

# Onychophagia as a clinical symptom: A pilot study of physicians and literature review

Science Progress

2021, Vol. 104(4) 1–11

© The Author(s) 2021

Article reuse guidelines:

[sagepub.com/journals-permissions](https://sagepub.com/journals-permissions)DOI: [10.1177/00368504211050288](https://doi.org/10.1177/00368504211050288)[journals.sagepub.com/home/sci](https://journals.sagepub.com/home/sci)

Sigita Lesinskiene<sup>1</sup> , Kamile Pociute<sup>2</sup>,  
Asta Dervinyte-Bongarzoni<sup>3</sup>  
and Odeta Kinciniene<sup>4</sup>

<sup>1</sup>Clinic of Psychiatry, Institute of Clinical Medicine, Faculty of Medicine,  
Vilnius University, Vilnius, Lithuania

<sup>2</sup>Faculty of Medicine, Vilnius University, Vilnius, Lithuania

<sup>3</sup>Clinic of Psychiatry, Institute of Clinical Medicine, Faculty of Medicine,  
Vilnius University, Vilnius, Lithuania

<sup>4</sup>Clinic of Children's Diseases, Institute of Clinical Medicine, Faculty of  
Medicine, Vilnius University, Vilnius, Lithuania

## Abstract

Although onychophagia is a medical condition and is associated with poorer health, there are no guidelines for assessment or treatment. The purpose of this study was to investigate the clinical aspects of nail biting from doctors' points of view, to estimate the prevalence of onychophagia among physicians, and to review the literature on and treatment methods for onychophagia. Twenty-four percent of doctors reported nail-biting periods during their lifetimes, and 2% of them remained active nail biters. A total of 64.4% of doctors see nail biting in their practices, and 60.6% never or only on request ask patients about nail biting and examine their nails. Family doctors and pediatricians ask their patients about nail biting most often. Attitudes and opinions on the treatment of nail biting are undefined and vary. Doctors reported usually treating nail-biting patients by referring them to another specialist or offering special nail polish. There is a need to improve physicians' knowledge of nail-biting treatment methods, but a lack of studies evaluating the clinical aspects of onychophagia and its relation to mental health and emotion dysregulation. Further research is needed. Clinical attitudes toward nail biting could be more precise in training and medical practice.

## Keywords

Onychophagia, nail biting, mental health, physicians attitude, symptom, treatment

---

## Corresponding author:

Sigita Lesinskiene, Clinic of Psychiatry, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, M.K. Ciurlionio 21/27, Vilnius 03101, Lithuania.

Email: [sigita.lesinskiene@mf.vu.lt](mailto:sigita.lesinskiene@mf.vu.lt)



Creative Commons CC BY: This article is distributed under the terms of the Creative Commons Attribution 4.0 License (<https://creativecommons.org/licenses/by/4.0/>) which permits any use,

reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access page (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

## Introduction

Onychophagia begins in childhood<sup>1</sup> and over time most nail biters tend to stop biting their nails.<sup>2</sup> The prevalence of nail biting in various populations ranges from 3%<sup>3</sup> to 46.9%, with the highest percentage found among medical students.<sup>2</sup> The etiology of onychophagia is unclear. Positive family history is found in 36.8%–63% of cases.<sup>4,5</sup> No instrument has been validated to specifically measure nail biting.<sup>6</sup> Studies point out that onychophagia could be classified as a tic disorder rather than obsessive-compulsive disorder.<sup>7</sup> Onychophagia is associated with poorer quality of life, psychiatric disorders, higher levels of stress, social problems, and poorer physical health.<sup>1,4,8–10</sup> A quarter of nail biters seek treatment, and treatment has a significant effect in reducing symptoms of onychophagia.<sup>5</sup> On the other hand, 26.4% of parents do not seek treatment for onychophagia in children, and 70.2% think that punishment is an effective way to break a habit.<sup>11</sup>

Onychophagia could serve as an informative clinical symptom for doctors working in different fields, especially mental health. Due to the lack of scientific literature, physicians might take it upon themselves to check patients' fingernails; results could serve as valuable clinical information and help establish a therapeutic dialogue with the patient. Having visibly bitten nails could tell both patient and doctor about the need to break the habit.

Although onychophagia is classified as a medical condition and associated with poorer health, the scientific literature lacks data on the condition from the physician's perspective. Additionally, there is little research with adults on the prevalence of nail biting. The aim of this study was to evaluate clinical aspects of onychophagia from the perspective of physicians and to determine the prevalence of onychophagia among them. A review of treatment methods was also included.

## Methods

### *Participants and context*

For one year in 2019, physicians at postgraduate training conferences were invited to complete a brief nail-biting questionnaire. The questionnaire was presented at an annual professional meeting, open to family doctors, pediatricians, and other medical specialists in all regions of Lithuania. Survey invitations, together with a brief description of the study, were announced during the conference. Volunteer physicians completed the questionnaires during conference breaks at a table close to the registration desk.

This pilot study was approved by the institution's ethical review board, and results are intended for use in organizing undergraduate and postgraduate training for medical doctors.

### *Instrument*

A 12-item, one-page nail-biting questionnaire was developed by the authors. The introductory part inquired about the respondent's age, gender, medical specialty, and years in practice. The second part was designed to cover nail biting as a symptom, and it asked

**Table I.** The specialties of physicians.

Doctors working with adult patients		Doctors working with children	
Family doctors   23 (34.0%), median age 40 ± 12.926		Doctors working with children   29 (35.6%), median age 56 ± 12.847	
Internal medicine, n = 27	Anesthesiology and reumatology, n = 13	Sports medicine, n = 5	Psychiatry, n = 5
Nephrology, n = 3	Otorhinolaryngology, n = 3	Medical doctor without residency, n = 9	Gynecology, n = 5
Endoscopy, n = 1	Gastroenterology, n = 1	Geriatrics, n = 2	Radiology, n = 2
			Allergology and clinical immunology, n = 1
			Dietology, n = 1
			Obstetrics and gynecology, n = 4
			Endocrinology, n = 1
			Ophthalmology, n = 1
			Urology, n = 1
			Rheumatology, n = 1
			Pulmonology, n = 2
			Allergy and clinical immunology, n = 1
			Intensive therapy, n = 2
			Endocrinology, n = 2
			Oncology, n = 3
			Neurology, n = 3
			Neonatology, n = 12
			Cardiology, n = 13
			Cardiotherapy, n = 1
			Neurology, n = 1
			Rheumatology, n = 1
			Surgery, n = 1

physicians to indicate whether they hear complaints from patients about nail biting. If so, they were asked to write approximately how many patients complained about it over the course of a year and to note how many complaints were about nail biting in children versus adults. Physicians were also asked whether they question their patients about nail biting (*often, rarely, never, only when the patient himself has complaints*) and if they pay attention to and examine patients' nails (*often, rarely, never, only when the patient himself has complaints*). Respondents were asked if they ever bit their nails and if they continued to do so. The third group of questions concerned physicians' attitudes toward treatment. Respondents were asked whether nail biting requires treatment (*does, doesn't, sometimes, I don't know*). If so, which specialists, in their opinion, should treat nail biting (*family doctor, pediatrician, psychiatrist, child and adolescent psychiatrist, psychologist, other or no treatment required*)? The questionnaire also included two open-ended questions: "What help would you offer to a nail biter?" and "Maybe you have something else to add about nail biting?"

### **Statistical analysis**

Data were processed using MS Excel and SPSS programs. We used descriptive statistics to describe respondent characteristics, the chi-square test for categorical variables and the Kruskal–Wallis test to compare means. A *p*-value <0.05 was considered statistically significant.

### **Literature review**

We decided to include studies related to the treatment of nail biting to make our research results more useful in practice. The PubMed and Cochrane Library databases were used to find studies of onychophagia treatment published between January 2013 and July 2020. The keywords used were nail biting OR onychophagia. Of the 150 studies retrieved from the PubMed database, 13 met the necessary criteria. In PubMed, we found 13 studies related to the treatment of onychophagia. Three studies were found in the Cochrane Library database, but these studies did not meet the inclusion criteria.

## **Results**

### **Demographics and prevalence**

The questionnaire was completed by 362 medical doctors, including 337 (93.0%) women and 25 (6.9%) men. A total of 123 (34.0%) respondents were family doctors, 110 (30.4%) doctors working with adult patients, and 129 (35.6%) working with children (Table 1). Median age of the survey respondents was  $53.00 \pm 13.994$ , and the median years of work experience were  $25.00 \pm 14.870$ . Eighty-six (23.8%) doctors reported nail biting during their lifetime, including 8 (2.2%) active nail biters. Eight (2.4%) doctors answered that they did not know if they bit their nails, and 2 (0.6%) did not answer. A total of 25.0% (82/328) of females and 16.0% (4/25) of men reported ever biting their nails, and there were no statistically significant differences between groups (*p*<0.05). A total of 7.4% (6/81) of women and 25% (1/4) of men reported being current nail

biters, and there were no statistically significant differences between men and women. The median age of active nail biters was  $52 \pm 14.547$ , and the median years of work experience were  $27.00 \pm 15.731$ .

### Clinical practice

According to respondents, 233 (64.4%) had heard complaints about nail biting in their practices. On average, 5.2 patients (4.5 children and 0.7 adults) complained of onychophagia per year. Statistically significant, most complaints about nail biting were received by children's doctors (Table 2).

A total of 212 (60.6%) of 350 doctors never asked patients about nail biting, 118 (32.6%) rarely asked them, and 20 (5.5%) often asked them. Most physicians (60/17.6%) reported never (or only when the patient complained) paying attention and examining patients' nails: 100 (29.4%) rarely, and 180 (52.9%) often. We categorized "often" and "rarely" as "initiate" and "never," respectively, and "only when the patient complains" as "do not initiate." We found (using chi-square test) that data were statistically significant among types of physicians,  $p = 0.000$  ( $p < 0.05$ ), but we found no statistical significance among groups regarding examination of patients' nails,  $p = 0.237$  ( $p > 0.05$ ) (Table 3 and Table 4).

### Treatment

Regarding the belief that nail biting needs treatment, 266 (73.5%) of 358 of doctors said yes, 18 (5.0%) said no, 39 (10.8%) reported that nail biting should be treated sometimes, and 35 (9.7%) said they did not know.

Three-quarters of respondents (250/75%) answered the open-ended question, "What help would you offer to a nail-biter"? The most common (~50%) response was referral to another specialist, 82 respondents said that they would refer the patient to a psychologist, 24 to a psychotherapist, 13 to a psychiatrist, 7 to a neurologist, a dentist, and an orthopedist were mentioned once. A few of the others noted "doctor" or "specialist," without naming a specialization.

**Table 2.** Means of patient complaints per year.

	N (%)	Total	About children	About adults
Family doctors	110 (35.83%)	4.5	3.5	1.0
Working with adults	88 (28.66%)	2.8	2.0	0.8
Working with children	109 (35.50%)	7.8	7.5	0.3
Total	307 (100%)	5.2	4.5	0.7
Sig.		0.000	0.000	0.000

ANOVA, analysis of variance.

P values reflect the results of the Kruskal-Wallis 1-way ANOVA test to compare means.

**Table 3.** Frequency of asking about nail biting.

	Family doctors (N = 121) n (%)	Adult's doctors (N = 107) n (%)	Children's doctors (N = 122) n (%)	p
Often	5 (4.1%)	2 (1.9%)	13 (10.7%)	
Rarely	49 (40.5%)	22 (20.6%)	47 (38.5%)	
Never	32 (26.4%)	53 (49.5%)	23 (18.9%)	
Only when the patient has complaints	35 (28.9%)	30 (28.0%)	39 (32.0%)	0.000
Initiate (often + rarely)	54 (44.6%)	24 (22.5%)	60 (49.2%)	
Do not initiate (never + only when the patient has complaints)	67 (55.3%)	83 (77.5%)	62 (50.9%)	0.000

P values reflect the results of the chi-square test comparing categorical variables.

**Table 4.** Frequency of patients' nail examination.

	Family doctors, n (%)	Adult's doctors, n (%)	Children's doctors, n (%)	p
Often	61 (50.8%)	37 (36.6%)	82 (68.9%)	
Rarely	42 (35.0%)	41 (40.6%)	14 (14.3%)	
Never	2 (1.7%)	11 (10.9%)	4 (3.4%)	
Only when the patient has complaints	15 (12.5%)	12 (11.9%)	16 (13.4%)	0.000
Initiate (often + rarely)	103 (85.8%)	78 (77.2%)	96 (83.2%)	
Do not initiate (never + only when the patient has complaints)	17 (14.2%)	23 (22.8%)	20 (16.8%)	0.237

P values reflect the results of the chi-square test comparing categorical variables.

The second most common (~25%) was to provide a special nail polish. Several respondents said that it would be important to discover the reason for onychophagia. Some said that it would be helpful to distract a child with another activity.

When was asked to choose which specialist should treat nail biting, 69.9% of respondents said a psychologist should treat nail biting, 45.3% a family doctor, 43.6% a child/adolescent psychiatrist, 36.7% a pediatrician, 29.6% a psychiatrist, 8.8% other, and 3.3% of respondents noted that treatment was unnecessary.

There were no statistically significant differences between the physicians who bit their nails and those who did not on any treatment choices.

## Literature review

### Therapy

Research has shown that cognitive psychophysiological treatment after 14 weeks of therapy reduces symptoms of body-focused repetitive behaviors, such as nail biting,

hair pulling, and skin picking. In this study, 54 participants completed the program, 22 of whom engaged in nail biting. Seventy-four percent of all patients showed significant improvement, as well as improved mood and self-esteem. After 6 months of follow-up, the decrease in symptoms was maintained.<sup>7</sup>

A randomized controlled trial reported that habit reversal training (HRT) and object manipulation training (OMT) could be useful in reducing symptoms of chronic nail biting in children and adolescents. Subjects were 91 children randomly assigned to three groups. After three months of therapy, the mean length of the nails in the HRT and OMT groups increased significantly compared to the control group, and HRT was more effective than OMT.<sup>12</sup>

The case report of a 4-year-old boy diagnosed with autism spectrum disorder showed a significant effect of differential reinforcement of other behavior in reducing nail biting at near-zero levels.<sup>13</sup>

A habit reversal treatment in combination with auricular acupressure was found more effective than habit reversal treatment in combination with placebo auricular acupressure for treating nail biting.<sup>14</sup>

### **Pharmacotherapy**

A 24-year-old male with long-lasting onychophagia was successfully treated with *N*-acetylcysteine.<sup>15</sup> However, one randomized controlled trial failed to find a statistically significant nail length difference in children and adolescents ( $n=42$ ) with chronic nail biting following the administration of *N*-acetylcysteine (800 mg/day) versus placebo after two months.<sup>16</sup>

When lithium was given to a 28-year-old woman with a bipolar II disorder and in remission for substance use disorder, she stopped biting her nails, even though the habit had bothered her since the age of 12, and various other methods, such as HRT, self-monitoring, and competing response, had been ineffective.<sup>17</sup>

Milk thistle (150 mg/day) was effective for a 24-year-old woman who had bitten her nails since age 7. Nail biting resumed after discontinuation of treatment, but the women stopped nail biting again after 4 weeks of resuming the food supplement.<sup>18</sup>

### **Topical intervention**

Research with 80 nail biters showed that nonremovable reminder vinyl wristbands and bitter-tasting nail enamel were effective in reducing nail biting, while nail enamel was found to be more effective than wristbands.<sup>19</sup>

A case report revealed that a special dental appliance that mechanically stopped the action of onychophagia and was maintained for one month was effective for a 26-year-old male. During the 9-month follow-up, the patient reported that the treatment met his expectations.<sup>20</sup> Another case report of an 11-year-old boy confirmed the success of the dental appliance.<sup>21</sup>

### **Special programs in school**

Two studies investigating complex programs presented in schools. "Do Not Bite Your Nails, Cut Your Nails,"<sup>11</sup> and *the healthy nails program*,<sup>22</sup> designed to reduce nail

biting in children, have shown that such programs are an effective way to reduce onychophagia.

## Discussion and conclusions

A quarter of physicians surveyed reported that they have bitten their nails, and this number corresponds to the general prevalence of onychophagia found in the literature. Interestingly, the prevalence found in our study is twice as low as that in the study by Pacan et al., which investigated nail-biting prevalence among medical students.<sup>2</sup> About 2% of physicians in our study continued to bite their nails, which is quite a small percentage compared to the literature. However, it makes sense. Our study and the literature review show that the symptoms of onychophagia decrease with age, and our study looked at the oldest population found in the literature. In contrast, most researchers study nail biting in children. Our study found that women more often bite their nails, but this difference was not statistically significant. The data found in the literature are mixed. Some studies indicate that there is no significant difference between the genders<sup>5,11,23</sup>; others show that women bite their nails more often than men.<sup>3,6</sup>

More than half of all doctors have heard complaints about nail biting from patients. Most complaints of nail biting are heard by doctors working with children, and the fewest complaints about nail biting are heard by adult doctors; they are also the least likely to ask about nail biting. Three-quarters of doctors believe that nail biting should be treated, but they themselves rarely ask about nail biting. When asked "What help would you offer to a nail biter?" The most frequent answer was referral to a specialist, and the second was to recommend a bitter-tasting nail polish. Nearly 70% of physicians believe that nail biting should be treated by a psychologist. Interestingly, the answers to questions about the need for treatment are different; individuals changed their minds when filling in the questionnaire, and more of them decided that nail biting should be treated. Only 5 of 18, who initially (in question 8) marked that no treatment is needed for onychophagia, stayed with their opinions (in question 12). It is possible that completing the questionnaire increased the importance of nail nail-biting treatment for the respondents. Our study showed that nail-biting habits possibly do not change an individual's perspective on the necessity for treatment or treatment methods. Onychophagia can be an indicator of relatively poor physical and mental health; furthermore, patients with more severe forms differ from subclinical forms and are in poorer health.<sup>24</sup> There are ways to help reduce the symptoms of onychophagia. Unfortunately, there is a lack of strong evidence for various methods that could help, but the literature describes some therapeutic and pharmacotherapeutic methods and other techniques that can reduce nail biting. How onychophagia is related to mental health disorders, anxiety, impulsivity, self-regulatory behavior, and emotion dysregulation remains unclear.

Although onychophagia is associated with poorer health, on average, less than half of nail biters seek help. Developing and implementing psychoeducational programs in schools to teach both children and adults about nail biting has proven effective in reducing the symptoms of onychophagia. The importance of psychoeducational programs was also demonstrated by a study that found most parents (91%) have punished their

children at least once for biting their nails.<sup>11</sup> There is still a lack of high-quality research evaluating the treatment methods and other clinical aspects of onychophagia, so further research is needed.

This pilot study revealed that clinical attitudes toward nail-biting symptoms could be more precise in medical practice and training. It is important to increase physicians' knowledge about nail-biting treatment methods. Developing a validated tool to assess nail biting would be useful in both clinical practice and research. Scale for anxiousness and emotion dysregulation could be elaborated and used simultaneously. Finally, developing an algorithm for the treatment of onychophagia that informs physicians about how to evaluate onychophagia, when to refer a patient to another specialist, and how to treat onychophagia themselves. Cross-cultural studies and further research in this area are needed.

## **Author contributions**

SL and OK: conceptualization. SL, KP, AD-B, and OK: methodology. KP and OK: formal analysis. SL, KP, AD-B, and OK: investigation. SL and KP: data curation. SL and KP: writing – original draft preparation. AD-B and OK: writing – review and editing. All authors have read and approved the final manuscript.

## **Declaration of conflicting interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## **Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## **Ethics approval**

This study was approved by the institutional review board at Vilnius University Faculty of Medicine as minimal risk research, using data collected for education and clinical practice. All study participants at postgraduate training courses were informed about the purpose of the study, their right to refuse. The respondents were also told that the information obtained from them was treated with complete confidentiality and did not cause any harm to them. All procedures in the current study were in accordance with ethical standards with the Declaration of Helsinki (1964) and its later amendments.

## **Data availability statement**

Data are available on reasonable request. All data relevant to the study are included in the article.

## **ORCID iD**

Sigita Lesinskiene  <https://orcid.org/0000-0003-2922-8626>

## **Supplemental material**

Supplemental material for this article is available online.

## References

1. Pacan P, Reich A, Grzesiak M, et al. Onychophagia is associated with impairment of quality of life. *Acta Derm Venereol* 2014; 94: 703–706.
2. Pacan P, Grzesiak M, Reich A, et al. Onychophagia and onychotillomania: prevalence, clinical picture and comorbidities. *Acta Derm Venereol* 2014; 94: 67–71.
3. Sharma S, Bansal A and Asopa K. Prevalence of oral habits among eleven to thirteen years old children in Jaipur. *Int J Clin Pediatr Dent* 2015; 8: 208–210.
4. Ghanizadeh A and Shekoohi H. Prevalence of nail biting and its association with mental health in a community sample of children. *BMC Res Notes* 2011; 4: 116.
5. Winebrake JP, Grover K, Halteh P, et al. Pediatric onychophagia: a survey-based study of prevalence, etiologies, and co-morbidities. *Am J Clin Dermatol* 2018; 19: 887–891.
6. Selles RR, La Buissonniere Ariza V, McBride NM, et al. Initial psychometrics, outcomes, and correlates of the repetitive body focused behavior scale: examination in a sample of youth with anxiety and/or obsessive-compulsive disorder. *Compr Psychiatry* 2018; 81: 10–17.
7. O'Connor K, Lavoie M, Desaulniers B, et al. Cognitive psychophysiological treatment of bodily-focused repetitive behaviors in adults: an open trial. *J Clin Psychol* 2018; 74: 273–285.
8. Gupta MA, Vujcic B and Gupta AK. Dissociation and conversion symptoms in dermatology. *Clin Dermatol* 2017; 35: 267–272.
9. Bin Saif GA, Alotaibi HM, Alzolibani AA, et al. Association of psychological stress with skin symptoms among medical students. *Saudi Med J* 2018; 39: 59–66.
10. Meijersjo C, Ovesson D and Mossberg B. Oral parafunctions, piercing and signs and symptoms of temporomandibular disorders in high school students. *Acta Odontol Scand*. 2016; 74: 279–284.
11. Gur K, Erol S and Incir N. The effectiveness of a nail-biting prevention program among primary school students. *J Spec Pediatr Nurs* 2018; 23: e12219.
12. Ghanizadeh A, Bazrafshan A, Firoozabadi A, et al. Habit reversal versus object manipulation training for treating nail biting: a randomized controlled clinical trial. *Iran J Psychiatry* 2013; 8: 61–67.
13. Heffernan L and Lyons D. Differential reinforcement of other behaviour for the reduction of severe nail biting. *Behav Anal Pract* 2016; 9: 253–256.
14. Sun D, Reziwan K, Wang J, et al. Auricular acupressure improves habit reversal treatment for nail biting. *J Altern Complement Med* 2019; 25: 79–85.
15. Kilic F and Keles S. Repetitive behaviors treated with *N*-acetylcysteine: case series. *Clin Neuropharmacol* 2019; 42: 139–141.
16. Ghanizadeh A, Derakhshan N and Berk M. *N*-acetylcysteine versus placebo for treating nail biting, a double blind randomized placebo controlled clinical trial. *Antiinflamm Antiallergy Agents Med Chem* 2013; 12: 223–228.
17. Sharma V and Sommerdyk C. Lithium treatment of chronic nail biting. *Prim Care Companion CNS Disord* 2014; 16.
18. Grant JE and Odlaug BL. Silymarin treatment of obsessive-compulsive spectrum disorders. *J Clin Psychopharmacol* 2015; 35: 340–342.
19. Koritzky G and Yechiam E. On the value of nonremovable reminders for behavior modification: an application to nail-biting (onychophagia). *Behav Modif* 2011; 35: 511–530.
20. Marouane O, Ghorbel M, Nahdi M, et al. New approach to managing onychophagia. *Case Rep Dent* 2016; 2016: 5475462.
21. Dev S, Pal A, Zahir S, et al. A fixed intraoral nail biting habit-breaker appliance: a case report of a novel approach to prevent onychophagia. *J Dent Res Dent Clin Dent Prospects* 2019; 13: 172–176.

22. Ergun A, Toprak R and Sisman FN. Impact of a healthy nails program on nail-biting in Turkish schoolchildren: a controlled pretest-posttest study. *J Sch Nurs* 2013; 29: 416–424.
23. Almeida IA, Jeske S, Mesemburg MA, et al. Prevalence of and risk factors for intestinal parasite infections in pediatric patients admitted to public hospitals in southern Brazil. *Rev Soc Bras Med Trop* 2017; 50: 853–856.
24. Houghton DC, Alexander JR, Bauer CC, et al. Body-focused repetitive behaviors: more prevalent than once thought? *Psychiatry Res* 2018; 270: 389–393.

## Author biographies

**Sigita Lesinskiene PhD, MD** is a child and adolescent psychiatrist. Leads Clinic of Psychiatry, Institute of Clinical Medicine, Faculty of Medicine, Vilnius University, Lithuania. Fields of scientific activity and research: epidemiological studies, student health, autistic spectrum, tics, hyperkinetic disorders, depression, suicide, self-injurious behaviour, eating disorders, Covid-19 and mental health, psychiatric services, doctor professional communication, psychosomatics, art therapies. She is the current president of the Lithuanian Society Society of Child and Adolescent Psychiatrists since 2020. 2010–2014 member of IACAPAP (International Association of Child Adolescent Psychiatry and Allied Professions) Executive Committee (assistant), 2014–2018 vice president and regional coordinator of the IACAPAP for Eastern Europe countries.

**Kamilė Pociūtė MD** is a third-year Resident Doctor in Child and Adolescent Psychiatry at Vilnius University Faculty of Medicine and, at the same time studying and practicing Cognitive Behavioral Therapy. Master in Health Science gained in Vilnius University Faculty of Medicine. Her main research interest currently concerns sensory processing issues in autistic spectrum patients and child mental health.

**Asta Dervinyte Bongarzoni PhD, MD** is a child and adolescent psychiatrist, psychotherapist and forensic expert. She works as a consultant in Republican Vilnius Psychiatry Hospital and lecturer and fellow tutor in Vilnius University Faculty of Medicine. Board member of the Lithuanian Society of Child and Adolescent Psychiatrists. Defended her PhD in “La Sapienza” University in Rome, Italy. Her main research fields are attention deficit hyperactivity disorder, child development, addictions, attachment, emotion and behavioural disorders, complex treatment according to the psychosomatic paradigm.

**Odetta Kinciniene PhD, MD** is a member of Board of Lithuanian Association of Pediatricians, president of Lithuanian Association of Pediatric Cardiologists, editor in chief of Lithuanian scientific-practical journal of clinical pediatricians “Pediatrija” and organizer of regular scientific-practical confederacies’ in Lithuania with main subject “Children diseases: of diagnosis, treatment and prevention in family doctors and clinical pediatricians’ practice”. The practical and scientific activity areas are pediatric cardiology (syncope, arterial hypertension, arrhythmia) and pediatric intensive care (acute intoxication, suicide attempts, self-harm, social aspects of children with suspected suicide attempts).