42 (4.3%) participants obtained higher secondary prescientific education. Two hundred fifty-eight participants (26.5%) indicated to have a bachelor degree, and 126 (12.9%) reported to have a master degree (both including Universities and Universities of Applied Science). Eleven (1.1%) participants reported to have a PhD degree.

Material

First, the participants were asked to give their personal definition of malingering.¹ This was followed by the explanation that, in medicine, malingering of symptoms (in Dutch: *het simuleren van symptomen*) was defined as the conscious invention or fabrication of symptoms with the intention to gain a defined goal, such as sick leave, exemption from unpleasant work or tasks, exemption from military service, early pension, monetary compensation, or the prescription of a medical drug. Then, the questions were given, as presented in Table 1.

This catalog of questions was adapted from the Merten and Giger (2018) study in Switzerland. As in that study, adherence to the explanatory models of malingering (Rogers, 1990) was assessed by presenting core statements of the three models (e.g., "The behavior of the person in question reveals a mental disorder, because a healthy person would not do something like this"; for a quintessential description of the pathogenic model, see Table 1).

This was followed by a number of additional questions related to malingered adult ADHD (its frequency, advantages and disadvantages; Table 2). The survey finished with the request to the participants to imagine persons who were malingering

adult ADHD and compare them with nonmalingerers. The question was if the ADHD malingerers were thought to be involved more frequently in other acts of malingering (using the same prototypical situations as in the first part of the interview). A 5-point Likert format was used.

Results

The percentage of Dutch people who have been engaged in malingering (in the above Dutch language sense of symptom invention) was judged, on average, to be as high as 31.2%, that is one in every three persons ($SD = 19.8$; $Mdn = 29\%$; Question 1). The range of given answers varied between the extremes of 0% (nobody) to 100% (everybody). About 22.7% of the participants (of $N = 975$, for all numbers given for the first part of the interview, Table 1) reported having had contact with people malingering symptoms within their families, 24.9% among their friends, 38.9% among their colleagues, and 15.4% in their neighborhoods (Question 2).

About 14.3% of participants admitted that they had feigned symptoms themselves at some point in the past (Question 3). Of those respondents who specified the chosen symptomatology, the majority (55%) had malingered physical symptoms, a minority (7.4%) mental symptoms, and a sizable proportion (37.5%) both physical and mental symptoms.

With regard to prototypical constellations (Question 4), the responses are summarized in Table 3. Almost half of the respondents would expect most invented symptomatology in the context of avoiding criminal responsibility. Although a nontrivial, sizable minority of cases was judged to be linked with malingered symptoms in all prototypical constellations, the estimates were lower than those obtained in the previous studies in Germany and Switzerland. The same is true for the question, if faking-bad would be an option for the participants themselves if they were in such a situation (Question 5). The highest rate of affirmation was obtained for compensation seeking in personal injury cases,

¹ For understanding the international literature, it is important to know that, similar to some other languages, the Dutch term *simulatie* as well as the German term *Simulation* are equivalent to that aspect of malingering that covers the invention or fabrication of symptoms, not just a gross symptom exaggeration, and not false imputations. In this sense, when asked about personal experience and estimated prevalence rates of *simulatie*, the responses mostly cover the domain of symptom invention.

Table 2*Questions About Attention Deficit Hyperactivity Disorder Presented to the Participants in Online Format*

No.	Contents
11.	Have you ever heard of attention deficit hyperactivity disorder (ADHD) in adults?
12.	Have you ever considered malingering ADHD yourself?
13.	Do you know anyone who has received an ADHD diagnosis, but is actually pretending to have or grossly exaggerating his/her symptoms? 1. Yes, this is a student. 2. Yes, this is not a student. 3. Yes, I know of both. 4. No.
14.	What percentage of students with an ADHD diagnosis, do you think, does in actuality not have ADHD because he/she malingers their symptoms?
15.	What percentage of all adults (excluding students) with an ADHD diagnosis, do you think, does in actuality not have ADHD because he/she malingers their symptoms?
16.	Do you think it is easy to malingering ADHD symptoms?
17.	Do you think there are advantages to malingering ADHD symptoms? Yes (namely: ...)/No
18.	Do you think there are disadvantages to malingering ADHD symptoms? Yes (namely: ...)/No
19.	Have you ever used stimulant medication (i.e., medication for ADHD) without a prescription from a medical doctor?
20.	Do you know a student who is using (or has used) stimulant medication (i.e., medication for ADHD) without a prescription from a medical doctor?
21.	Do you know anyone who is not a student but is using (or has used) stimulant medication (i.e., medication for ADHD) without a prescription from a medical doctor?
22.	What percentage of experts can, in your opinion, accurately judge whether ADHD symptoms are genuine or malingered?
23.	Imagine that you would compare people who malingering ADHD symptoms with people who do not malingering ADHD symptoms. Do you think that people who malingering ADHD symptoms would more often or less often also malingering symptoms in the following situations? 1. In general. 2. To get a sick leave declaration from the general practitioner. 3. In an independent medical examination, seeking early pension. 4. When being victim of a motor vehicle accident and seeking compensation for presumably associated health problems. 5. When being victim of a crime and seeking compensation for presumably associated health problems. 6. Seeking diminished legal responsibility or exemption from punishment, after having committed an offence. 7. Seeking prescription of a medical drug. Chose one responses for every situation: far less often—less often—equally often—more often—far more often

caused either by an offender (44.6%) or by a motor vehicle accident (39.9%).

Participants who had reported having feigned health problems in the past mostly reported feelings of guilt (80.6%), but 16.5% of them also admitted feelings of thrill (Question 6). Satisfaction with the result of malingering was reported by 46.0% of the respondents while 39.1% reported having felt neutral. Those participants who had not responded having malingered in the past themselves thought malingering would mostly be accompanied by feelings of guilt (91.6%). About one in every five respondents reported expectations of feeling neutral (21.7%) or satisfied with the results (22.9%), while only 7.1% expected to feel thrilled in the context of feigning health problems. For all four emotional categories, the

differences between the two subgroups were significant (separate crosstabulation testing, with χ^2 from 21.90 to 42.28, all $p < .001$).

With regard to the moral dimension of malingering (Question 7), 80.5% of the respondents chose a negative category (bad or very bad), while only 1.6% of the respondent judged such behavior to be good or very good. There was some variation among the specified prototypical situations, with the least severe moral judgement for health problems malingered by victims of a criminal offence (57.6% bad or very bad, 9.4% good or very good) to the lowest scores of acceptance for offenders who seek diminished criminal responsibility (82.7% bad or very bad, 2.3% good or very good).

Table 4 presents the results of the participants' responses about how to assess malingering

Table 3

Prevalence of Malingering Estimates Given by the Participants for Different Referral Contexts (Questions 4 and 5 of the Interview)

Referral domain/referral question	Estimated prevalence of malingering (%)			Malingering might be an option for the respondent (%)	Percentages reported in two previous studies (%) ^{a, b}
	Range	<i>M</i> (<i>SD</i>) [<i>Mdn</i>]	Comparison values from two previous studies ^a		
Clinical: obtaining sick leave from the general practitioner	0–100	30.0 (21.8) [25.0]	55.9 (22.2) 41.9 (29.2)	26.6	66.6 20.5
Clinical: prescription of a drug	0–100	32.6 (23.9) [27.0]	— —	25.9	— —
Civil forensic: early pension	0–100	23.6 (21.5) [16.0]	46.2 (26.3) 39.0 (27.7)	18.7	60.0 23.1
Civil forensic: compensation after motor vehicle accident	0–100	36.4 (24.3) [30.0]	49.1 (28.1) 45.1 (28.6)	39.9	53.3 46.2
Criminal forensic: diminished criminal responsibility	0–100	47.4 (28.4) [47.0]	66.8 (22.1) 60.6 (26.8)	35.9	66.6 56.4
Criminal forensic: crime-related amnesia	—	—	— 60.9 (28.3)	—	— 51.3
Forensic—civil and social legislation: compensation for victims of a criminal act	0–100	36.1 (25.2) [30.0]	53.2 (22.7) 49.2 (27.1)	44.6	66.6 59.0
Military forensic: exemption from military service	—	—	— 63.0 (28.0)	—	— 41.0

^a Comparison data from a German pilot study (Schlicht & Merten, 2014; upper line) and data from Switzerland (Merten & Giger, 2018; lower line). ^b Column refers to the question if malingering might be an option for the participants themselves.

behavior in terms of Rogers' explanatory models of malingering (Question 8). While the majority of malingered presentations was judged to be explainable using an adaptational model (35.3%), they thought a criminological explanatory model would apply to nearly as many cases (34.8%), with somewhat less preference for the pathogenic model (29.8%).

The ability of experts to correctly identify fabricated or grossly exaggerated symptom presentations was judged to be poor (Questions 9 and 10). The participants thought on average that only 58.4% of malingered symptom presentations

($SD = 23.3$; $Mdn = 61.0\%$) were correctly identified by doctors, that is 41.6% were not detected. In contrast, a high number (34.3%, $SD = 22.5$; $Mdn = 30.0$) of true symptomatology was thought to be mistaken by experts as malingered presentations (Table 5).

With regard to adult ADHD, 87.3% of the participants responded they had heard of this disorder before (Question 11). Nine participants (0.9% of $N = 975$) had themselves considered to feign adult ADHD (Question 12). Eighty-seven participants (8.9% of $N = 975$) responded they knew people who had the diagnosis of adult ADHD

Table 4

Layperson's Attribution of Malingered Symptomatology to Three Explanatory Models (Rogers, 1990), Question 8 of the Interview

Model	Range	<i>M</i> (%)	<i>SD</i>	Comparative data	
				Merten and Giger (2018)	Schlicht and Merten (2014)
Criminological	0–100	34.8	31.4	32.7% (18.1)	27.1% (20.5)
Pathogenic	0–100	29.8	18.6	25.7% (16.2)	20.3% (10.9)
Adaptational	0–100	35.3	21.7	41.6% (20.9)	52.5% (21.3)

Table 5

Estimated Error Rate of Experts in Their Detection of Malingered Symptoms (Questions 9 and 10 of the Interview)

False classifications	Current results			Comparative data	
	Range	<i>M</i> [<i>Mdn</i>]	<i>SD</i>	Merten and Giger (2018)	Schlicht and Merten (2014)
Wrongly confirmed malingered symptoms (false-positive rate)	0–100	34.3% [30.0%]	22.5	23.4% (17.3)	34.3% (24.1)
Wrongly missed malingering (false-negative rate)	0–100	41.6% [39.0%]	23.3	33.4% (21.9)	35.9% (18.5)

but behaved in a way as if they would seriously exaggerate their symptoms (Question 13).

As far as university students were concerned (Question 14), participants thought that 22.4% (of $N = 975$) of those with the diagnosis of ADHD had fabricated their symptoms ($SD = 18.3$; $Mdn = 19.0$), in contrast to 19.5% ($SD = 16.8$; $Mdn = 14.0$) in the rest of the population (nonstudents; Question 15). One-third of the respondents (33.3%, $n = 324$ of 974) thought it was easy to malingere adult ADHD (Question 16). Only one-fifth (21.7%, $n = 211$ of 974) of the respondents expected that feigning adult ADHD would be connected with advantages (such as better concentration in healthy people, too; extra time on exams; access to psychostimulants, free of cost; Question 17) while 69.0% ($n = 672$ of 974) expected that such a behavior would rather bring about disadvantages (such as negative side effects of medication; negative impact of wrong diagnosis; moral dilemma, feelings of guilt, etc.; Question 18).

About 2.1% of the participants ($n = 20$ of 973 valid responses) admitted having consumed psychostimulants without a medical prescription (Question 19) while 6.2% ($n = 60$) reported knowing a student who was using psychostimulants without a prescription (Question 20). 3.8% ($n = 37$) reported knowing someone who was not a student and consumed psychostimulants (Question 21). The number of experts who are able to accurately judge whether ADHD symptoms are genuine or malingered (Question 22) was expected to be poor, with an estimate of only 56.4% ($SD = 25.2$; $Mdn = 60.0$).

Persons who malingered adult ADHD were expected to be involved more frequently in other acts of malingering (Question 22; Table 6). Primary at-risk contexts were, according to the participants' judgment, seeking diminished criminal responsibility after having committed an offence

and, directly related to malingered ADHD, seeking unjustified prescription of a medical drug.

Discussion

Ever since the seminal survey by Mittenberg et al. (2002), the international literature has brought about a notable number of expert surveys investigating the prevalence of malingered, feigned, or otherwise invalid symptom presentations both among forensic and clinical patient groups (e.g., Dandachi-FitzGerald et al., 2013; Martin et al., 2015; Santamaría et al., 2013). More recently, a number of surveys from different countries (e.g., from the U.S.: Aita et al., 2020; from the Netherlands: Dandachi-FitzGerald et al., 2020; from Italy: Giromini et al., 2022; from Spain: Puente-López et al., 2022) confirm our main result that noncredible symptom presentations are perceived by experts to occur in a sizable, nontrivial number of cases. Also, in more recent years, noncredible symptom reports in clinical and rehabilitation contexts have increasingly drawn the attention of researchers and practitioners alike (e.g., Carone & Bush, 2018; Martin & Schroeder, 2020; Merten et al., 2020; Schroeder & Martin, 2022). In contrast, some medical and psychological experts appear to continuously adhere to a position accepting clinical patient presentations as genuine, without questioning their validity at all. In this vein, Reuber et al. (2005) had remarked that: "Fortunately, it is rarely necessary for a clinician to determine whether symptoms are intentional" (p. 308, *emphasis added*). Such a position, although avoiding effort and possible conflict for the clinician, may also be highly detrimental to the patient. This is often the case in patients with factitious disorder, to name the most obvious constellation of potential harm unnecessarily caused to mental health patients.

Table 6
Estimated Probability to Malingering in Other Contexts

Context	Expected frequency to malingering in other referral contexts		5-point Likert scale ^a	
	Much less or less frequently (%)	Much more or more frequently (%)	<i>M</i>	<i>SD</i>
In general	17.8	36.1	3.19	0.83
Sick leave from general practitioner	10.0	53.1	3.50	0.80
Early pension	16.4	39.2	3.24	0.86
Compensation claim after MVA	12.9	47.6	3.41	0.86
Compensation claim as crime victim	11.1	49.5	3.46	0.84
Diminished criminal responsibility	9.2	56.4	3.61	0.89
Prescription of a drug	6.0	59.4	3.72	0.87

Note. MVA = motor vehicle accident. Comparison of adults who feign attention deficit hyperactivity disorder with adults who do not.

^a 5-point Likert scale, from 1 (*much less frequently*) to 5 (*much more frequently*), with the point of indifference at 3 (*equal frequency*).

Thus, van der Heide et al. (2020) published two case vignettes in which nondetected feigned symptomatology resulted in potentially harmful interventions. The detrimental effects of false diagnoses in cases of claimed ADHD and other incentivized nonvisible disabilities, their medicalization and overpathologizing have more recently been discussed by Suhr and Johnson (2022) and Harrison (2022).

In the present study, we surveyed Dutch laypeople's beliefs and convictions about malingered health problems using a final sample of 975 participants responding to a set of questions via an Internet research platform. As in two previous studies from Germany and Switzerland (Merten & Giger, 2018; Schlicht & Merten, 2014) with low numbers of participants, the first important result was that a substantial number of respondents admitted having feigned symptoms themselves (14.3%) in the past or knowing people within their families (22.7%), among their friends (24.9%), their colleagues (38.9%), or neighbors (15.4%) who had been engaged in malingering. This result contradicts myths continuously held among some clinicians and even forensic experts that malingering was a rare or even negligible event (e.g., Ramesh, 2013). However, the number of participants who admitted having feigned symptoms themselves at some point in the past (14.3%) turned out to be relatively low, in contrast to results obtained in other studies (Dandachi-FitzGerald et al., 2020: 34.2%; Merten & Giger, 2018: 41.0%; Puente-López et al., 2022: 33.9%). The most plausible explanation for this discrepancy is

the definition of the Dutch *simulatie* to be limited to pure malingering only.

The participants estimated the base rate of malingered symptom presentations in the range of 31.2%. This number is well in line with results from various expert surveys, in particular those estimates published by Mittenberg et al. (2002) for personal injury cases (adjusted base rate: 34.4%) and disability or worker's compensation referrals (32.7%). Other expert surveys yielded similar estimates of noncredible symptom presentations or malingering (e.g., Aita et al., 2020: up to 29.3% of chronic pain patients; Dandachi-FitzGerald et al., 2013: 20% of forensic neuropsychological patients; Puente-López et al., 2022: 20 to 40% of forensic psychological cases). They also compare with the results of another study from the Netherlands. In the Dandachi-FitzGerald et al. (2020) study, 34% of their participants "... said that they were certain that a person they knew had feigned symptoms because the person in question had told them so" (p. 227).

Our participants assumed the highest prevalence to occur for the referral question of diminished criminal responsibility (47.4%), the lowest in persons with early pension claims (23.6%). A sizable minority of participants also reported that malingering would be an option for themselves in one of the described prototypical contexts. Being an innocent victim of circumstances or adverse events appears to facilitate the readiness of people to engage in manipulated symptom presentations, confirmed by 44.6% of the participants if they were victim of a criminal offense and 39.9% of

them in the context of motor vehicle accidents not caused by themselves. It seems as if being a victim is considered as a moral justification to compensation. In this context, parallels to reactions of embitterment as described by [Linden and Rotter \(2020\)](#) are obvious. Thus, [Linden et al. \(2020\)](#) described feelings of injustice and humiliation as the most frequent and most hurting stressors in psychosomatic patients. At the same time, it may be assumed that those feelings can smooth the contrast between objectively unjustified compensation claims and deeply rooted subjective convictions that such compensation awards would be fully justified. [Iverson et al. \(2018\)](#) found that perceived injustice in patients with mild traumatic brain injury, among them victims of motor vehicle accidents and assaults, was not only associated with more reported postconcussive, depressive, and pain symptoms, but also with a higher probability of failing on performance validity tests. In an Australian sample of emergency department trauma cases, return to works after compensable injury was significantly mediated by perceived injustice ([Giummarra et al., 2017](#)). At a different level, [Cartwright and Roach \(2016\)](#) found in the context of motor vehicle accidents that exaggerated (partially malingered) compensation claims are considered to be morally “less of a crime as it is something everybody does” (p. 417).

This corresponds to a further result of our study. A majority of the respondents (80.5%) morally characterized malingering in negative terms (as bad or very bad). However, when they were asked to specify their judgments according to prototypical situations, only 57.6% did so with respect to victims of a criminal offence, 63.7% with respect to victims of a motor vehicle accident, but 82.7% when diminished criminal responsibility was sought.

At a level of emotional reactions, a high percentage of participants reported predominant feelings of guilt in a situation where they had malingering health complaints or imagined they would do so. However, those who had, in fact, malingered symptoms in the past confirmed feelings of guilt more often than those who had not (91.6% vs. 80.6%). Nevertheless, almost half of those who had been engaged in malingering in the past, reported they had felt satisfied with the results. In a broader context, it might be interesting to know if personality traits or social factors are associated with feigned symptom presentations,

underperformance in psychological assessment, or overreporting with respect to symptom claims (cf. [van Helvoort et al., 2022](#)).

With regard to explanatory models of malingering as described by [Rogers \(1990\)](#), most participants adhered to the adaptational and the criminological models while both previous studies had shown a clear preference for the adaptational model. In all three studies, the pathogenic model ranged lower in participants' preference. The dominance of the adaptational model corresponds to a shift in experts' conceptualization of malingering from the 1970s and 1980s (when malingering was understood as being regularly coupled with antisocial personality) to the present times. Adherence to an adaptational model is also able to ensure the maintenance of a positive self-concept. Thus, a victim of a criminal offense or a motor vehicle accident may feel morally entitled to an appropriate compensation, even if this means that the effects of the offense or the accident will be exaggerated or (partly) fabricated. In this context, an association between malingering and cognitive dissonance may be interesting ([Merckelbach & Merten, 2012](#)).

As in the two previous studies, the ability of experts to reliably distinguish between genuine and feigned symptom presentations was judged to be poor, both in terms of false-positive and false-negative determinations. The particularly high rate of 41.6% of failed malingering detection estimated in our study may (at least partially) be based on the personal experience of the participants or observations in their social environment, friends, neighbors, colleagues, or family members, of how easy it appears to convince a doctor to accept an invented or grossly exaggerated symptom report as genuine. The high rate of false-positive determinations of 34.3% appears to be as problematic, if not more so. In symptom and performance validity assessment, a reduction of false-positive errors is considered to be a prime concern, due to the potential negative effects of incorrectly labeling a genuine symptomology as noncredible or feigned. In laypeople's perspective, the ability of experts to reliably distinguish between genuine and feigned ADHD appears to be similarly poor. This is well in line with the description of multiple difficulties in determining genuine ADHD, the large variety of diagnostic approaches used by practitioners in real-world assessment contexts (e.g., [Schneider et al., 2019](#)), and calls for a more systematic use of validity

tests in clinical ADHD assessments (Suhr & Johnson, 2022).

In fact, results from early malingering research demonstrated how difficult it is for experts and would-be experts to reliably distinguish between true and false contents of communication in general, and genuine and fabricated symptom reports or test profiles in particular (e.g., Ekman & O'Sullivan, 1991; Faust et al., 1988; Heaton et al., 1978; Rosenhan, 1973). The use of modern symptom and performance validity testing and a comprehensive analysis of consistency and plausibility will have improved the situation considerably, but such an improvement can only occur when these means of deception detection are taken seriously.

We also included some additional questions to the survey specifically focusing on malingered ADHD. Fabricated claims of ADHD are a problem of special attention in particular in younger adults such as university students, with external gain expectations directed either at the prescription of psychostimulants or at academic accommodations. Consequently, this problem has drawn much attention in the research literature of the last decade (e.g., Bryant et al., 2018; Fuermaier et al., 2021; Hurtubise et al., 2017; Marshall et al., 2016; Martin & Schroeder, 2020; Tucha et al., 2015). The participants of our survey appeared to be aware of this problem. They estimated that almost a quarter of all university students with claimed ADHD were malingering.

It appears to be noteworthy that the participants of the survey judged that individuals who feigned ADHD were more likely to get involved in acts of malingering in different contexts. This item (Question 23) was included in the study to gain some preliminary insight into laypeople's beliefs about links between person-related factors and dishonest behavior. Historically, antisocial personality had been conceived to be closely linked to malingering. This is documented by the continuous adherence of the *Diagnostic and Statistical Manual (DSM-5; American Psychiatric Association, 2013)* to its malingering criteria which have not been given up for more than three decades. More recent research found generally weak correlations between personality traits and overreporting of symptoms (cf. van Helvoort et al., 2022, for a recent review). On a more general level, Palena et al. (2022) described the link between personality traits, moral disengagement, Machiavellianism, and lying tendencies. The question if persons who are engaged in one act of feigned health

presentations are indeed more likely to engage in more acts, will be an interesting topic to be researched in the future.

Compared to a recent survey among university students in the Netherlands (Fuermaier et al., 2021), the present survey among the general Dutch population showed a lower degree of suspicion toward the veracity of the diagnosis of adult ADHD. This was also reflected in a lower number of participants who admitted knowing someone who was feigning ADHD.

The first and possibly major limitation of the study is that it was performed as an Internet online study with a substantial percentage of participants with incomplete and assumably invalid response patterns. Participation was paid for and we have no information what factors determined registration at the platform and motivation to do this particular survey. The main advantages of using online survey formats are their cost effectiveness, convenience, and the possibility of studying a large number of participants in a limited time frame, but representativeness of the sample remains a major source of concern (e.g., Andrade, 2020; Klieve et al., 2010). A possible selection bias for participation has to be kept in mind when evaluating our results. At the same time, it has to be kept in mind that other survey methods like convenience sampling or recruitment of participants through the social media face similar restraints.

Another limitation is the conceptual difference between the English language concept of malingering which comprises symptom fabrication (*pure malingering*), gross exaggeration of symptoms (sometimes referred to as *partial malingering*) and *false imputations*. As is the case for some other languages like German or Spanish, the Dutch noun *simulatie* only refers to the first aspect (i.e., symptom invention or fabrication), at least in everyday language and from laypeople's perspective. In contrast, medical and psychological research often refers to the English language concept of *malingering* comprising both symptom fabrication and gross exaggerations of symptoms (e.g., Schmand & Ponds, 1997). The questions in the studies of Schlicht and Merten (2014) in Germany and Merten and Giger (2018) in Switzerland had explicitly included such gross exaggerations in the questions posed to the participants. Although the participants of the present study had received an introduction alerting them to the inclusion of exaggeration of symptoms, it will remain unclear how far they had kept this in mind when responding to

the items of the survey. This factor may explain some of the differences in the results of the three studies, but another important factor is the fact that both the German and the Swiss studies were pilot studies with low numbers of participants.

Despite these limitations, the main result of all three studies appears to confirm that malingering of health problems occurs at a nontrivial rate in different contexts, including clinical presentations, a result that corresponds to the findings of most expert surveys and those empirical studies that include modern methods of validity assessment. Modern validity research came to the conclusion, as formulated by Sweet (2009), that "... failure to proactively assess for possible malingering in a forensic case is now considered below the standard of acceptable practise" (p. 6). It is a more recent development that the same demand should be extended to clinical and rehabilitation patients whenever substantial external gain expectations can be identified or medical complaints remain unexplained (e.g., Martin & Schroeder, 2020).

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