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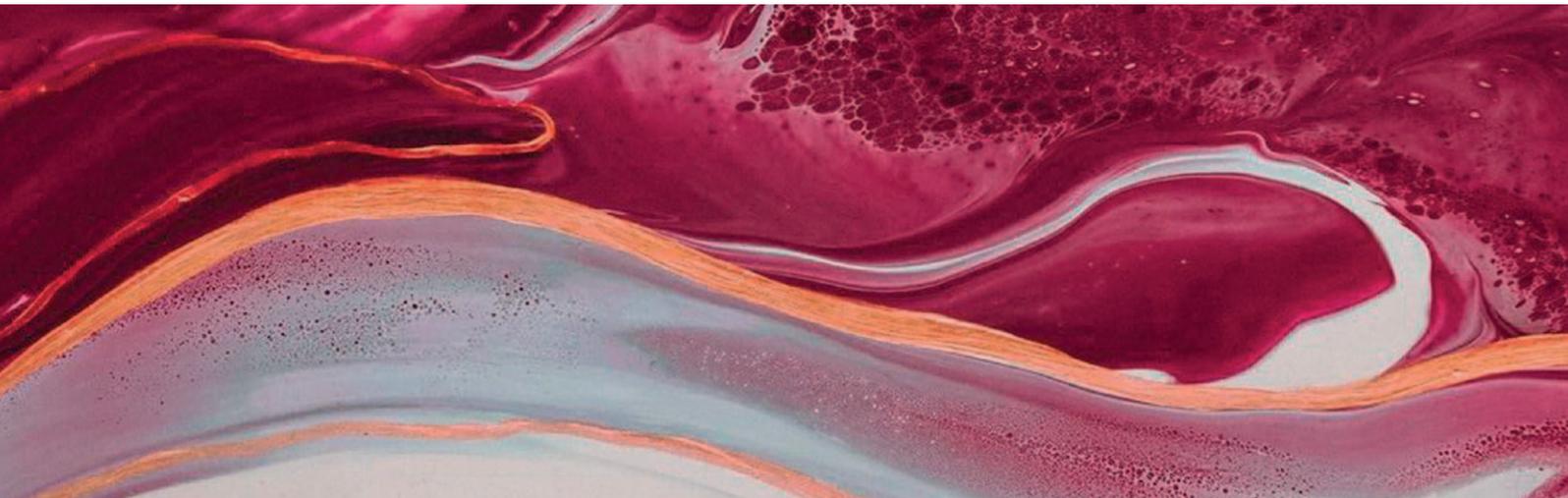
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**DEAR COLLEAGUES!**

This is the fourth issue of *Consortium Psychiatricum* in 2022.

We started the year with a thematic issue on old-age psychiatry and we finish the year with a thematic issue on child and adolescent psychiatry.

Most articles in this issue focus on the organization of care, new diagnostic tools, early detection, or the epidemiology of mental disorders in children. These topics are of particular relevance because of the crucial role early detection of mental disorders plays and the need for appropriate treatment.

The organization of care for children and adolescents in crisis is one of the priorities in healthcare. In the Information section of this issue, the Crisis clinic at the Mental Health Center for Children and Adolescents, the biggest such institution in Russia, shares its experience of providing care to children with suicidal behavior.

Special articles are dedicated to the organization of community mental care in New Zealand and Japan.

This year, our journal witnessed several achievements I want to share with you: we published four thematic issues; introduced the journal at the 22^d WPA Congress in Bangkok, and in 2022 the journal was accepted for indexation in PsycInfo and Scopus.

I hope that in 2023 our journal will remain the most credible choice for the authors who submit manuscripts and that our readers will continue to enjoy the articles we publish.

I wish you a pleasant reading!

George Kostyuk,
Editor-in-Chief, Consortium Psychiatricum

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Comment on “Violence Against Psychiatric Trainees: Findings of a European Survey”

Комментарий к статье «Насилие в отношении обучающихся психиатров: результаты европейского исследования»

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Letter to the editor

**Egor Chumakov¹, Natalia Petrova¹,
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Pereira-Sanchez, et al (2021), in their paper, raise important and timely questions regarding violence by patients against psychiatry trainees. An overwhelming majority of trainee respondents from Europe reported having experienced some form of violence from their patients [1]. Not surprisingly, this has led to a lasting impact on their mental wellbeing. Recent reports of high vulnerability and psychological concerns among trainees and young physicians [2, 3] make it clear that the profession has an obligation to improve working and training conditions, but also to provide immediate and appropriate assistance to the trainees, be it psychological or medical, especially to those who need it. However, as the authors [1] point out, the number of trainees who reported assaults was very low. This may have been due to their perception that the incidence was not serious enough, or some misleading belief that their supervisors would not take the incident seriously, thus leading them to avoid reporting it.

In our international study, we aimed to explore the experiences of early career psychiatrists working within the current legal framework of compulsory psychiatric care and detention of patients in their

countries of practice, along with potential areas for revision [4]. We also explored their experiences of physical aggression towards them from their patients. In this international, cross-sectional and anonymous online survey, 142 psychiatrists from 43 countries (52.8% females; mean age 32.6±3.9) responded. Of those, 38 (26.8%) were psychiatry trainees. A majority of our respondents (78.2%) reported a history of physical abuse by patients. Almost a quarter (22.5%) of these attacks were described as life-threatening. Almost two-thirds (64.7%) of the respondents did seek psychological help or supervision after the episode, the rest did not. Peer support was offered in 46.8% of cases and/or from their senior colleagues in 32.4% of cases.

Both studies were conducted during the same time period. They highlight an urgent need for support on the part of both clinical and educational supervisors at a personal level. But training institutions have a moral obligation to provide appropriate training and a supportive environment. Although currently little formal risk-assessment training occurs in psychiatric settings, proper training in dealing with violent patients in order to effectively assess, treat, and cope with these

individuals should be implemented in training programs for mental health professionals [5]. Researchers have proposed training programs to prevent aggressive behavior by patients [6], including the assessment and management of violent patients, receiving training in diagnosing and evaluating such individuals, learning about pharmacological interventions, and environmental safety [7], as well as various de-escalation techniques [8]. To date, however, these programs have yielded limited empirical research evidence of their effectiveness [8], which likely precludes their broader implementation in psychiatry residency training curricula. Therefore, it is important to pay more attention to research on the effectiveness of patient violence-prevention strategies.

A worrying finding is that one-third of early career psychiatrists in our study failed to receive any help, similar to the findings in an earlier study [9]. In order to deal effectively with the aftermath of violent attacks, urgent action is needed not only to train everyone in breakaway techniques, but also to have immediate access to support were these incidents to happen. In this regard, it is critical to develop guidelines for the psychological support of the victims of violent acts. The institutions must implement/adopt hospital and emergency room policies that prevent the violence from occurring. We recommend that they implement clear policies but also make available wellbeing guardians who can be approached by those affected and act as repositories of information. They can provide support that prevent burnout and the appearance of long-term distress, thus mitigating psychological consequences. At the level of government, policies must be put in place and resources made available so that trainees are well taken care of. Regulatory bodies have an ethical obligation to ensure that the workforce is protected, so that it can provide the best care possible to patients.

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The Effect of Untreated Illness in Youth Depression: A Cross-Sectional Study

Влияние длительности нелеченого периода при юношеских депрессиях: данные поперечного исследования

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Original research

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ABSTRACT

BACKGROUND: The existing research has mainly focused on exploring how the duration of untreated psychosis affects the further course of the disease. By contrast, the duration of an untreated illness (DUI) in youth depression and its impact on the further course of the disease has remained scarcely investigated.

AIM: The current study aims to determine how the duration of untreated illness affects the severity of the symptoms during the first depressive episode and the degree to which the symptoms are reduced after treatment.

METHODS: Fifty-two young male patients (15–29 years old) were examined. First, they were hospitalized with a severe without psychotic symptoms (F32.2) and moderate (F32.1) depressive episode. The Hamilton Depression Rating Scale (HDRS), the Scale of Prodromal Symptoms (SOPS), and the Scale for Assessment of Negative Symptoms (SANS) were used to achieve the research goals. The examination was conducted twice at the time of patient admission to the hospital and before discharge. Our statistical analysis was carried out with the Statistica 12 software. The Mann–Whitney U test was used to compare the differences between two independent groups. The Spearman's rank correlation coefficient was used to uncover any correlation between how long the illness has remained untreated and the severity of its clinical symptoms.

RESULTS: All patients were hospitalized at the first depressive episode. The average duration of an untreated illness was 35.8 ± 17.0 months. The patients were divided into two groups: the first group (59.6%, $n=31$), with a duration of the untreated illness of more than 36 months, and the second group (40.4%, $n=21$), with a duration of the untreated illness of less than 36 months. A cross-group comparison between the participants showed that the reduction of HDRS scores was significantly higher in the second group ($p=0.019$) at the time of discharge, with no differences in the severity of depressive symptoms ($p=0.544$) at the time of admission. Comorbidity was detected in 83.9% of the patients in the first group and in 42.9% of the patients in the second group. A greater therapy effectiveness was found to exist in the second group, as the depressive symptoms score on the HDRS scale ($p=0.016$; $U=196.0$) and prodromal symptoms score on the SOPS disorganization subscale ($p=0.046$; $U=218.0$) were found to have been reduced significantly.

CONCLUSION: The study showed that DUI has an impact on the reduction of depressive, negative symptoms and symptoms of disorganization in youth patients at the first depressive episode. A high level of comorbidity has

been uncovered, confirming that a variety of non-psychotic and psychotic disorders in youth manifest themselves in depression at a prodromal stage, causing difficulties in establishing diagnoses and requiring subsequent verification. Future research might need to focus on exploring depressive symptoms as predictors of mental disorders in youth patients.

АННОТАЦИЯ

ВВЕДЕНИЕ: В настоящее время большинство исследований сфокусированы на изучении влияния длительности нелеченого психоза на дальнейшее течение заболевания. В отношении длительности нелеченого заболевания при депрессии таких работ значительно меньше.

ЦЕЛЬ: Целью данного исследования является: установить влияние длительности нелеченого заболевания на тяжесть симптомов депрессии, на степень их редукции за время лечения.

МЕТОДЫ: Обследованы 52 больных мужского пола 15–29 лет, впервые госпитализированных по поводу депрессивного эпизода тяжелой степени без психотических симптомов (F32.2) и средней степени тяжести (F32.1). Применялись Шкала оценки депрессивных симптомов (HDRS), Шкала оценки продромальных симптомов (SOPS) и Шкала оценки негативных симптомов (SANS). Обследование проводилось дважды: на момент поступления пациента в стационар и на этапе редукции психопатологических расстройств перед выпиской. Статистический анализ проводился с помощью программы Statistica 12. Для сравнения различий между двумя независимыми группами применялся непараметрический метод Манна — Уитни и ранговый коэффициент Спирмена для оценки взаимосвязей между длительностью нелеченого заболевания и тяжестью клинических симптомов.

РЕЗУЛЬТАТЫ: Выборка включала больных, впервые госпитализированных с диагнозом «Депрессивный эпизод», средняя длительность нелеченого заболевания составила 35.8 ± 17.0 месяцев. Пациенты были разделены на две группы: 1 группа (59.6%, $n=31$) с длительностью нелеченого заболевания более 36 месяцев, 2 группа (40.4%, $n=21$) — менее 36 месяцев. Межгрупповые сравнения показали, что редукция баллов по шкале HDRS к моменту выписки была значительно выше во второй группе ($p=0.019$) при отсутствии различий по степени выраженности депрессии при поступлении ($p=0.544$). Коморбидность отмечалась у 83.9% пациентов первой группы и у 42.9% — у второй. Лучший эффект терапии был установлен у больных второй группы по степени выраженности депрессивных симптомов ($p=0.016$; $U=196.0$) и продромальных симптомов, оцененных по подшкале симптомов дезорганизации шкалы SOPS ($p=0.046$; $U=218.0$) при выписке.

ЗАКЛЮЧЕНИЕ: Исследование показало влияние длительности нелеченого заболевания на степень редукции депрессивных, негативных симптомов и симптомов дезорганизации у молодых людей с первым депрессивным эпизодом. Также была установлена большая степень коморбидности, подтверждающая, что различные непсихотические психические расстройства, а также психотические заболевания на продромальных стадиях могут проявляться депрессивной симптоматикой, что затрудняет диагностику юношеских депрессий и требует последующей верификации диагноза. Будущие исследования должны быть направлены на определение предикторной значимости юношеских депрессий в отношении развития психических расстройств в юношеском возрасте.

Keywords: *youth depression; prodromal symptoms; negative symptoms; duration of untreated illness; comorbidity; effectiveness of therapy*

Ключевые слова: *юношеские депрессии; продромальные симптомы; негативные симптомы; длительность нелеченого заболевания; коморбидность; эффективность терапии*

INTRODUCTION

The existing research has largely focused on exploring how the duration of untreated illness (DUI) influences its further course. DUI is defined as the period between the onset of the first clinical symptoms of a disease and the beginning of adequate treatment [1, 2]. There is a large number of studies that have established how the duration of untreated psychosis (DUP) influences the effectiveness of therapy and the outcomes [3, 4]. A shorter DUP has shown correlation with better treatment outcomes [3], whereas a longer DUP has been associated with more severe, positive, and negative symptoms and lower chances of achieving remission [4]. Furthermore, a longer DUP has been associated with a more severe global psychopathology and poorer functioning during follow-up [4]. However, DUI in youth depression and its impact on the further course of the disease remains scarcely investigated. It has been found that a longer DUI negatively impacts the course of affective disorders [1, 2], reduces the duration of remission [2], and is associated with a higher risk of suicide [5]. According to other researchers, a longer DUI correlates with the severity of the cognitive impairments associated with depression [6].

It is often difficult to determine exactly when depression begins. According to researchers in the field, a major depressive episode is typically preceded by several non-affective symptoms, including dysthymic illness, cognitive disorders, episodes of apathy, decreased motivation, and obsession symptoms and irritability [7, 8]. The beginning of youth depression is frequently characterized by episodes of substance abuse and aggressive, self-harm behavior [9, 10]. These symptoms are often not associated with reduced premorbid functioning and, therefore, are not recognized as mental disorders. This leads to either refusal of medical care or referral to primary care, in place of qualified mental health care [11]. Yet, depression in youth may be the first symptom of a variety of non-affective disorders, including schizophrenia spectrum disorders such as schizotypal disorder and the prodromal stage of schizophrenia [12, 13]. It is clear that early identification of youth depression is crucial not only for the further course of depression, but also as part of the diagnosis and prevention against a wide spectrum of mental health issues.

Against this background, the present study aims to determine how the DUI affects the severity of

symptoms during the first depressive episode in youths and the degree of symptom reduction after treatment, with an analysis of the comorbidity of non-psychotic mental disorders.

METHODS

Study design

A cross-sectional study design was applied for the purposes of the current study. Cross-sectional design is often regarded as a method of choice when there is a need to collect data from different individuals at a single point in time. In the context of the current study, using this design was advantageous in several respects. Firstly, it allowed us to establish the average duration of the DUI by the time of the first hospitalization. Secondly, it made it possible to compare the severity of depressive symptoms in patients with different DUI. Thirdly, it enabled us to determine the effectiveness of treatment in patients recruited at the same time.

Sampling and recruitment

The convenience sampling strategy was used to select the participants in the study. All patients hospitalized with the first depression episode at the Department of Youth Psychiatry of the Mental Health Research Centre from April 1, 2021 to May 30, 2022 were invited to participate.

Participants were eligible if they met the following criteria: 1) categorized as young people and youths (15–29 years old), according to the classification of the World Health Organization [15]; 2) hospitalized with the first depressive episode; 3) diagnosed within a range of nonpsychotic mental disorders according to the International Classification of Diseases, version 2019 (ICD-10); and 4) showing no indication of previous adequate treatment based on the National Institute for Health and Care Excellence Guidelines [16] and clinical recommendations of the Russian Society of Psychiatrists [17]. Treatment was considered as inadequate if low doses of antidepressants were administered or the duration of the treatment was under six months without any clinical response.

Participants were excluded from the study if they met one of the following criteria: 1) diagnosed with psychotic disorders, 2) presence of clinically significant somatic and neurological diseases at the time of the study, and 3) refusal to participate in the study at any stage during hospitalization.

Procedure

Hospital medical form 003 U (a mandatory form for patients admitted for inpatient treatment) was used to collect socio-demographic and clinical data, including medical history, the age when the symptoms (apathy, irritability, decreased motivation and other negative symptoms) preceding the first depression episode appeared, duration of the current depressive symptoms, and details regarding previous antidepressant treatment.

For the purposes of this study, both affective and “prodromal” symptoms were assessed. The assessment was conducted twice: at the time of admission (the first assessment) and at the time of discharge (the second assessment).

Affective symptoms were evaluated using the Hamilton Depression Rating Scale (HDRS) [18]. It is a 21-item Likert questionnaire in which a total score is calculated as the sum of all individual items.

“Prodromal” symptoms, including attenuated positive, negative and disorganization symptoms, were assessed using the Scale of Prodromal Symptoms (SOPS) [19] and the Scale for Assessment of Negative Symptoms (SANS) [20]. SOPS is a Likert scale which contains four main sections assessing (P) Positive Symptoms (5 items), (N) Negative Symptoms (6 items), (D) Disorganized Symptoms (4 items), and (G) General Symptoms (4 items). Positive Symptoms are rated on a scale from 0 (Absent) to 6 (Severe and Psychotic). Negative, Disorganized and General Symptoms are rated from 0 (Absent) to 6 (Extreme). SANS is a 25-item Likert scale which consists of five domains, including Affective Flattening or Blunting, Alogia, Avolition — Apathy, Anhedonia — Asociality, and Attention. A set of different symptoms is rated within each domain from 0 (Absent) to 5 (Severe).

After collecting all the clinical and psychometric data, a possible comorbid diagnosis was verified. It is important to note that there were difficulties in confirming comorbid bipolar disorder, recurrent depressive disorder, and persistent mood (affective) disorders due to the young age of the participants and their hospitalization being the first one. Therefore, the provided comorbid diagnoses are rather tentative here.

Treatment effectiveness is defined as the difference between the adopted scales score at the time of admission and at the time of discharge converted into percentages.

In order to evaluate the influence of the side effects of the therapy on the daily performance, all participants were examined on the 48-item Likert UKU Side Effect Rating Scale [21].

Data analysis

Our statistical analysis was carried out using the StatSoft’s statistical analysis software package Statistica 12.0. Firstly, sociodemographic data was analysed using descriptive statistical methods. The data was presented in mean values (standard deviation) and reported as Mean ± (SD). Secondly, depressive symptoms were analysed using the HDRS and “prodromal” symptoms were analysed using the SOPS and the SANS. The data was presented in median values and quartile range and reported as Me [Q1; Q3]. The first quartile [Q1] is defined as the middle number between the minimum value and the median, whereas the third quartile [Q3] is the middle value between the median and the maximum value. The Mann–Whitney U test was used to compare the differences on these scales between two independent groups. Correlations between the DUI and severity of clinical symptoms at the time of admission and before discharge were defined using the Spearman’s rank correlation coefficient as a nonparametric measure of rank correlation.

Research governance

The study was in line with the Helsinki Declaration and was approved by the Local ethics committee of the Mental Health Research Centre (Protocol №746 of 18.03.2021). All patients signed an informed consent form. Clinical data was collected in compliance with Order of the Ministry of Health of the Russian Federation (from 13.12.2015) N 1034n “On approval of the procedure specialized medical care ‘Psychiatry-Narcology’ and dispensary procedure monitoring of persons with mental disabilities and (or) behavioral disorders associated with substance abuse” and the regulations of the Mental Health Research Centre.

RESULTS

Sample characteristics

Overall, 52 male patients hospitalized with the first depressive episode were included in the study. At the time of admission, a severe depressive episode without psychotic symptoms (classified as F32.2 according to the

ICD-10) was established in 88.5% ($n=46$) of the patients, whereas a moderate depressive episode, (classified as F32.1 according to the ICD-10), was determined in 11.5% ($n=6$) of the patients. The participants were treated with antidepressants and antipsychotics. In particular, 10 patients (19.2%) had received inadequate antidepressant therapy during the period of untreated illness. The average dose was 7.6 ± 3.2 mg/day in fluoxetine equivalent, and the average duration was 26.5 ± 14.7 days. Overall characteristics of the sample are presented in Table 1.

Assessment of all participants

At the time of admission (first assessment), the degree of depression among all participants based on HDRS was 32 [28; 35], indicating severe depression [22]. The total score on the SOPS was 50 [45; 55], which demonstrated the presence of “prodromal” positive, negative symptoms and symptoms of disorganization in the patient of the clinical group. The overall score on the SANS was 49 [42; 54.5], which supported previous results and revealed the presence of negative symptoms. During the second assessment (before discharge), the degree of depression based on HDRS was 10.5 [6.75; 14.25], which suggested mild depression [22]. The total score on the SOPS was 24.5 [18.75; 32], whereas the total score on the SANS was 27 [19; 35]. Although these values suggest a reduction in symptoms acuity, they cannot be perceived as a sign of complete remission.

Assessment of participants depending on the mean DUI value

Based on the mean DUI value, which was 35.8 ± 17.0 months, the patients were divided into two groups: the first group, with a DUI of more than 36 months (59.6%, $n=31$), and the second group — DUI of less than 36 months (40.4%, $n=21$). The length of hospitalization was equal to the duration of active treatment and lasted 42.9 ± 27.6 days in the whole sample. The average dose of received antidepressants in the fluoxetine equivalent in the first group was 32.2 ± 25.0 mg/day; in the second group, 43.4 ± 28.3 mg/day, and the average dose of antipsychotics in the chlorpromazine equivalent in the first group was 295.9 ± 187.8 mg/day; and in the second group — 294.3 ± 144.5 mg/day. There were no statistical differences between the groups in the fluoxetine equivalent ($p=0.191$; $U=255.0$) and in the chlorpromazine equivalent ($p=0.787$; $U=310.0$).

Cross-group comparison between participants with different DUI shows that the reduction of HDRS scores was significantly higher in the first group ($p=0.019$) at the time of discharge, with no differences in the severity of depressive symptoms ($p=0.544$) at the time of admission. No other statistically valid differences were found. Assessment of the severity of affective and “prodromal” symptoms in the two groups of patients with different DUI at the time of admission and before discharge are presented in Table 2.

Table 1. Characteristics of the sample

Characteristic	Patients, total ($n=52$)
Sex (%)	Male (100%)
Age when depressive symptoms appeared, years	16.1 ± 3.6
Age of the first hospitalization, years	19.2 ± 2.1
Mean DUI, months	35.9 ± 17.0
Level of education	
Basic general education, n (%)	14 (26.9)
Secondary general education, n (%)	35 (67.3)
Higher education, n (%)	3 (5.8)
Occupation	
Student, n (%)	29 (55.8)
Full-time employment, n (%)	6 (11.5)
Part-time employment, n (%)	8 (15.4)
Non-Employment, n (%)	9 (17.3)

Table 2. Severity of affective and “prodromal” symptoms in the two groups of patients at the time of admission and before discharge

Parameters	1 st group (DUI >36 months), n=21		2 nd group (DUI <36 months), n=31		U, p-value	
	1 st assessment	2 nd assessment	1 st assessment	2 nd assessment	1 st assessment	2 nd assessment
HDRS total score [Q1;Q3]	32 [28; 36.5]**	12 [7.5; 18.5]*	33 [28; 35]	10 [4; 11]	292.5, 0.544	199.5, 0.019
SOPS total score [Q1;Q3]	51 [45; 54.5]	28 [19; 35.5]	48 [45; 55]	21 [16; 29]	308.5, 0.758	227.5, 0.069
SOPS positive score [Q1;Q3]	8 [6; 12]	3 [2.5; 6]	8 [6; 12]	2 [1; 4]	313.0, 0.822	246.0, 0.140
SOPS negative score [Q1;Q3]	20 [18; 22.5]	13 [8; 15]°	20 [18; 21]	10 [6; 12]	294.0, 0.563	227.5, 0.069
SOPS disorganization score [Q1;Q3]	10 [8; 12]	5 [4; 7]°	8 [8;11]	5 [3; 6]	266.0, 0.271	234.5, 0.091
SOPS general score [Q1;Q3]	12 [11; 13.5]	5 [4; 7]	12 [11; 14]	5 [3; 7]	299.5, 0.634	267.0, 0.279
SANS total score [Q1;Q3]	51 [42.5; 56]	32 [20.5; 37.5]°	48 [42; 51]	24 [17; 28]	273.5, 0.337	235.0, 0.093
SANS “Affective Flattening or Blunting” score [Q1;Q3]	16 [13; 19]	10 [6; 13.5]	15 [13; 18]	8 [5; 12]	275.5, 0.544	252.0, 0.173
SANS “Alogia” score [Q1;Q3]	7 [6; 9]	4 [2; 5]°	6 [5; 8]	2 [1; 3]	252.0, 0.173	232.0, 0.082
SANS “Avolition – Apathy” score [Q1;Q3]	9 [7; 10]	5 [3.5; 7]	9 [8; 0]	5 [3; 6]	311.0, 0.794	272.0, 0.323
SANS “Anhedonia – Asociality” score [Q1;Q3]	12 [10; 13]	8 [5; 9.5]°	12 [11; 13]	5 [4; 8]	312.0, 0.808	223.5, 0.058
SANS “Attention” score [Q1;Q3]	6 [5; 6]	3 [2.5; 4]°	6 [5; 7]	3 [2; 4]	304.0, 0.695	235.0, 0.093

Note: * — statistically significant ($p < 0.05$); ° — trend towards statistical significance ($0.05 < p < 0.1$) between the first group and the second group; ** — the median value, values of Q1 and Q3 are given in square brackets.

Table 3. Possible comorbid diagnoses in the two groups of patients

Comorbid diagnoses (ICD-10)	1 st group (DUI >36 months), n (%)	2 nd group (DUI <36 months), n (%)
Schizotypal disorder (F21)	11 (42.3)	2 (22.2)
Bipolar disorder (F31)	3 (11.5)	3 (33.3)
Recurrent depressive disorder (F33)	8 (30.8)	1 (11.1)
Persistent mood (affective) disorders (F34)	2 (7.7)	2 (22.2)
Personality disorders (F60)	2 (7.7)	1 (11.1)
Overall	26 (83.9)	9 (42.9)

Defining a possible comorbid diagnosis

Further, possible comorbid diagnoses according to the ICD-10 were verified in 67.3% ($n=35$) of patients while a single depressive episode (classified as F32 according to the ICD-10) remained a primary diagnosis in 16.1% ($n=5$) of patients in the first group and in 57.1% ($n=12$) in the second group (Table 3).

Treatment effectiveness

According to the clinical recommendations accepted in the Russian Federation, the therapy is considered to be sufficiently effective if the reduction of symptoms amounts to more than 50% and partly effective if the reduction of symptoms is less than 50%, but more than 30%. When comparing the results obtained during the

first and second assessments (see Table 2), it was noted that the severity of affective symptoms based on the HDRS results had reduced by 62.5% in the first group and 69.7% in the second group. The severity of “prodromal” symptoms based on the SOPS results was down by 45.1% in the first group and 56.3% in the second group, whereas the severity of negative symptoms on the SANS had decreased by 37.2% and 50.0%, respectively. The highest treatment effectiveness was noticed in the reduction in positive symptoms based on the SOPS positive subscale by 62.5% in the first group and 75% in the second group. The lowest reduction in symptoms, in turn, was observed in negative symptoms on the SOPS negative subscale (35%), SANS “Affective Flattening or Blunting” subscale (37.5%), and SANS “Anhedonia — Asociality” subscale (33.3%) in the first group.

When comparing the reduction in scores between the two groups, a greater therapy effectiveness was established in the group with DUI of less than 36 months. In particular, the depressive symptoms score on the

HDRS scale ($p=0.016$; $U=196.0$) and prodromal symptoms score on the SOPS disorganization subscale ($p=0.046$; $U=218.0$) were down significantly. No other statistically valid differences were found (Figure 1).

Across the results collected at the time of admission, positive correlations were found between DUI and the “Alogia” subscale of SANS ($r=0.333$, $p < 0.05$), the degree of positive symptoms of SOPS ($r=0.284$, $p < 0.05$), the symptoms of disorganization of SOPS ($r=0.274$, $p < 0.05$), and the total HDRS score ($r=0.313$, $p < 0.05$). Across the results collected before discharge, positive correlations were determined between DUI and the “Alogia” subscale of SANS ($r=0.376$, $p < 0.05$).

The duration of active treatment was 36.9 ± 18.5 and 47 ± 31.9 days, for the first and second groups, respectively. No significant difference between the groups ($p > 0.05$) depending on the duration of active treatment was found. Based on the UKU Side Effect Rating Scale, no significant side effects were identified (for all items in the scale, the values are 0).

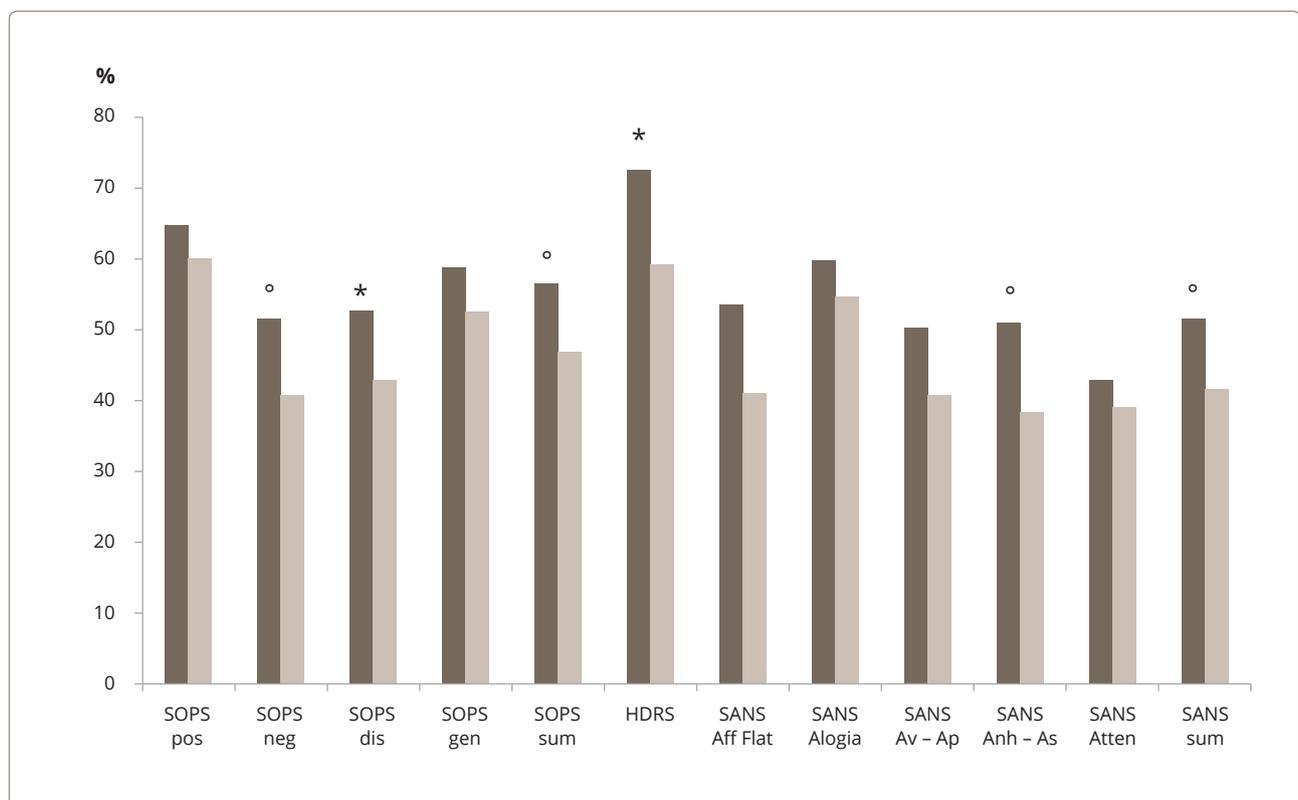


Figure 1. Degree of depressive and non-affective symptoms reduction (%) in the two groups of patients.

Note: * — statistically significant ($p < 0.05$); ° — trend towards statistical significance ($0.05 < p < 0.1$). Dark columns — the first group; light columns — the second group; pos — positive; neg — negative; dis — disorganization; gen — general; sum — summary; Aff Flat — Affective Flattening or Blunting; Av - Ap — Avolition - Apathy; Anh - As — Anhedonia - Asociality; Atten — Attention.

DISCUSSION

Main result

The study determined that the severity of depressive and non-affective symptoms at the time of admission does not depend on the duration of the DUI. However, the DUI has an impact on the reduction of depressive, negative symptoms, and symptoms of disorganization in young patients with a first depression episode. A high level of comorbidity has been found, confirming that a variety of non-psychotic and psychotic disorders in youth manifest themselves in depression at a prodromal stage, whereas no nonspecific affective symptoms are observed. High comorbidity with other mental disorders requires subsequent verification and underlines the difficulty of diagnosing young patients at their first depressive episode. In addition, it has been established that DUI has an impact on the taming of depressive symptoms upon discharge.

Strengths and limitations of the study

Our study exhibits the following strengths. Firstly, a holistic approach to the assessment of youth depression was adopted, allowing us to assess the dynamics of symptoms during treatment. Furthermore, it is clear that not only depressive symptoms, but also negative symptoms and symptoms of disorganization have clinical value in the context of DUI assessment.

The study has several limitations. Firstly, only male patients were included. Secondly, the sample size was relatively small, which may have potentially reduced the statistical potency of the study. Thirdly, follow-up of patients after discharge from the hospital was not performed, limiting the possibilities to analyze the dynamics of remission and its completeness. Finally, inclusion of patients with various types of depressions within nonpsychotic mental disorders may also have influenced the results.

Comparison with the existing literature

The obtained data do not support the results of other studies in which a relationship between the DUI and severity of the depressive episode was established [23]. This may be related to the pathoplastic effect of youth and high stress reactivity of this age, which determine the severity of clinical symptoms [24]. However, significant differences were found between the selected groups during the assessment at the stage of discharge from the hospital. Patients with a shorter DUI (less than 36 months) had a broader reduction of depressive

symptoms in a relatively short period of therapy. This is consistent with early studies showing that delayed beginning of therapy reduces the likelihood of achieving full remission [4]. In addition to the higher level of depressive symptoms, patients with a longer DUI (more than 36 months) demonstrated a lower degree of reduction and a higher severity of negative symptoms, both on the SOPS scale and the SANS scale, symptoms of disorganization on the corresponding subscale SOPS, and a higher total score on the SOPS scale at discharge. To our knowledge, this is the first study to measure links between DUI and prodromal symptoms.

The pathogenesis of negative symptoms has now been found to be related to the functional reduction in dopamine levels in the frontal lobe and mesolimbic structures [25], and in the dorsal, rather than limbic, striatum [26]. The areas of the brain involved in cognitive dysfunction include the hippocampus, dorsolateral prefrontal cortex, and dorsal parietal cortex [27]. In depression, the main biological processes can be characterized by reduced neurotrophic support, metabolic dysfunction, impaired immune response with increased inflammation, oxidative stress, and mitochondrial dysfunction [28]. Thus, according to existing research, prolonged DUI has a long-term neurotoxic effect on the brain, which is manifested in increased ventricle volumes, atrophy of the cortex, white matter lesions in the frontal cortex and basal ganglia, as well as a decrease in the volume of the hippocampus [29]. Clinically, this can manifest itself as persistent negative symptoms and symptoms of disorganization, which can be difficult to treat. Interestingly, in the present study we found no cross-group differences in the reduction in positive symptoms. This is consistent with the dopaminergic hypothesis linking the appearance of positive symptoms to changes in the neurotransmission of dopamine in the mesolimbic system, with an increase in presynaptic regions [30], which is easy to treat and does not have a lasting effect on brain functioning.

Implications for future research and practice

The lack of a reduction in depressive, negative, and disorganized symptoms in the first group of patients with a longer DUI points to the need for more elaborate studies of youth depression, with a clarification of its pathogenesis. In addition, more attention should be given to depressive symptoms as predictors of adverse outcomes in mental disorders.

CONCLUSION

Our study showed that the DUI has an impact on the reduction of depressive, negative symptoms, and symptoms of disorganization in youth patients at the first depressive episode. A high level of comorbidity has been uncovered, confirming that a variety of nonpsychotic and psychotic disorders in youth manifest themselves in depression at a prodromal stage, causing difficulties in establishing diagnoses and requiring subsequent verification. Future research might need to focus on exploring depressive symptoms as predictors of mental disorders in youth patients.

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M.A. Omelchenko — development of the idea, setting of research objectives, discussion of results and formation of conclusions, obtaining data for analysis, analysis of the obtained data (40%); V.V. Migalina — review of publications on the topic of the article, analysis of the obtained data (40%); V.G. Kaleda — developing an idea, setting research objectives, discussing results and drawing conclusions (20%).

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Epidemiological Study on the Early Detection of Mental Disorders in Young Children in Russia

Эпидемиологическое исследование раннего выявления психических расстройств у детей раннего возраста в России

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Original research

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ABSTRACT

BACKGROUND: Assessing the risk of children developing mental, behavioral, and developmental disorders (MBDDs), including autism spectrum disorders (ASDs), as well as achieving early detection of such disorders, has become one of the most important undertakings for public mental health professionals worldwide.

AIM: This study aims to evaluate the risk of developing MBDDs and the prevalence of MBDDs among young children (18–48 months old) in Russia.

METHODS: A two-level epidemiological screening approach was developed and adopted for the purposes of this study. At the first level, the parents of all children between 18 and 48 months old were questioned using Russian national validated Screening Checklist for Parents for Identification of the Risk of Mental, Behavioral, and Developmental Disorders in Early Childhood in nine regions of Russia (Volgograd, Kirov, Moscow, Novosibirsk, Orenburg, Tver, Chelyabinsk, Yaroslavl, and Stavropol). At the second level, children identified at the first level of screening as being at risk of developing MBDDs were assessed by a child psychiatrist on a voluntary basis and diagnosed according to the International Classification of Diseases, Tenth Revision criteria.

RESULTS: The present study revealed that the risk of developing MBDDs stands at 13.07% or 1,307 cases per 10,000 child population aged 18–48 months, whereas the prevalence of confirmed MBDDs is 1.51% or 151 cases per 10,000 among a Russian child population aged 18–48 months.

CONCLUSION: Screening for the risk of developing MBDDs, including ASDs, in Russia among very young children is a promising area of preventive medicine. This initiative allows us to develop optimal algorithms for specialized care measures that could help prevent the development and aggravation of children mental health issues.

АННОТАЦИЯ

ВВЕДЕНИЕ: Оценка риска возникновения нарушений психического развития (НПР), психических и поведенческих расстройств, включая расстройства аутистического спектра (РАС), а также раннее выявление у детей НПР — это важнейшие направления деятельности специалистов по охране психического здоровья во всем мире.

ЦЕЛЬ: Настоящее исследование направлено на оценку риска развития НПР и распространенности НПР у детей раннего возраста (18–48 месяцев) в России.

МЕТОДЫ: Для достижения целей настоящего исследования разработан и применен двухуровневый подход к эпидемиологическому скринингу. На первом уровне сплошным методом были опрошены родители детей в возрасте от 18 до 48 месяцев с использованием отечественной валидизированной «Скрининговой анкеты для родителей по выявлению риска возникновения нарушений психического развития у детей раннего возраста» в девяти регионах России (Волгоград, Киров, Москва, Новосибирск, Оренбург, Тверь, Челябинск, Ярославль, Ставрополь). На втором уровне дети, идентифицированные на первом уровне скрининга как находящиеся в группе риска по развитию НПР, осматривались врачом-психиатром на добровольной основе и в ряде случаев устанавливался диагноз в соответствии с критериями МКБ-10.

РЕЗУЛЬТАТЫ: Установлено, что риск НПР составляет 13.07%, или 1307 случаев на 10,000 детей в возрасте 18–48 месяцев, тогда как распространенность подтвержденных НПР составляет 1.51%, или 151 случай на 10,000 детей, среди детского населения России в возрасте 18–48 месяцев.

ЗАКЛЮЧЕНИЕ: Скрининг риска развития НПР, в том числе РАС, в России среди детей раннего возраста является перспективным направлением профилактической медицины. Эта инициатива позволит разработать оптимальные алгоритмы проведения специализированных мероприятий по профилактике возникновения и усугубления проблем психического здоровья детей.

Keywords: *early detection; epidemiology; screening; early childhood; mental, behavioral and developmental disorders; autism spectrum disorders; primary healthcare*

Ключевые слова: *ранняя диагностика; эпидемиология; скрининг; ранний детский возраст; нарушения психического развития; психические расстройства; расстройства аутистического спектра; первичная медико-санитарная помощь*

INTRODUCTION

A review by the World Health Organization (WHO) noted that the number of unmet mental health needs in the general population is on the increase and that there is a need for a strategy aimed at promoting mental health and pre-empting mental disorders [1]. The WHO also reports that half of mental health problems emerge before the age of 14 [2], whereas the proportion of children with mental health issues ranges from 10 to 29% of their general population [3–5]. Therefore, evaluating the risk of children developing mental, behavioral, and developmental disorders (MBDDs), including autism spectrum disorders (ASDs), as well as detecting such disorders early, has become one of the most important tasks facing public mental health officials throughout the world [6–8].

Screening procedures are recognized as the most cost-effective population-wide preventive strategies for reducing the societal burden of mental illnesses

[9, 10]. Although the number of studies focusing on epidemiological screening for mental health issues among children has risen in the last decades [11, 12], the early detection and epidemiology of MBDDs in young children remain insufficiently investigated [13, 14]. Many prospective, longitudinal studies indicate that risk factors and predictors of mental disorders can be identified in the early years of a child's life [13, 15–18]. Timely identification and treatment of MBDDs is critical for children wellbeing [19] and crucial in preventing the emergence of psychological and developmental problems in later life [20–23]. Hence, screening for MBDDs can contribute substantially to the development of a national medical system of MBDDs prevention, early diagnosis, and timely intervention.

Children mental health is now recognized as an important country-level issue in Russia [24, 25]. According to national statistics, MBDDs, including ASDs, dominate among childhood disabilities [26]. As in other countries,

in Russia MBDDs are diagnosed according to the International Classification of Diseases, Tenth Revision (ICD-10). Having acknowledged the importance of preempting the development of MBDDs, including ASDs, in early childhood [27], the Russian Ministry of Health has launched a campaign targeting parents. Under this campaign, parents are entitled to free consultations with child psychiatrists during the first years of their children's life [24]. This campaign should help parents with preventive advice and assistance in the early detection of mental health issues in their children. Notwithstanding, Russia still experiences a lack of capacity as concerns epidemiological estimations of MBDDs prevalence in early childhood.

Against this backdrop, this study aims to determine the risk of developing MBDDs among young children (18–48 months old) and the prevalence of such disorders in Russia.

METHODS

Context

The present study was performed as part of the Russian national epidemiological screening campaign for MBDDs. In Russia, epidemiological screening for MBDDs was initiated by the Ministry of Health and was carried out in two stages, between 2015 and 2019. Firstly, screening of children 16 to 24 months old was implemented in order to assess the risk of developing ASDs in the three largest Russian regions [28, 29]. Secondly, the scope of the screening was extended, with the aim to explore the risk of developing MBDDs of different origins (including ASDs) among children between 18 and 48 months of age across nine regions of Russia (Volgograd, Kirov, Moscow, Novosibirsk, Orenburg, Tver, Chelyabinsk, Yaroslavl, and Stavropol). These nine regions were representative in terms of mean population size and density. Furthermore, these regions were selected for the pilot study because of the presence in them of a well-established pediatric infrastructure, with a sufficient number of capable child psychiatrists. The screening was executed as part of the mandatory clinical examination of children in primary public healthcare institutions. It aimed to cover a maximum number of children, including those with genetic diseases, hearing and other disabilities, who might be at higher risk and in need of a psychiatrist or clinical psychologist for preventive purposes.

Procedure

The two-tiered epidemiological screening approach was developed and adopted for the purposes of the current study. At the first level, the parents of all the children between 18 and 48 months old were questioned using the Russian nationally validated Screening Checklist for Parents for Identification of the Risk of Mental, Behavioral, and Developmental Disorders in Early Childhood (SCPIR) in the abovementioned nine regions of Russia [25, 27]. The SCPIR is similar to the questionnaire developed by Prof. C. Gillberg in the context of Early Symptomatic Syndromes Eliciting Neurodevelopmental Clinical Examinations (ESSENCE), which aims to cover all types of early developmental disorders [30]. The assessment was carried out in primary healthcare institutions mainly by pediatricians, with the involvement of neurologists, clinical (medical) psychologists, and medical students. We note that a defined risk of MBDDs was not interpreted as a diagnostic category and that it cannot substitute a clinical diagnosis by a psychiatrist.

At the second level, the at-risk children detected at the first level of screening were assessed by a child psychiatrist on a voluntary basis and diagnosed according to the ICD-10 criteria. The ICD-10 criteria were used as special diagnostic classifications. Other classifications, such as the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC:0-3 or DC:0-5) [31], are not used in Russia. Children diagnosed with MBDDs were kept under the dynamic supervision of a psychiatrist. Children who had not been diagnosed with MBDDs remained under the supervision of a pediatrician, and consultations with a clinical psychologist were recommended in their case in order to forestall any possible difficulty in their cognitive development.

Data analysis

A descriptive-analytical method was used for the purposes of the current study.

RESULTS

In total 595,691 parents (one parent per child) of children aged 18–48 months (born within 2017–2019) were surveyed in nine regions of Russia (Volgograd, Kirov, Moscow, Novosibirsk, Orenburg, Tver, Chelyabinsk, Yaroslavl, and Stavropol regions). The participants were not divided into subgroups based on either theirs or

their children's age. Although the parents had the right to decline to participate in the survey, no refusals were registered. The average screening coverage of the child population of the specified age was 53%, the maximum coverage was in the Orenburg region (80%), in the Chelyabinsk region (68.5%), and in the Volgograd region (66%), and the minimum coverage was in the Novosibirsk region (20%). Low coverage might have been caused by a lack of awareness about the project in some regions.

The analysis of the obtained data has demonstrated that, on average, the risk of developing MBDDs among the child population aged 18–48 months stands at 13.07% (1,307 cases per 10,000). The MBDDs risk indices were found to vary significantly across the regions. The minimum values were noted in Orenburg, Stavropol, and Chelyabinsk regions (3.69%, 4.85%, and 6.7%, respectively), whereas maximum values were registered in the Volgograd, Kirov, and Moscow regions (19.15%, 19.22%, and 23.28%, respectively). Such discrepancies might have to do with the existing issue of uneven access to healthcare services among urban and rural child populations. However, there was no accessible data on the urban and rural child populations that participated in the study, making it difficult to draw conclusions that could stand under scrutiny.

The prevalence of confirmed MBDDs was found to stand at 1.51%, or 151 cases per 10,000 child population aged 18–48 months [32, 33]. Minimum values of this index were observed in the Orenburg (0.51%), Stavropol (0.31%), and Chelyabinsk (0.25%) regions, where the risk of developing MBDDs was also the lowest. The highest prevalence of MBDDs was noted in Kirov (3.57%) and Tver (5.24%) regions. Although the age coverage was similar in all regions, the regions participating in the study differed in their population size and in their level of development of preventive psychiatric and psychological care systems for young children. Kirov and Tver regions are both characterized by relatively small territories and populations, as well as better developed child psychiatric infrastructures. In particular, a specialized system of comprehensive care for children (from 1-year-old) was introduced in these regions in 2010. Considering that an extended diagnosis of MBDDs is based on the work of a multi-disciplinary team of clinical specialists, early introduction of the specialized care system might explain the highest rate of MBDDs found in these regions. The present study's findings suggest that ASDs prevalence

is 0.18%, or 18 cases per 10,000 children population of between 18–48 months of age.

The group of "specific disorders of psychological development" (F80–F83) constituted 60.41% of the sample and prevailed over other MBDDs (Figure 1a). This group included the specific disorders of speech and language development, progress in educational skills, development of motor function, and mixed disorders of mental development. It is important to note that children diagnosed with F80–F83 are of special interest to clinical psychologists, psychiatrists, and pediatricians because of the possible deterioration of their state in the absence of adequate help and treatment. The next two most frequently observed groups were behavioral disorders, including hyperkinetic, emotional, and behavioral disorders (F90–F98), comprising 17.08% of the overall sample, and the pervasive developmental, general psychological development, and ASDs (F84.0–F84.8), comprising 16.92% of the overall sample (Figure 1a). These groups were followed by mental retardation (F70–F79), comprising 5.54% of the sample. Early-onset childhood type schizophrenia (F20.8xx3) comprised only 0.06% of the sample (Figure 1a).

A separate analysis of the group of pervasive developmental, general psychological development, and ASDs has shown the following distribution (Figure 1 b): "Childhood autism" (F84.0) comprised 27.48% of the cases; "Atypical autism" (F84.1) — 16.55%; "Hyperactive disorder associated with mental retardation and stereotyped movements" (F84.4) — 7.13%; "Other childhood disintegrative disorder" (F84.3) — 4.34%; and "Rett syndrome" (F84.2) — 0.26%. The prevailing group of "Other pervasive developmental disorders" (F84.8), which comprised 44.25% of the cases, represents a temporary diagnostic category. Only dynamic observation of the children enables further diagnostic specification.

The present study's findings also suggest that the prevalence of ASDs is 0.18%, or 18 cases per 10,000 of children population between 18–48 months old. In our previous pilot study conducted between 2015 and 2016, the prevalence of ASDs was estimated at 0.05%, or 5 cases per 10,000 child population between 16 and 24 months old (diagnosed according to the ICD-10 criteria) [28]. Thus, estimation of the prevalence of ASDs has increased with the expansion of the age range. This can be explained by the deterioration of the mental state of undiagnosed children without medical help and the appearance of comorbid symptoms.

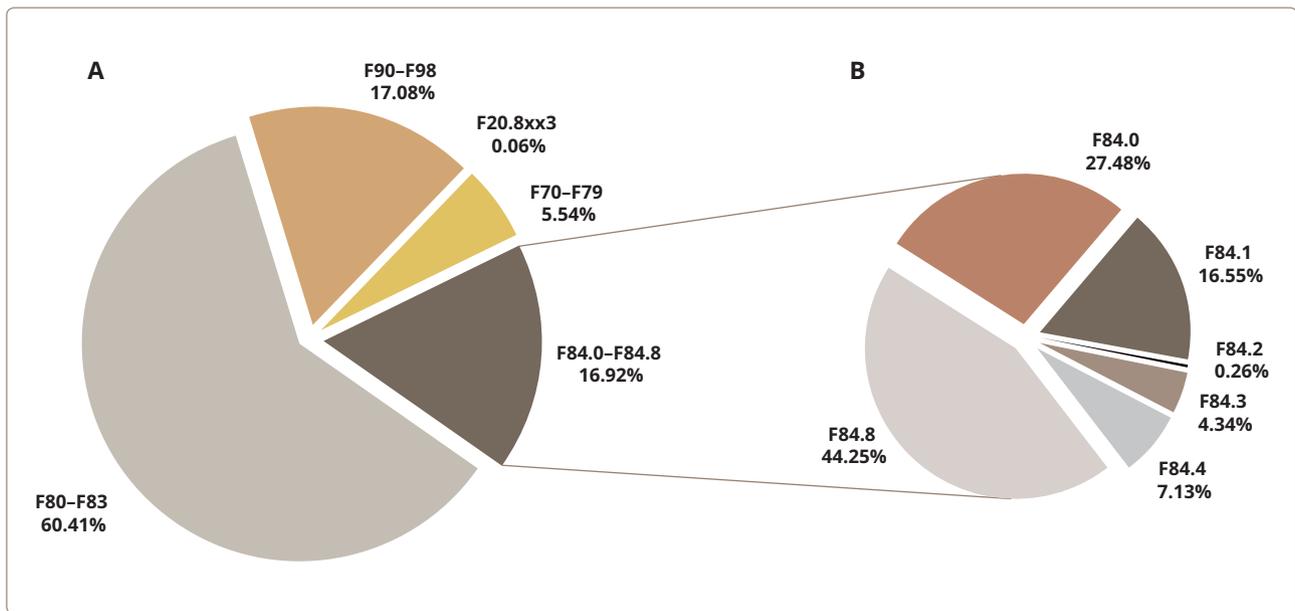


Figure 1. The structure of mental and behavioral developmental disorders, according to the ICD-10, among children 18–48 months of age in nine Russian regions.

DISCUSSION

Main result

The present study reveals that the risk of developing MBDDs among a Russian child population aged 18–48 months stands at 13.07% (1,307 cases per 10,000), whereas the prevalence of confirmed MBDDs among a Russian child population aged 18–48 months is 1.51% (151 cases per 10,000).

Strengths and limitations of the study

To our knowledge, this was the first study assessing the risk of developing MBDDs and the prevalence of MBDDs among young children (18–48 months old) in Russia.

Screening for mental health in children is generally laden with ethical, social, and cultural quandaries [34]. The most screening tools have been developed in English in the United States or United Kingdom; thus, translated versions are needed for use in culturally and linguistically different populations. For example, the translation methods proved to affect selected psychometric properties differing in the various translation versions of the M-CHAT-R [35]. A more accurate cultural adaptation approach may be necessary to maintain relevance with the original instrument. Besides, M-CHAT is designed specifically for ASD, but our study was targeted at a broad MBDD spectrum, and even more so, at revealing the risk group for MBDD development.

The proposed Russian national SCPIR screening checklist enables determination of the risk of developing MBDDs (including ASDs) based on the scientific and practical experience of Russian child psychiatrists and psychologists. This checklist does not require any special training, and the questions on the list are formulated in terms accessible to parents. The Ministry of Health of the Russian Federation has reacted positively to the results of this epidemiological study and has issued Order of the Ministry of Health of the Russian Federation № 396n, which has instructed integration of the screening procedures into the Russian primary care system (since the end of 2019) [36]. However, the association between gender and the risk of developing MBDDs and the prevalence of MBDDs among the children included in the study was not taken into consideration. Therefore, this can be considered as a limitation of the study.

Comparison with the existing literature

The data obtained in our study are comparable with those of a Danish cohort study (diagnoses in which were also made according to the ICD-10 criteria). The Danish researchers reported that 16,164 children (1.76% of a population of 918,280 children in their first four years of life) were diagnosed with mental (0.90%) and/or general developmental disorders (1.05%). The incidence of mental and developmental disorders diagnosed within

the first four years of life increased in the following years (1997–2010) and showed complex comorbidities [12].

In a Norwegian population study ($n=1555$), the highest prevalence of suspected developmental delays was identified in the gross motor area among children 4–12 months of age and accounted for 2.3–8.7% (0.4–4.6% in the fine motor area), whereas the overall prevalence rates of suspected developmental delays varied from 5.7% to 12.3% [14].

A recent meta-analysis has estimated the prevalence of mental disorders among children worldwide [37]. It included ten studies, summarizing data on 18,282 children of 12–83 months of age from eight countries. The pooled prevalence of mental disorders was estimated at 20.1%. The most common disorders were defiant disorder (4.9%) and attention-deficit hyperactivity disorder (4.3%). The study revealed that the epidemiology of mental disorders in children younger than seven years remains a neglected area of research, and that a significant number of young children suffering from mental disorders are in need of appropriate age-adapted treatment [37]. Another review estimated that the prevalence of mental health disorders amongst children aged from one to five years is about 16–18% [38].

When comparing Russian epidemiological data on the prevalence of ASDs with other populations, we noted that information about ASDs prevalence worldwide is mostly available for children above 36 months (older than 3 years old). This might have to do with issues in the development of mental health services for young children and the interest accorded the problems of school-age children and adolescents. Available epidemiological data from Belarus suggests that the prevalence of ASDs is estimated at 5.07 cases per 10,000 children and adolescents in a population aged from three to 17 years [39]. These numbers are similar to the findings in our study but lower than the results obtained in the studies originated in other countries.

Since 2000, the United States Centers for Disease Control and Prevention (CDC) has been actively monitoring the prevalence of ASDs among children aged eight years in eleven states (Autism and Developmental Disabilities Monitoring Network, ADDM). According to the data for 2016, the prevalence of ASDs was 185 cases per 10,000 children aged eight years, of which 33% had severe mental retardation, 24% had borderline mental retardation, and 42% had a medium or high IQ. An increase in the identification of cases with ASDs by 175% was shown compared to the first data obtained

in 2000 and 2002 [40]. According to the latest report released by the CDC in 2020, the prevalence of ASDs was 156 cases per 10,000 in a four-year-old children population [41]. Overall, 53% of these cases had mental retardation. It is important to note that the prevalence of ASDs varied widely depending on the US state. The minimum number of 88 cases per 10,000 four-year-old children population was registered in Missouri, whereas the maximum number of 253 cases per 10,000 four-year-old children population was recorded in New Jersey [41]. According to the CDC, the prevalence of ASDs reached 250 cases per 10,000 children population aged three to 17 years in 2016 [42]. However, another US National Health Interview Survey (NHIS) reports an even higher prevalence of ASDs of 276 per 10,000 children population aged from three to 17 in the same year [43].

A recent meta-analysis estimated the pooled prevalence of ASDs in China at 39.23 cases per 10,000 children population (the age of the included subjects ranged from 1.6 to 8 years, with the median age of 4 years). Specifically, the prevalence of autism was estimated at 10.18 cases per 10,000 children population [44], which is close to our estimations in the Russian population. A great gender-related difference in the prevalence was revealed in the Chinese analysis (20.50 cases in boys versus 6.12 cases in girls per 10,000 population) [44]. This interesting observation could be tested in Russian and other populations in the future, because the average epidemiological estimations of ASD in Chinese and Russian child populations are similar.

According to the eleven meta-analyses reflecting the prevalence of autism conducted in 1966–2019, the border between people diagnosed with autism and the rest of the population has been shrinking in the last decade, which affects the increase in figures reflecting the prevalence of ASDs [45]. There is evidence that the broadening of the ASDs concept in terms of the expansion of diagnostic criteria, development of medical services, and awareness improvement plays a major role in explaining the increase in the prevalence of ASDs, although we cannot rule out that other factors might also contribute to the trend [11, 46]. It is worth noting that epidemiological assessments around the world can be influenced by differences in diagnostic approaches, clinical practices, the traditions of medical communities, data sources for statistics, and the availability of medical and rehabilitation care for children. Also, it is important

to take into account the influence of ethnic, linguistic, and other characteristics of the population.

It is useful to note that ADDM Network estimates are based on data from various sources (general health clinics, reports from specialized programs serving children with developmental disabilities, as well as from public schools). Further, these data are processed by experienced doctors in accordance with the diagnostic criteria for autistic disorder, Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS), including Atypical Autism and Asperger Syndrome according to DSM-IV-TR (2000). Also, the prevalence of ASD in the US is determined by interviewing families by phone, and currently, by e-mail, based on the subjective assessment of parents and alignment with the DSM criteria (National Survey of Children's Health, NSCH). Criticisms regarding the estimations of ASD prevalence made by CDC ADDM have been expressed by the research group headed by Professor T.S. Brugha, the UK psychiatrist epidemiologist, who noted that passive sampling analysis is unreliable [47].

According to an Italian child psychiatrist, Professor M. Zappella, the striking differences in epidemiological estimates are associated with the methods used in the examination and assessing of children. The primary method for assessing autism, he notes, should be a clinical examination of the child and family, with possible involvement of psychometric research data [28].

An increase in the number of newly revealed cases with ASD among the world might be due to the changes in diagnostic approaches and emergence of new nosological classifications over the past two decades [49, 29].

Implications for future research and practice

Raising awareness of MBDDs among Russian parents is one of the possible strategies in efforts to move the needle on the issue. Considering that screening procedures are already integrated into the Russian primary care system, children with a higher risk of developing MBDDs need preventive care because of their vulnerability. Creating the required conditions, such as regular consultations with psychologist and other pediatric medical specialists, is essential for a full development of these children.

CONCLUSION

Screening for the risk of developing MBDDs, including ASDs, in Russia among very young children in the general pediatric population is a promising area of preventive medicine.

This initiative allows to develop optimal algorithms for specialized care measures, preventing the development and aggravation of mental health issues affecting children.

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The Prevalence of Autism Spectrum Disorders in the Russian Federation: A Retrospective Study

Распространенность расстройств аутистического спектра в Российской Федерации: ретроспективное исследование

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Original research

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ABSTRACT

BACKGROUND: There has been an increase in the prevalence of autism spectrum disorders (ASD) worldwide over the past decades. Studies have shown that the number of confirmed diagnoses correlates with the awareness of the disorder among the general public and the professional community, in particular, as well as the availability of formalized screening procedures and modern medical and educational tools for families raising children with ASD in regional population centers. Thus, comparing autism prevalence rates in regions of the same country helps identify regions with limited access to diagnostic services and adequate medical care.

AIM: To estimate the overall number of individuals meeting the diagnostic criteria for ASD in Russia and determine the differences in the number of registered individuals with established diagnosis in the constituent territories of the Russian Federation.

METHODS: We conducted a retrospective, observational study and analyzed data from official statistical reports (form 12 "Information on the Number of Diseases Registered in Patients Residing in the Service Area of a Healthcare Institution" for 2020–2021).

RESULTS: A steady upward trend in the number of individuals with autism has been observed since 2014 in the Russian Federation as a whole and in the federal districts, although the prevalence rates differ from the global median prevalence of ASD (all-Russian figure by almost 40 times). In addition, regional differences (by 104.5 times) in the frequency of the diagnosis have been revealed: from a minimum of 1.7 to a maximum of 177.7 per 100,000 population. The percentile distribution of the number of individuals with ASD that are followed-up at healthcare facilities in the constituent territories of the Russian Federation was in the interquartile range (25–75th percentile), below the 25th percentile, and above the 75th percentile in 38, 26 and 21 regions, respectively.

CONCLUSION: The study has shown significant differences in the ASD diagnosis rates by regions in the country against a backdrop of a low (compared to international data) number of registered cases of autism. The presented data suggest that, due to the lack of proper diagnosis, a significant number of individuals with ASD do not receive adequate medical care, nor do they receive social, psychological, or pedagogical support. Possible reasons for this probably include low awareness of new diagnostic approaches among psychiatrists; low level of involvement of pediatrics professionals in screening activities; and fear of stigmatization because of a psychiatric diagnosis in the absence of a developed medical care infrastructure that encompasses a social, psychological, and pedagogical support system for people with ASD.

АННОТАЦИЯ

ВВЕДЕНИЕ: В течение последних десятилетий во всем мире отмечается увеличение распространенности расстройств аутистического спектра (РАС). По данным исследований количество установленных диагнозов коррелирует с уровнем осведомленности о характере расстройства в обществе в целом и в профессиональном сообществе в частности, наличием формализованных процедур скрининга и доступных в регионе современных медицинских и образовательных услуг для семей, воспитывающих детей с РАС. Таким образом, сравнение показателей распространенности аутизма внутри регионов одной страны помогает выявить регионы с ограниченным доступом к диагностическим услугам и адекватной медицинской помощи.

ЦЕЛЬ: Общая оценка количества лиц, соответствующих диагностическим критериям РАС, в России и определение различий в количестве зарегистрированных лиц с установленным диагнозом в субъектах Российской Федерации.

МЕТОДЫ: Проведено ретроспективное наблюдательное исследование, проанализированы данные официальной государственной статистической отчетности (форма 12 «Сведения о числе заболеваний, зарегистрированных у пациентов, проживающих в районе обслуживания медицинской организации» за 2020–2021 гг.).

РЕЗУЛЬТАТЫ: Отмечена устойчивая тенденция к росту числа людей с аутизмом, наблюдающаяся с 2014 года в целом по Российской Федерации и в федеральных округах. При этом показатели распространенности (общероссийский — почти в 40 раз) отличаются от общемировой медианной распространенности РАС. Выявлены региональные различия (в 104.5 раза) частоты диагноза: от минимального 1.7 до максимального 177.7 на 100000 населения. Распределение по перцентилям количества лиц с РАС, находящихся под динамическим наблюдением в субъектах РФ, составило: в межквартильном диапазоне (25–75 перцентиль) — 38 регионов, ниже 25-го перцентиля — 26, выше 75-го — 21.

ЗАКЛЮЧЕНИЕ: Исследование показало значительные различия в уровне диагностики РАС в зависимости от региона страны на фоне низкого (по сравнению с международными данными) числа зарегистрированных случаев аутизма. Представленные данные позволяют предположить, что из-за отсутствия надлежащей диагностики значительная часть лиц с РАС не получают адекватной медико-социальной и психолого-

педагогической помощи. Возможными причинами этого, вероятно, являются недостаточная осведомленность врачей-психиатров в отношении новых диагностических подходов, низкая вовлеченность педиатрической службы в скрининговые мероприятия, опасения стигматизации по факту психиатрического диагноза в отсутствие развитых структур медико-социального и психолого-педагогического сопровождения лиц с РАС.

Keywords: *autism; prevalence; diagnostics; screening*

Ключевые слова: *аутизм; распространенность; диагностика; скрининг*

INTRODUCTION

According to WHO, the average prevalence of autism spectrum disorders (ASD) in children stands at approximately 1 in 100 [1]. At the same time, a significant number of studies conducted mainly in countries with a high standard of living reveal a higher prevalence of autism.

Meanwhile, there is a need for more reliable estimates of the prevalence of ASD that take into account the severity of the affliction, to plan steps in the area of public health and education, anticipating the number of disabilities and the needs in terms of social support programs, as well as setting priorities in the field of research [2].

The term “*autism spectrum disorders*” per se is not included in the ICD-10, but it is present in the ICD-11, the transition to which is currently underway and is expected to be completed in the next 3 years (by 2025). The catchall concept of “*autism spectrum disorder*” pools all forms of “*autism*” cited in the ICD-10: childhood autism, atypical autism, Rett syndrome, other childhood disintegrative disorders (F84.0–F84.3), and Asperger’s syndrome (F84.5). In addition, in the ICD-11, it will become necessary to determine the level of concurrent disorder in intellectual development and the impairment of functional language as part of the core diagnosis for this group of disorders.

The first studies conducted in the 1960s and 70s in Europe and the United States estimated that the prevalence of autism ranged from 2 to 4 cases per 10,000 children [3, 4], which gave the impression that autism was a relatively rare developmental disorder [5].

After the expansion of diagnostic criteria for autism in the 1980s and 1990s, studies of its prevalence predictably showed a significant increase in the number of cases in the population [6–8]. At the beginning of the 21st century, estimates of the prevalence of autism in the United States already stood in the range of 6 to 7 per 1,000 children, which represents a more than 30 times increase compared to 30 years ago [9].

The increase in the prevalence of autism in recent years mainly has to do with the expansion of diagnostic criteria for the disorder and the acceptance of the concept of autism as a spectrum of certain disorders of varying severity [10–12].

Other factors that have been hypothesized to contribute to the increasing number of patients diagnosed with autism include screening and the improved quality of health care in general, as well as an increase in the proportion of children born to aged parents, an increase in the proportion of surviving children with extremely low birth weight, and assortative mating for autism spectrum disorders [7, 13–16].

In addition, it has been recognized that the increase in the number of reported cases of autism has contributed to the expansion of diagnosis among adults, female patients, and high-functioning individuals of both sexes [17].

The latest systematic review concludes that the increase in the measured prevalence of autism in most of the developed world reflects the combined impact of various factors, including increasing awareness on the part of the parent community and the public health response capacity [2].

The upward trend in the diagnosis rates of autistic disorders is also observed in Russia. The total number of people with ASD, according to monitoring in 2018, was 22,953 persons, a 43% increase (6,955 people) in the number compared to 2017 (15,998 people) [18].

It is important to note that, according to various studies, ASD prevalence rates vary widely not only between different countries but also between different regions within countries. Thus, a study conducted in 2018 in the United States by the Autism and Mental Developmental Disabilities Monitoring Network showed that the prevalence of ASD per 1,000 children aged 8 years varied from 16.5 in Missouri to 38.9 in California [19]. A study published around the same time in JAMA Pediatrics showed that children in Florida

were diagnosed with ASD three times more often than in Texas — 4.88% and 1.54%, respectively [20]. At the same time, researchers conclude that the actual prevalence of autism does not significantly depend on geographic, racial, or socioeconomic factors.

However, these factors may affect the detection of the disorder. Research results show that the number of established diagnoses correlates with the level of awareness of the main manifestations of ASD among the general public and professional community, in particular. The timeliness of the diagnosis and the quality of care depend on the number of trained specialists, the availability of formalized screening procedures, and the modern medical and educational services available in the region for families raising children with ASD. Living near urban centers with access to quality medical care and special education programs has a beneficial effect on the quality of life of patients with ASD; therefore, there is a need to attract additional resources in the development of monitoring programs and assistance to families from vulnerable low-income groups [19].

Thus, a comparison of autism prevalence rates in a country helps identify regions with limited access to diagnostic services and adequate medical care. It also stands as a way to highlight the need to improve the overall professional level, to zero in on shortcomings in the organization of screening activities and public awareness, and substandard special educational conditions, and it points to a likelihood of the presence of socioeconomic barriers for families on the path to diagnosis. Our study aimed to estimate the number of individuals meeting the diagnosis criteria of ASD in Russia. In addition, we specifically investigated the differences in the number of registered individuals with an established diagnosis in the constituent territories of the Russian Federation.

METHODS

A retrospective observational study was conducted to assess the number of individuals with established diagnoses corresponding to ASD in the Russian Federation and its constituent territories, and the 2020–2021 data of form 12 “Information on the Number of Diseases Registered in Patients Residing in the Service Area of a Healthcare Institution” (report form to Federal State Statistics Service; hereinafter — Form 12) were used. The study did not aim to determine the true

prevalence of autism. It was important for us to determine how many patients with an established diagnosis had access to the services needed to resolve their medical, social, and educational issues (disability registration, referral to a psychological, medical, or pedagogical commission, etc.). Therefore, the analysis includes the item of form 12 “The patient is under follow-up at a healthcare facility at the end of the reporting year.”

Form 12, approved in 2019 (Order of Rosstat No. 679 dated November 22, 2019), contains the classes and individual diseases following ICD-10, where the following disorders are combined in line 6.2: childhood autism, atypical autism, Rett syndrome, other childhood disintegrative disorders (F84.0–F84.3). The genetic syndrome is coded under the appropriate rubric (LD90 “Conditions with disorders of intellectual development as a relevant clinical feature”), and a diagnosis of ASD is made by a psychiatrist.

The statistical analysis was carried out in R version 4.1.1 (package `tableon`). The quantitative parameters were tested for uniform distribution using the Kolmogorov–Smirnov test. Since the distribution was abnormal, we calculated the median and interquartile ranges (IQR) for the quantitative parameters. Comparison of the quantitative characteristics of independent groups was performed using the Mann-Whitney test (when comparing 2 groups) or the Kruskal-Wallis test (≥ 3 groups). An adjustment for multiple comparisons (q) was calculated to account for multiple hypothesis testing, and the q results should be used to detect significant differences when more than 2 groups are compared. The hypothesis testing was two-sided: $p < 0.05$ values were considered statistically significant.

RESULTS

According to the Department of Monitoring, Analysis and Strategic Health Development of the Federal State Budgetary Institution “Central Research Institute for the Organization and Informatization of Healthcare”, in 2021, 41,307 individuals were under follow-up regime (FU) at healthcare institutions with diagnoses consistent with ASD, which exceeds the figures for 2020 by 5,897 individuals (Table 1). The median number of individuals with ASD under follow-up at healthcare institutions in the constituent territories of the Russian Federation was 21 (14.36) per 100,000 population (Table 2).

Table 1. Number of individuals with ASD under follow-up at healthcare institutions (per 100,000 of the corresponding population)

Territory	2000	2021	Growth rate, %
Russian Federation	24.2	28.3	17
Central Federal District	34.7	35.7	3
Northwestern Federal District	11.3	13.4	19
Southern Federal District	22.4	32.8	46
North Caucasian Federal District	14.7	19.0	29
Volga Federal District	19.9	23.8	25
Ural Federal District	28.2	32.7	16
Siberian Federal District	23.6	29.6	25
Far Eastern Federal District	22.0	26.1	19

Table 2. Median number of individuals with ASD under follow-up at healthcare institutions in the Russian Federation (2021)

Under follow-up with ASD at the end of 2021 (per 100,000 population)	Number of Russian Federation regions N=85
Median (IQR)	21 (14; 36)
Min-Max	1.7–178

In 2020, the studied indicator exceeded the average Russian level only in two federal districts; the Central Federal District (CFD) and the Ural Federal District (UFD), while in 2021 four such districts had appeared: the Central Federal District (CFD), Southern Federal District (SF), Ural Federal District (UFD), and Siberian Federal District (SFD). There was a significantly lower number of patients with ASD under FU in the North-Western Federal District (NWFD) than the average all-Russia level (by 2.1 times). Low figures, in comparison with the all-Russia level, were registered in the North Caucasian Federal District (NCFD) and Volga Federal District (VFD). In the Far Eastern Federal District (FEFD), the figure is slightly below the Russian average.

There is a pronounced uniformity in the growth rate of the number of individuals with ASD under FU in the federal districts: from an insignificant 3% in the Central Federal District to a high 46% in the Southern Federal District (Table 1).

A steady upward trend in the number of individuals with autism has persisted since 2014 both in the Russian Federation, as a whole, and in the federal districts. However, the indicator still differs significantly (the all-Russia one by almost 40 times) from the global median prevalence of ASD.

Table 3 shows the percentile distribution of the number of individuals with ASD under FU in the constituent

territories of the Russian Federation, indicating its extremely heterogeneous nature. In the interquartile range (25; 75th percentile), there are 38 regions with 15 to 36 individuals with ASD under FU per 100,000. The all-Russian indicator is also in the same range. The distribution below the 25th percentile includes 26 constituent territories of the Russian Federation — this is slightly less than a third (31.8%) of all districts — with the number of individuals with ASD under FU ranging from 1.7 to 14 per 100,000 population.

The minimum number of individuals with autism under FU (per 100,000 population) was registered in the Kaluga Region, Khabarovsk Territory, Amur, Irkutsk, and Omsk Regions (Figure 1).

Individuals with ASD under FU above the 75th percentile were registered in 21 regions of Russia. The maximum number of individuals with ASD under FU (per 100,000 population) was registered in the Kabardino-Balkarian Republic, the Republic of Khakassia, the Kamchatka Territory, the Jewish Autonomous Region, and the Yamalo-Nenets Autonomous Okrug.

There are significant regional differences (104.5 times) in the studied indicator: from the minimum in the Kaluga region (1.7 per 100,000) to the maximum in the Yamalo-Nenets Autonomous Okrug (177.7 per 100,000).

Table 3. Distribution of the number of individuals with ASD under FU in the territories of the Russian Federation by percentiles

Indicator	Regions with prevalence >75th percentile N=21	Regions with prevalence <25th percentile N=27	Regions with prevalence within 25-75th percentile N=37	p-value ¹	q-value ²
2021 (absolute number) N	21	26	38	<0.001	<0.001
Median (IQR)	604 (315; 1129)	113 (68; 184)	264 (176; 455)		
Min-Max	25–5367	6–691	78–1352		
2021 (per 100,000 population) N	21	26	38	<0.001	<0.001
Median (IQR)	51 (42; 57)	12 (8; 13)	24 (19; 27)		
Min-Max	37–178	1.7–14	15–36		

Note: ¹ Kruskal-Wallis rank sum test, ² False discovery rate correction for multiple testing.

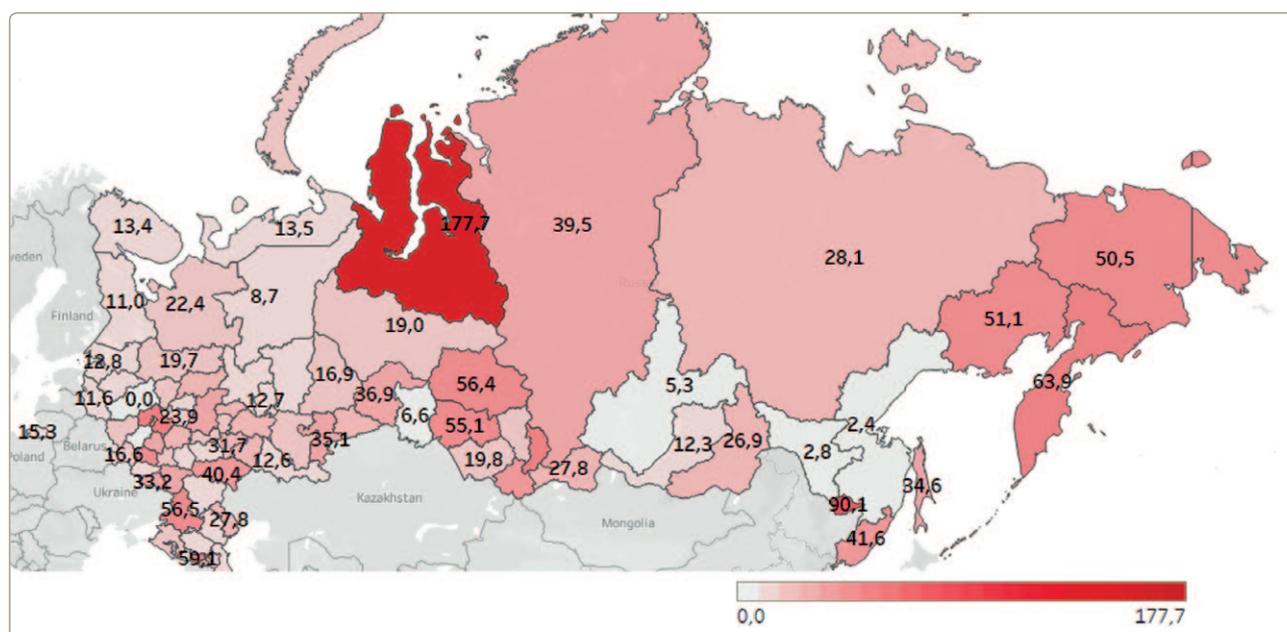


Figure 1. Distribution of the number of individuals with ASD under FU in the territories of the Russian Federation.

Note: The intensity of the red gradient depends on the increase in the prevalence of ASD per 100,000 population.

DISCUSSION

The upward trend in the number of patients diagnosed with ASD persists both in the Russian Federation, as a whole, and in each federal district, which reflects the widespread improvement in the quality of diagnostics. At the same time, the growth rates in the proportion of individuals with ASD in different Russian territories differ significantly (104.5-fold differences in the ASD prevalence). In other words, the likelihood of being diagnosed with ASD depends on one’s place of residence. Delayed (late) diagnosis of autism or interpretation of the condition as other diagnostic rubrics (mental retardation or schizophrenia) severely limits the ability of patients

to access educational services and certain therapeutic interventions. In Russia, decisions in the education system are still made based on the medical model (the educational program depends on the diagnosis), which means that when developing an adapted educational program (AEP), the child stands the risk of being deprived of a range of services that he/she could have otherwise received had he/she been diagnosed with autism.

Although our study provides comprehensive information on the mapping of the service usage in ASD across the Russian Federation, it has several limitations. For objective reasons (specific to official state statistics), our study did not include patients who were diagnosed with Asperger’s syndrome

(F84.5), which undoubtedly affected the total number of patients, but to a lesser extent affected the comparative analysis of the substantive problems encountered in the territories of the Russian Federation. At the same time, the Rett syndrome is included in ASD, because the discovery of its genetic cause does not negate its typical clinical manifestations, which determine the need for medical, educational, and social services.

We suspect several major reasons for the heterogeneous distribution of patients with ASD across regions in the country. The fickleness of clinical manifestations in individuals with ASD is a serious challenge in trying to make the correct diagnosis. In addition, there are neither physiological markers, cerebral correlates, genetic determinants, nor stable clinical criteria that would allow us to consider variants of mental development disorders as discrete entities. Therefore, there is a shift away from the nosological paradigm, when the “disease” is replaced by a “spectrum of disorders”. This approach to diagnosis is perceived by part of the psychiatrists’ community as a regress in clinical concepts [21]. The developers of the latest diagnostic classifications have to take into account the limitations of modern scientific knowledge in the evidence-based categorization of mental disorders. Therefore, to improve diagnostic reliability, it was decided to expand the unified criteria for the clinical assessment of autism. The diagnostic criteria used in the ICD-10, on the contrary, create prerequisites for discrepancies in the clinical assessment of developmental disorders and other psychopathological conditions. Thus, for example, the study by B.D. Mendeleevich in 2008 established that in the Russian Federation, there is a 316-, 93-, 27-, and 88-fold gap in the incidence rates of organic mental disorders, schizophrenia, mild mental retardation, and other forms, respectively, by region in children under the age of 14 [22]. These data indicate the low reliability of diagnostics with existing clinical approaches in psychiatry. Patients and their families become victims of circumstances, being forced to change their place of residence in search of the “right” diagnosis and adequate care.

Opponents of the concept of ASD point to significant differences in the typology of these disorders, based on the principles of descriptive psychopathology and “psychiatry of the course.” This refers to the theoretical ideas of the last century regarding the procedural, organic or constitutional, and personality-based nature of autism. At the same time, to date, genetic

anomalies or hereditary metabolic disorders as a cause of autism have, unfortunately, attracted the attention of psychiatrists to a much lesser degree.

In addition, representatives of the “old school” criticize the practice of diagnostic prioritizing of ASD in patients with co-occurring intellectual disability (ID). Indeed, in the case of co-occurring ID and autism, the DSM-5 and ICD-11 assume the diagnosis of ASD, with an indication of the level of the concurrent disorder of intellectual development. There are reasonable grounds for such an approach. Intelligence in ASD can be quite difficult to measure. Assumptions that social communication disorder and, in particular, motor stereotypes are a consequence of ID [23] have been refuted in scientific studies. Thus, the use of special interventions for children with intellectual disabilities contributes to the emergence of alternative ways of communication and additional opportunities for them to solve complex problems [24–26].

Another discussed problem is the diagnosis of comorbid conditions in ASD [27]. Autism and schizophrenia is the existence of alternative and even mutually exclusive diagnoses for many domestic psychiatrists [28]. Therefore, as the patient ages, the diagnosis of autistic disorder may still change to a diagnosis of schizophrenia.

Despite a significant amount of research describing not only schizophrenia, but also other mental disorders as comorbid conditions with ASD, such as attention deficit hyperactivity disorder [29, 30], obsessive-compulsive disorder [31], catatonia [32, 33], bipolar disorder [34, 35], and others, a double diagnosis is still met infrequently in the field practice of a Russian psychiatrist.

Studies show that the involvement of the pediatric service is necessary for early detection and diagnosis of ASD. Since 2019, following Order No.396n of the Ministry of Health of the Russian Federation of June 13, 2019, changes have been made to the Procedure for Conducting Preventive Medical Examinations of Minors, approved by Order No.514n of the Ministry of Health of the Russian Federation of August 10, 2017. According to paragraph 16 of the new edition of the procedure, as part of the preventive medical examination of children who have reached the age of 2 years, screening for the identification of a risk group of developmental disorders is carried out by conducting a survey of the children’s parents and an examination by a child psychiatrist of children included in the risk group for developmental disorders [36].

Introducing screening into routine medical practice has been proven to promote early detection of ASD and other developmental disorders, compared to a diagnosis based solely on the physician's clinical intuition.

The incidence of autism diagnosis is higher in those regions where NGOs actively work with pediatricians and teach them screening procedures [37]. Thus, in the Voronezh region, 35.7 people with ASD under FU per 100,000 population were registered, which is above the 75th percentile.

However, in most regions, the involvement of the pediatric service in ASD risk screening remains unacceptably low.

The stigma associated with a psychiatric diagnosis also remains a serious problem that prevents timely access to psychiatrists and the identification of developmental disorders. It is important to note that the primary task of the psychiatric service after a diagnosis of ASD is to register the child with the medical, social, psychological, and pedagogical support system. In the absence of such a system being in place, the patient's family does not see the benefit of consulting a psychiatrist. Assistance in choosing an adequate educational path and provision of a wide range of social services for patients with ASD is likely to facilitate early consultation with a psychiatrist.

CONCLUSION

Our study has shown significant (104.5-fold) differences in ASD diagnosis rates by regions in the country against a backdrop of a low (compared to international data) number of registered cases of autism. This suggests that, since a significant number of individuals with ASD do not appear for a diagnostic assessment timely, the diagnosis is delayed and this group of patients does not receive adequate medical, social, psychological and pedagogical support. The reasons probably include different approaches to diagnosing ASD, low involvement of the pediatric service in screening activities, and fear of stigmatization by way of a mental disorder in the absence of a developed, accessible infrastructure of medical, social, psychological, and pedagogical support for people with ASD. To identify such patients, it is necessary to include ASD screening in routine medical practice in all regions of the Russian Federation and record the diagnosis in statistical reporting forms. Further studies in the regions of the country are needed to identify the problems standing

in the way of a timely diagnosis of patients with ASD, as well as efforts to develop comprehensive care based on the principles of evidence-based effectiveness.

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Predictors of Self-Harm Types in Members of Online Communities: Age As a Moderating Variable

Предикторы типов вреда себе у участников онлайн-сообществ: модулирующая роль возраста

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Original research

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ABSTRACT

BACKGROUND: Deliberate self-harm includes direct and indirect behaviors that cause harm to the body. Various manifestations of such behavior (e.g., non-suicidal self-injuries) are prevalent in adolescent and youth populations, and they often serve as precursors of subsequent suicidal behavior. The interpersonal dynamics that lead to self-harm behavior remain understudied. Interpersonal sensitivity, defined as an anticipation of criticism and fear of rejection in one's relationships with other people, may become one such factor.

AIM: The present study was conducted to investigate the relationship between interpersonal sensitivity, psychopathological symptoms, and types of self-harm.

METHODS: The sample ($n=804$, 17–35 years, $M=23.3\pm 4.6$ years) was recruited in online communities. A survey developed by the authors was used to measure the types of self-harm. Other measures included the Interpersonal Sensitivity Measure and Symptom Checklist-90-R.

RESULTS: It was discovered that superficial self-injuries could be related to more severe types of self-harm, destructive for the body on the whole (e.g., risk-taking, deprivation, fasting, substance abuse). Fear of rejection and psychopathological symptoms emerged as predictors of both superficial self-injuries and self-destructive behavior. Although younger respondents (17–19 years old) were more likely to inflict on themselves superficial self-injuries, those who scored high on fear of rejection were more likely to report more severe self-destructive behavior. Acute psychological distress elevated this risk for both younger and older participants (27–35 years old).

CONCLUSIONS: The results of the study point at the important role the dynamics of interpersonal relationships plays in perpetuating self-harm.

АННОТАЦИЯ

ВВЕДЕНИЕ: Намеренный вред себе включает прямые и косвенные действия, причиняющие вред телу, в разных формах (напр., несуицидальные самоповреждения). Он широко распространен в подростковой и юношеской популяции, и представляет фактор риска последующего суицидального поведения. Межличностные факторы причинения себе вреда недостаточно изучены. Одним из таких факторов может стать межличностная чувствительность, связанная с ожиданием критики и отвержения в отношениях с другими людьми.

ЦЕЛЬ: Данное исследование проводилось, чтобы выявить отношения между межличностной чувствительностью, психопатологическими симптомами и типами вреда себе.

МЕТОДЫ: Выборка была набрана в онлайн сообществах ($n=804$, возраст — 17–35 лет, $M=23.3\pm 4.6$). Для выявления типа вреда себе использовалась авторская анкета. Также были использованы опросник Межличностной чувствительности и Опросник выраженности психопатологической симптоматики.

РЕЗУЛЬТАТЫ: Выявлено, что поверхностные самоповреждения могут быть связаны с более тяжелыми способами причинения вреда себе, деструктивно воздействующими на организм в целом (напр., рискованное поведение, депривация потребностей, голодание, употребление психоактивных веществ). Страх отвержения и психологический дистресс выступают предикторами как поверхностных самоповреждений, так и более тяжелого аутодеструктивного поведения. Хотя для респондентов более юного возраста (17–19 лет) были более характерны поверхностные самоповреждения, при высоком страхе отвержения они чаще сообщали о тяжелом вреде себе. При высоком психологическом дистрессе риск тяжелого вреда себе был и у взрослых респондентов (27–35 лет).

ЗАКЛЮЧЕНИЕ: Результаты исследования указывают на значимость восприятия межличностных отношений при самоповреждающем поведении.

Keywords: *interpersonal sensitivity; fear of rejection; self-harm; psychological distress*

Ключевые слова: *межличностная чувствительность; страх отвержения; самоповреждающее поведение; психологический дистресс*

INTRODUCTION

Self-harm is a problem that attracts the attention of researchers in various countries due to its prevalence, especially in adolescence and youth [1]. Self-harm encompasses different ways of injuring oneself, regardless of the underlying reasons or possible suicidal intent [2], such as non-suicidal self-injuries, self-poisoning, or disordered eating. Non-suicidal self-injuries are closely related to suicidal ideation, and they are thought to lead to active suicide planning and attempts [3–8].

One of the key psychological mechanisms that helps entrench self-harm is emotion dysregulation, which is defined as “high emotional vulnerability, plus an inability to control emotions”, and includes “high sensitivity to emotional stimuli, emotional intensity, and slow return to emotional baseline” [9]. Self-harm becomes a way

to return one’s emotional state under one’s control and cope with emotional pain [10].

Unlike emotion dysregulation, the interpersonal factors of self-harm are less known [11]. Self-harm is associated with poorer attachment to parents and friends [12], bullying, and interpersonal stress [13]. It is more likely to emerge in adolescents whose parents are highly critical, rejecting, emotionally or physically abusive, or practicing severe punishments [13]. Traumatic attachment, i.e., attachment to the caregiver who is also the source of trauma, has been proposed as a significant risk factor of self-harm and eating disorders [14]. Ecological momentary assessment shows that arguments, criticism, and rejection precede self-harm urges, especially non-suicidal self-injury [15, 16]. In addition, a number of studies show that the perception of interpersonal relationships, operationalized by such

constructs as interpersonal sensitivity and rejection sensitivity, is an important risk factor for various psychopathological symptoms and mental disorders such as depression, anxiety, bulimia, borderline personality disorder, body dysmorphic disorder, intimate relationship dissatisfaction, and loneliness [17–20].

The present study was conducted to analyze the relationship between interpersonal sensitivity, psychopathological symptoms, and self-harm types of different levels of severity. It was hypothesized that more severe self-harm would be associated with more psychopathological symptoms and higher interpersonal sensitivity. Interpersonal sensitivity was also hypothesized to be closely associated with psychopathological symptoms indicating the severity of the overall psychological distress.

METHODS

Procedure and sample

Data collection was conducted online in June–August, 2021. Invitations to participate in the study were posted on social media platforms in online psychological self-help and psychoeducation communities and public pages, as well as communities discussing unrelated topics. The participants filled out informed consent forms prior to starting the questionnaires, where they were informed that their responses would be used in aggregated form.

Parental consent was not implemented due to the difficulties of securing it online; however, the minimal recommended participation age was set at 18, and participants were advised to opt out of the study if the questions made them uncomfortable. The question about age was formulated as an open-ended one (as opposed to using a scale with 18 as a minimum), specifically to elicit truthful answers from younger participants if they decided to take part in the study. Participants were not asked to leave their names or nicknames: however, an email address was required to proceed to the survey and questionnaires.

The overall sample consisted of 999 participants. The sample for the current paper included 804 participants aged 17–35. Participants who were younger than 17, older than 35, or provided improbable answers to the open-ended questions in the survey (see Measures and Supplement 1) were excluded. We decided to include 17-year-old participants, because they were old enough to assent to the study, as shown in previous studies on the ethical considerations of recruiting adolescents from online communities [21]. The demographic characteristics of the sample (age, gender, nationality, country of residence, and education level) are presented in Table 1.

Fifty-nine percent ($n=474$) of the participants reported having used mental health services. About half of them ($n=268$) reported having been diagnosed by a professional psychiatrist. The reported diagnoses could be predominantly attributed to three diagnostic clusters: affective disorders, personality disorders, and anxiety, dissociative, stress-related, and somatoform disorders. Additionally, 114 participants presumed that they had undiagnosed mental health problems.

Online community membership was distributed as follows: 214 participants (26.6%) enrolled in the study from communities focusing on mental health problems, including self-harm; 278 participants (34.6%) were recruited from psychoeducation and self-help groups, including Russian feminist support groups; 178 participants (22.1%) were from groups discussing education, creative activities, and volunteering; and 134 participants (16.7%) didn't specify their online group and reported only the name of the social network (e.g., Telegram, vKontakte) or received personal invitations.

The distribution of the participants by age in different types of online communities is shown in Figure 1.

Table 1. The sample characteristics ($n=804$)

Sociodemographic characteristics		%, (n)
Age	M=23.3, SD=4.6	-
	17–19 years old	25.1% ($n=202$)
	20–22 years old	26.9% ($n=216$)
	23–26 years old	24.3% ($n=195$)
	27–35 years old	23.8% ($n=191$)
Gender	Female	82.1% ($n=660$)
	Male	16.8% ($n=135$)
	Non-binary	0.9% ($n=7$)
	Didn't answer	0.6% ($n=2$)
Nationality	Russians	74.4% ($n=598$)
	Other nationalities	25.6% ($n=206$)
Country of residence	Russian Federation	79.9% ($n=642$)
	Other countries	20.1% ($n=162$)
Education	Higher education graduates or undergraduates	67.4% ($n=542$)
	Comprehensive/vocational schools graduates	32.2% ($n=262$)

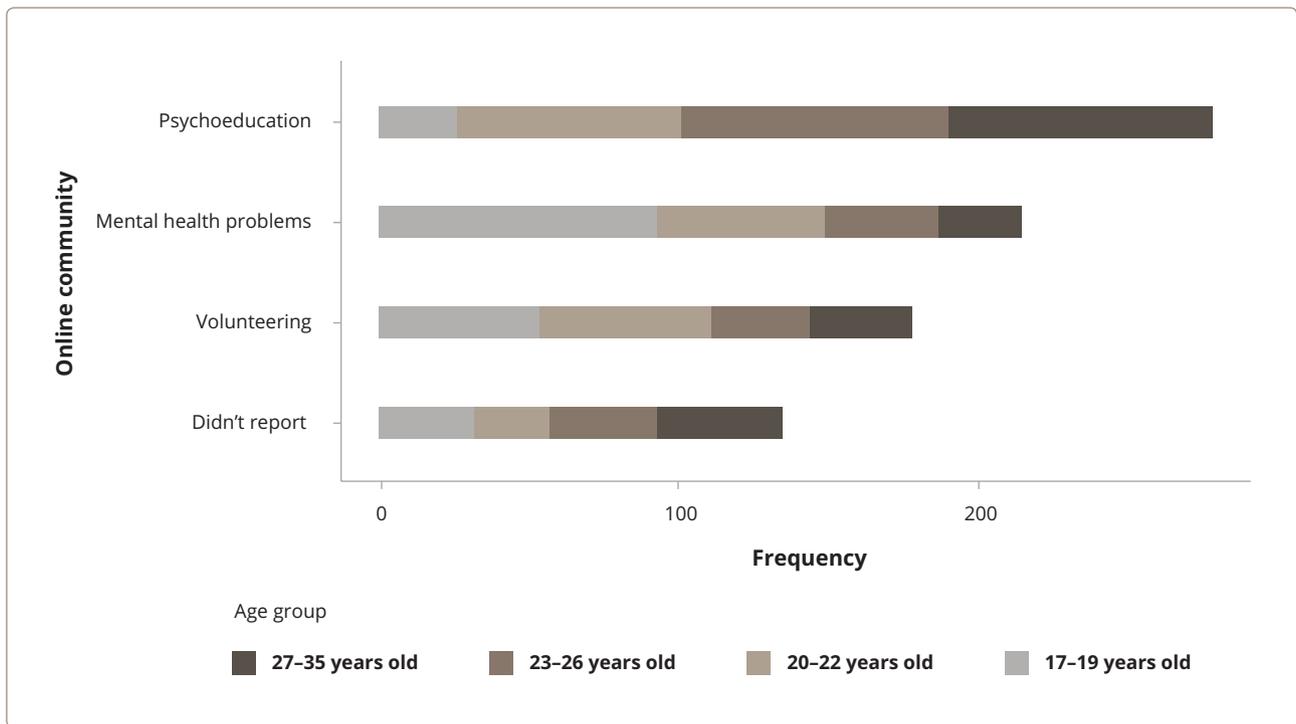


Figure 1. Age distribution in online communities.

An analysis of the relationship between age groups and online community membership with contingency tables showed that psychiatry-themed communities (where participants discussed self-harm and other mental health problems) were represented by younger participants, whereas participants from psychoeducation and self-help groups hued older (contingency coefficient — 0.43, $p < 0.001$).

Measures

A survey developed by the authors was used to collect sociodemographic data, the history of using mental health services (including having an established or assumed diagnosis), attitude to one's appearance (not analyzed in the current study), and characteristics of self-harm. The question analyzed in the present paper ("How did you harm yourself?") was open-ended and yielded short descriptions of the self-harm methods used by the participants. The answers were qualitatively analyzed by two experts and used to distinguish between groups of participants with different self-harm behaviors. A full qualitative analysis of self-harm methods and subjective reasons was described elsewhere (unpublished data). For the full text of the survey, see Supplement 1.

The Russian Three-factor version of the Interpersonal Sensitivity Measure [17, 20] was used to explore interpersonal sensitivity. The original version of the scale was developed by P. Boyce and G. Parker in 1989; it was validated in a Russian sample in 2021 by A. Razvaliaeva and N. Polskaya. The Measure contains 22 items assessed on a 4-point Likert scale ("very like me", "moderately like me", "moderately unlike me", "absolutely unlike me"). The tool measures the fear of rejection, dependence on others' appreciation, and interpersonal worry (sum scores). Internal consistency of the scales (Cronbach's α) in the current sample varied from 0.75 to 0.87.

To assess the psychopathological symptoms and distress, the study used the Russian version of the Symptom Checklist-90-Revised [22, 23], originally developed by L. Derogatis in the 1970s and validated in a Russian sample by N. Tarabrina in 2001. The Checklist includes 90 items assessed on a 5-point Likert scale (0 — "not at all", 1 — "a little bit", 2 — "moderately", 3 — "quite a bit", 4 — "extremely"). The scale measures 10 types of psychopathological symptoms: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism; all of these scales

are scored as means. Three global scales are measured as well: Global Severity Index (mean score), Positive Symptom Total (number of symptoms with scores of more than 0), and Positive Symptom Distress Index (Global Severity Index divided by Positive Symptom Total). Cronbach's alphas for scales varied between 0.78 and 0.98.

Research governance

The study was supported and ethically approved by the Russian Foundation for Basic Research (RFBR), project no. 20-013-00429.

Data analysis

Data analysis was carried out in SPSS ver. 23 and R ver. 4.1.2 (packages nnet ver. 7.3–16, rockchalk ver. 1.8.151, psych ver. 2.1.9, performance ver. 0.9.2 and DescTools ver. 0.99.46) and included descriptive statistics, group comparisons with non-parametric criteria, correlation, and a logistic regression analysis. Although the size of the sample facilitated the use of parametric tests, non-parametric ones were used, because the groups under comparison differed in size and the variables of interest (age, interpersonal sensitivity, and psychological distress) were not normally distributed based on the results of the Kholomogorov-Smirnov test. The Mann-Whitney, Kruskal-Wallis, and Dunn's tests were used for group comparisons. Correlations were carried out using Spearman's r_s . Holm-Bonferroni adjustments for multiple comparisons were performed for every type of analysis; p values lower than 0.05 after correction were considered significant.

The regression analysis included the binary and multinomial logistic regression: the former is used when the dependent variable contains two groups, and the latter is used when the dependent variable describes more than two groups. Sex and age group effects were controlled for all tested models. The moderation effects of age were tested by including interaction terms into the models. Pseudo R^2 (Nagelkerke's R^2) was calculated for both the multinomial and binomial logistic regression models to assess the predictive capabilities of the model [24]. Model fit was tested by the difference in deviation between the null model and the suggested model; significant p values (<0.05) implied that the suggested model predicted data better than the null model (no predictors, only intercept). Binomial regression model fit was also tested by the Hosmer-

Lemeshow test, where good model fit is implied by non-significant p values [24, 25]. Holm-Bonferroni adjustment was performed for p values of the regression coefficients in every model.

RESULTS

Self-harm correlates in the sample

Some 75.5% ($n=607$) of the participants reported self-harm; in comparison with participants without self-harm, they used professional mental health services more ($\chi^2(1)=36.29, p <0.001$) and reported having a confirmed psychiatric diagnosis more often ($\chi^2(2)=27.87, p <0.001$). Participants who reported engaging in self-harm were significantly younger (Mann-Whitney test $p <0.001$; median age for self-harm group — 22 [interquartile range — 19–26]; median age for participants who reported no self-harm — 24 [21–28]); they were more likely to be female (87.5% vs. 12.5%; $\chi^2(1)=33.02, p <0.001$) and were less educated (67.9% in comprehensive or vocational school or technical college vs. 32.1% in undergraduate programs or graduates — $\chi^2(1)=30.29, p <0.001$).

The participants' answers were analyzed, and ways of harming oneself were extracted and counted, yielding a number of different self-harm methods for each participant. The participants validated up to 14 different ways of harming themselves at the same time (Figure 2).

Four groups were distinguished on the basis of self-harm type:

- 1) Participants who reported no self-harm in the past ($n=197$).
- 2) Participants who had inflicted superficial self-injuries on themselves, such as self-cutting, burning, hitting and pulling hair ($n=457$).
- 3) Participants who endorsed more severe self-destructive behaviors such as self-poisoning, substance abuse, disordered eating, and depriving one of their basic needs, without superficial self-injuries ($n=25$). Due to the small size of this group (less than 5% of the sample), it was excluded from further analysis.
- 4) Participants who reported both superficial self-injuries and self-destructive behaviors ($n=125$), further referred to as 'self-destructive behaviors' group. Thus, further analysis was performed only on participants who reported superficial self-injuries, with or without more severe self-destructive behaviors.

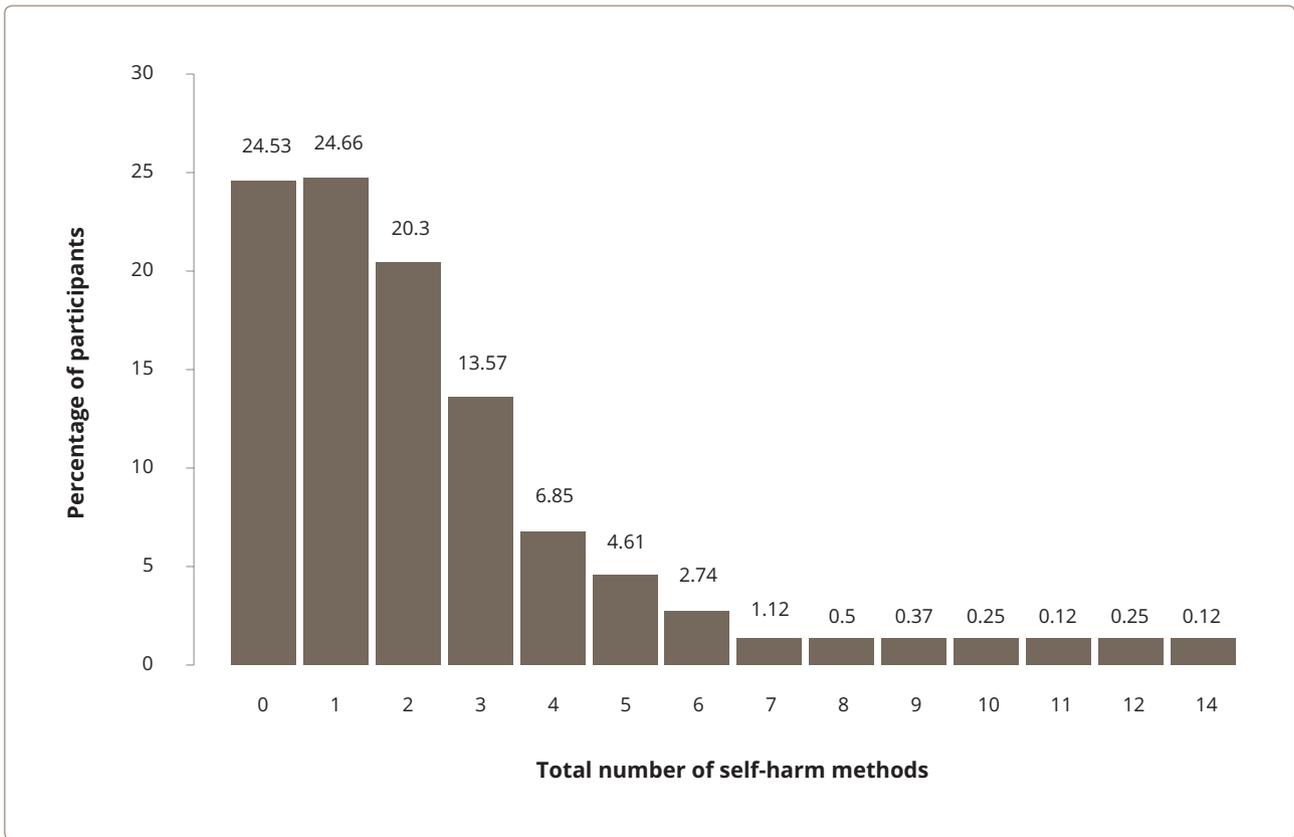


Figure 2. Distribution of the number of different ways of self-harm employed by the same participant.

Group differences in interpersonal sensitivity and psychopathological symptoms

Differences between participants with different self-harm behaviors were tested using the Kruskal-Wallis test with adjusted p-values (Holm-Bonferroni method for multiple comparisons) and Dunn's post-hoc test (Table 2). Significant differences between participants not engaging in self-harm and two groups who endorsed self-harm were recorded for all variables in that participants from both self-harm groups had higher scores on all interpersonal sensitivity measures and all symptom scales compared to the no self-harm group. Participants with self-destructive behaviors scored higher on the scales of fear of rejection, interpersonal sensitivity, and all psychopathological symptoms (with the exception of depression and hostility) than participants who self-injured only superficially.

The relationship between interpersonal sensitivity and psychopathological symptoms

The correlation analysis (Spearman's r_s) in the overall sample yielded significant links between interpersonal sensitivity and psychological distress ($p < 0.001$ for all correlations

after Holm-Bonferroni correction). Interpersonal sensitivity showed the strongest correlation intensity with the interpersonal sensitivity subscale from SCL-90-R — $r_s = 0.67$ (Table 3). The global severity index and depression were also closely linked to interpersonal sensitivity on the whole, and fear of rejection in particular. All the relationships retained their significance when tested in self-harm subgroups, except for interpersonal worry and hostility in the self-destructive behaviors group (Supplement 2).

Interpersonal sensitivity and psychological distress as predictors of self-harm severity

The regression analysis was performed to further test the predictive power of interpersonal sensitivity and psychopathological symptoms on self-harm severity operationalized by group inclusion (no self-harm, superficial self-injuries, and self-destructive behaviors). Due to the high correlations of the psychopathological symptoms with each other, only the global severity index was included in the models.

Multinomial regression showed that psychopathological symptoms and fear of rejection significantly predicted

Table 2. Interpersonal sensitivity and psychopathological symptoms in groups based on the type of self-harm

Scales	No self-harm (<i>n</i> =197) — group A	Superficial self-injury (<i>n</i> =457) — group B	Self-destructive behaviors (<i>n</i> =125) — group C	Kruskal-Wallis test (<i>p</i> < 0.001 for all comparisons)	Dunn's test heterogeneous groups (at <i>p</i> < 0.05)
	Median [Interquartile range]				
Interpersonal Sensitivity Measure					
Dependence on others' appreciation	25 [21–29]	28 [24–32]	28 [25–32]	26.59	AB, AC
Fear of rejection	13 [10–17]	17 [14–20]	18 [15–21]	75.17	AB, AC, BC
Interpersonal worry	18 [15–21]	20 [17–23]	20 [17–23]	25.18	AB, AC
Interpersonal sensitivity (sum score)	57 [47–65]	65 [56–72]	67 [60–75]	56.12	AB, AC, BC
Symptom Checklist-90-Revised					
Somatization	0.5 [0.3–0.8]	1 [0.5–1.7]	1.4 [0.8–2.1]	97.11	AB, AC, BC
Obsessive–Compulsive	1 [0.6–1.6]	1.7 [1–2.4]	1.9 [1.1–2.7]	72.69	AB, AC, BC
Interpersonal Sensitivity	1 [0.4–1.8]	1.6 [0.9–2.4]	2.1 [1–2.8]	57.93	AB, AC, BC
Depression	1.2 [0.5–2]	2.1 [1.2–2.8]	2.2 [1.5–3.2]	81.13	AB, AC
Anxiety	0.5 [0.2–1.1]	1.2 [0.6–2]	1.6 [0.9–2.7]	90.06	AB, AC, BC
Hostility	0.5 [0.2–1]	1 [0.5–1.8]	1.5 [0.7–2.2]	83.04	AB, AC
Phobic Anxiety	0.1 [0–0.6]	0.6 [0.3–1.4]	1 [0.4–2]	84.95	AB, AC, BC
Paranoid Ideation	0.5 [0.2–1]	0.8 [0.3–1.7]	1.3 [0.7–2]	53.87	AB, AC, BC
Psychoticism	0.4 [0.1–0.8]	0.8 [0.4–1.4]	1.1 [0.5–1.8]	85.73	AB, AC, BC
Global Severity Index	0.7 [0.4–1.3]	1.3 [0.8–1.9]	1.7 [1.1–2.3]	107.76	AB, AC, BC
Positive Symptom Total	38 [26–53]	57 [42–69]	63 [49–75]	101.28	AB, AC, BC
Positive Symptom Distress Index	1.7 [1.4–2.2]	2.2 [1.7–2.6]	2.4 [1.9–2.8]	87.94	AB, AC, BC

Table 3. Correlations* between interpersonal sensitivity scales and psychopathological symptoms in the overall sample

Scales	Dependence on the others' appraisal	Fear of rejection	Inter-personal worry	Inter-personal sensitivity (sum score)
Somatization	0.28	0.44	0.30	0.41
Obsessive–Compulsive	0.38	0.54	0.38	0.52
Interpersonal Sensitivity	0.54	0.66	0.44	0.67
Depression	0.45	0.64	0.40	0.60
Anxiety	0.39	0.54	0.37	0.53
Hostility	0.33	0.53	0.23	0.44
Phobic Anxiety	0.38	0.51	0.37	0.51
Paranoid Ideation	0.33	0.52	0.24	0.43
Psychoticism	0.36	0.58	0.32	0.50
Global Severity Index	0.45	0.66	0.40	0.61
Positive Symptom Total	0.42	0.62	0.42	0.59
Positive Symptom Distress Index	0.42	0.59	0.32	0.53

Note: * — Spearman's *r_s*, *p* < 0.001 after Holm-Bonferroni correction for all correlations.

membership in the self-harm groups compared to the no self-harm group (Table 4, Model 1). The global severity index predicted self-destructive behaviors better than superficial self-injuries only. After running the Holm-

Bonferroni correction, the impact of fear of rejection was rendered insignificant (original *p* value — 0.011; after correction — 0.089). The two other scales of the Interpersonal Sensitivity Measure (interpersonal worry

Table 4. Results of a multinomial and binomial logistic regression, and testing of interaction effects

Dependent variable	Predictors	β	SE	z	p
Model 1. Multinomial logistic regression: $R^2=0.21$; $G^2(12)=153.88$, $p < 0.001$					
Superficial self-injury vs. no self-injury	Dependence on the others' appraisal	-0.11	0.13	-0.89	ns
	Fear of rejection	0.37	0.13	2.86	0.039
	Interpersonal worry	-0.001	0.12	-0.01	ns
	Global severity index	0.68	0.15	4.46	0.000
	Age (continuous)	-0.18	0.10	-1.85	ns
	Gender: male	-1	0.23	-4.42	0.000
Self-destructive behaviors vs. no self-injury	Dependence on the others' appraisal	-0.15	0.17	-0.89	ns
	Fear of rejection	0.45	0.18	2.54	0.089
	Interpersonal worry	0.05	0.16	0.28	ns
	Global severity index	0.98	0.19	5.28	0.000
	Age (continuous)	-0.17	0.13	-1.26	ns
	Gender: male	-1	0.36	-3.32	0.010
Model 2. Binomial logistic regression: $R^2=0.09$; $G^2(6)=27.21$, $p < 0.001$; HL $\chi^2(8)=9.36$, $p=0.31$					
Self-destructive behaviors vs. superficial self-injury	Fear of rejection	0.10	0.14	0.75	ns
	Global severity index	0.34	0.14	2.47	0.068
	Age: 20–22 years old	0.44	0.12	3.47	0.003
	Age: 23–26 years old	0.07	0.14	0.53	ns
	Age: 27–35 years old	0.13	0.14	0.96	ns
	Gender: male	-0.06	0.11	-0.50	ns
Model 3. Interaction between fear of rejection and age: $R^2=0.07$; $G^2(7)=27.58$, $p < 0.001$; HL $\chi^2(8)=5.23$, $p=0.73$					
Self-destructive behaviors vs. superficial self-injury	Fear of rejection	0.33	0.12	2.78	0.013
	Age: 20–22 years old	0.51	0.15	3.41	0.054
	Age: 23–26 years old	0.15	0.15	0.96	0.034
	Age: 27–35 years old	0.16	0.15	1.06	ns
	Fear of rejection*Age: 20–22 years old	-0.30	0.15	-1.97	ns
	Fear of rejection*Age: 23–26 years old	-0.42	0.15	-2.78	0.033
	Fear of rejection*Age: 27–35 years old	-0.26	0.15	-1.76	ns
Model 4. Interaction between psychopathological symptoms and age: $R^2=0.09$; $G^2(7)=36.44$, $p < 0.001$; HL $\chi^2(8)=13.29$, $p=0.10$					
Self-destructive behaviors vs. superficial self-injury	Global severity index	0.42	0.12	3.51	0.000
	Age: 20–22 years old	0.64	0.16	3.91	0.002
	Age: 23–26 years old	0.28	0.17	1.67	0.027
	Age: 27–35 years old	0.33	0.17	1.99	ns
	GSI*Age: 20–22 years old	-0.36	0.13	-2.66	0.031
	GSI*Age: 23–26 years old	-0.38	0.14	-2.64	0.031
	GSI*Age: 27–35 years old	-0.18	0.15	-1.18	ns

Note: β — standardized regression coefficient, SE — standard error, R^2 — Nagelkerke's R^2 , G^2 — difference between null deviance and model deviance ($p < 0.05$ shows good model fit), HL χ^2 — Hosmer-Lemeshow test (significant p values show bad model fit), ns — not significant. Holm-Bonferroni adjustment was performed for p values for every model. Referent age group: 17–19 years old.

and dependence on others' appreciation) did not carry significant predictive value in the model. Men were less likely to report both superficial self-injuries and self-destructive behaviors. To further investigate which

variables predicted the particular self-harm type, the no self-harm group was excluded and binomial logistic regression was run on a subsample of the participants ($n=582$).

Binomial logistic regression showed that fear of rejection significantly predicted self-destructive behaviors ($b=0.27$, $p=0.027$), but not after introducing the global severity index in the model (Table 4, Model 2). The effect of GSI on self-destructive behaviors was significant ($p=0.014$) before one ran the Holm-Bonferroni correction, which yielded a value of 0.068. Participants aged 20–22 also had a higher chance of being in the self-destructive-behavior group compared to 17- to 19-year-old participants, and gender didn't have a significant effect.

Age moderated the effect of fear of rejection and psychopathological symptoms on the type of self-harm. Moderation was explored in logistic regression models with interaction variables (Table 4, Models 3 and 4). In general, younger participants (17- to 19-year-olds) were less likely to be included in the self-destructive-behavior group compared to 20- to 23- (significant effect in both models before correction; original p value in Model 3 — 0.014) and 23- to 26-year-olds (significant effect in both models). Younger participants (17- to 19-year-olds) who scored lower on the fear of rejection scale had lower odds of being in the self-destructive-behavior group than older participants (Figure 3A). They were also less likely to severely harm themselves if they scored low on psychopathological symptoms than older participants (Figure 3B). On the other hand, high fear of rejection and psychopathological symptoms in the youngest participants were associated with infliction of more severe self-harm. The oldest participants in the study (27- to 35-year-olds) were also more likely to belong in the self-destructive-behaviors group than 20- to 26-year-old participants with severe psychopathological symptoms.

DISCUSSION

Main findings

The study showed that fear of rejection and psychopathological symptoms predicted the severity of self-harm measured on the basis of free descriptions. Generally, 20- to 22-year-old participants were more prone to severe self-harm as opposed to superficial self-injuries. However, the relative impact of psychological distress and fear of rejection was more pronounced in younger participants (17–19 years old) compared to older ones (20- to 26-year-olds in the case of the Global Severity Index and 23- to 26-year-olds in the case of fear of rejection), which revealed the age-related aspects of self-harm.

Comparisons with other studies

About 15% of the participants in the study reported both superficial self-injuries and self-destructive behavior, such as disordered eating, substance abuse, sleep deprivation, and risk-taking. While the former target the skin, the latter target the whole body and could potentially lead to more negative consequences. Combined with self-harm, these types of behavior could become riskier and unrestrained, as shown by studies of alcohol consumption [26] and disordered eating (fasting, purging, binge-eating, excessive exercising) [27]. Coexistence of various types of self-harm differing in severity, consequences, and possible motivation presents a worrying trend, especially in light of the previous studies, which linked suicidal ideation and increasing severity and quantity of self-harm methods to subsequent suicide attempts [28]. While motivation wasn't directly controlled in the current study and open-ended questions in the survey were used specifically to capture a wider range of behaviors than those assessed by validated measures, the qualitative analysis (unpublished data) revealed that some participants reported suicide-related reasons for their behavior (e.g., using cutting to stop suicidal thoughts).

Psychopathology emerged as a risk factor in self-harm, and it proved more important for discriminating between self-harm types (superficial self-injuries and self-destructive behavior) than interpersonal sensitivity. This result agrees with a corpus of research showing that more severe self-harm, especially when it co-occurs with eating disorders and substance abuse, is associated with an increase in psychological distress [29] and emotion dysregulation [30]. Psychological distress in particular emerged as a stronger predictor of self-harm and non-suicidal self-injuries than depression [29], low self-esteem, and difficulties in nurturing behaviors in interpersonal relationships (e.g., limited display of care for others) [31]. On the other hand, D'Agostino et al. showed no differences in psychopathology for direct and indirect self-harm [32]; however, it should be noted that their sample consisted of adult psychiatric patients; so, the effects could be less pronounced than in young adults. In the current study, depression and hostility were not significantly associated with self-harm severity. This leads us to hypothesize that these two symptoms are pervasive in young people who self-harm across different stages in the development of this behavior, including its incidence.

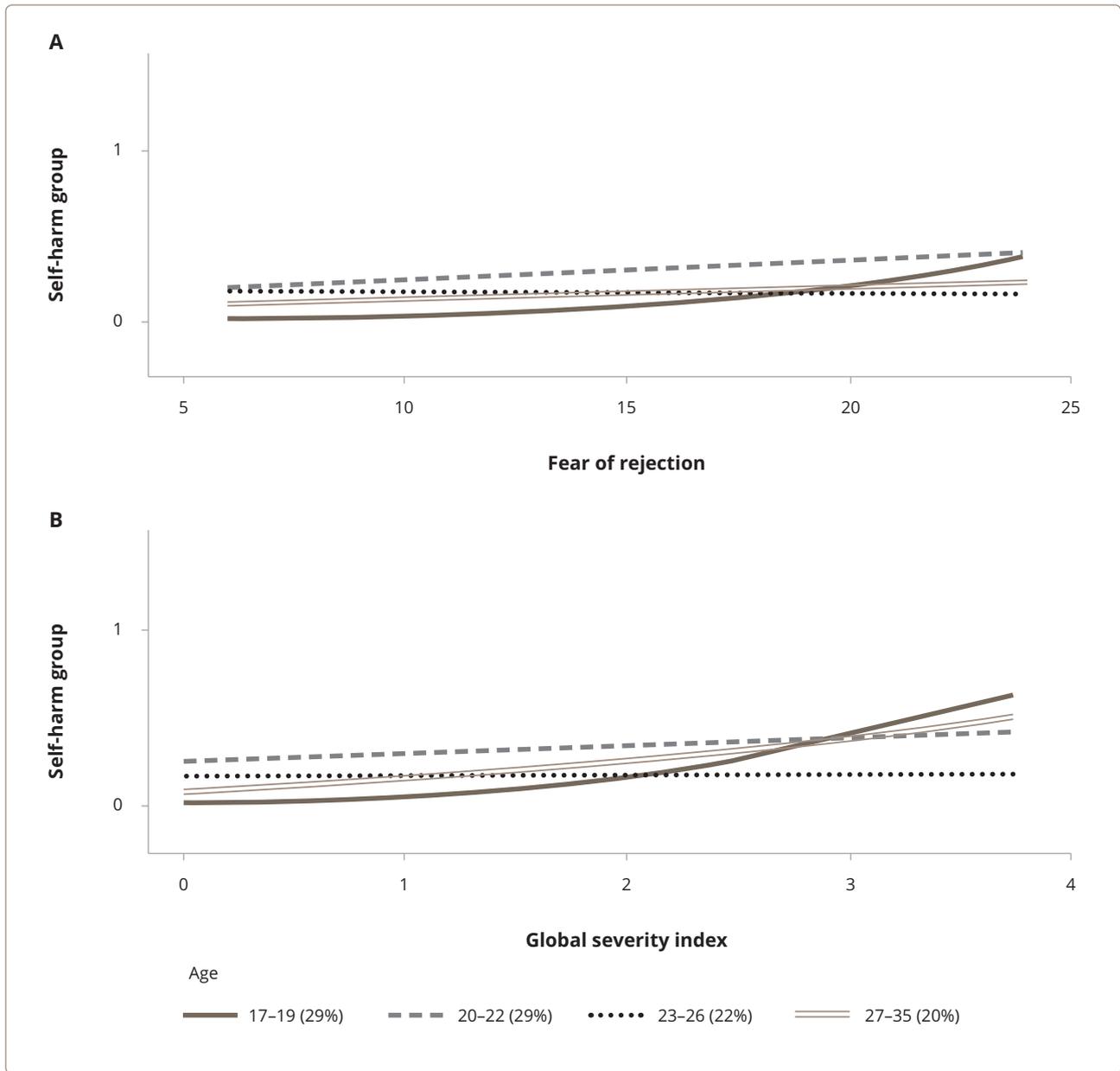


Figure 3. Predicted inclusion in self-harm groups based on the interaction between age and the fear of rejection (A), and age and the Global severity index (B): 0 — superficial self-injuries; 1 — self-destructive behaviors.

Interpersonal sensitivity was moderately associated with all the psychopathological symptoms. This result corroborates earlier studies on clinical samples linking interpersonal sensitivity to deep depression, post-partum depression, anxiety and social phobia, bulimia, and other mental disorders [17–20]. Although the strongest correlation was yielded with the interpersonal sensitivity subscale from SCL-90-R, its magnitude implies that the constructs measured by these scales weren't similar. Thus, despite a close relationship between

these constructs, interpersonal sensitivity (and more specifically, fear of rejection) captures the variability in self-harm unaccounted for by psychological distress.

The relationship between interpersonal sensitivity and self-harm has yet to be extensively researched. However, the results yielded by the present study speak in favor of the studies of rejection sensitivity, given that fear of rejection was the dimension of interpersonal sensitivity that had the most impact on self-harm. Rejection sensitivity was shown to predict non-suicidal self-injuries in adolescents,

and its impact is exacerbated by low self-compassion and mediated through depressive symptoms [33].

Curiously, age didn't have an impact on self-harm severity when it was introduced into the models as a continuous variable. Based on the discovered interactions between age groups, fear of rejection, and global severity index and their impact on self-harm, we can assume that the relationship between age and self-harm is not linear. Younger people (17- to 19-year-olds) tended to stick to more superficial self-injuries, whereas 20- to 26-year-olds reported more severe self-destructive behaviors. This could indicate a potential trajectory for self-harm that starts from relatively superficial behavior in adolescence (mean age of self-injurious behavior incidence is 15, according to [34]) but gets more severe and incorporates risky behavior, disordered eating behavior, and substance abuse in young adults. The rise in self-harm severity in cases where it was kept secret and left untreated in adolescence was shown in previous studies [35].

Strengths and limitations of the study

Given the scarcity of studies investigating the interpersonal factors of self-harm, the present research provided an opportunity to learn more about the impact of personal perception of interpersonal relationships on the types of self-harm. The use of open-ended questions in the self-harm questionnaire also provided a fuller view of possible self-harm methods and their combinations, which couldn't be achieved with a standardized scale with predefined answers.

However, due to the design of the study, there are certain limitations in the generalization of the results. First, the study was conducted online, which limited the reliability of the results, especially in terms of a self-reported psychiatric diagnosis, compared to clinical samples where medical records are usually available to researchers. This was partly mitigated by introducing the presumed diagnosis option in the survey. However, given the high interest of the participants in mental health issues, they could benefit from self-diagnosing both to form an identity and to find a community of like-minded people. Thus, these results should be treated with caution.

The sample was partly recruited in self-harm and mental health-themed communities and mostly consisted of self-selected participants who willingly

responded to the invitation. While this strategy was useful to recruit a lot of people who self-harmed, the rates in the current study are arguably much higher than they are in the general population (up to 15–30% for a single lifetime self-injury) [1, 33].

Lastly, although regression models show possible risk factors for superficial self-injuries and self-destructive behavior, causal inferences to the developmental mechanisms behind the emergence of self-harm can only be made in longitudinal studies. A cross-sectional study like the one presented cannot account for the possible complex relationships between variables of interest; e.g., whether psychopathological symptoms and interpersonal sensitivity increase the severity of self-harm, or vice versa, severe self-harm leads to the experience of loneliness, criticism and lower social support, which in turn heightens psychopathological symptoms.

Relatively low R^2 in the regression models can be explained the following way. Most regression models in psychology (unlike, for example, in physics) have R^2 less than 0.5. This is due both to the high individual variability in behavior and at the same time to the fact that we focus on certain particular characteristics and cannot account for all the possible variables that might contribute to the phenomenon of our interests. So, in our study, we did not take into account factors of emotional dysregulation (which are already quite well studied in connection with self-harm).

We applied Nagelkerke R^2 values (one of pseudo- R^2 statistics). These statistics demonstrate a wide variation for the same model, but in general, they all are much smaller than the traditional R^2 , which is measured for linear models (for example, Smith & McKenna showed that pseudo- R^2 varied between 0.23 and 0.40, while the corresponding linear R^2 in the simulation was 0.47) [24].

Implications for future research and practice

The current state of self-harm research shows good progress of emotional dysregulation models. However, more studies of the interpersonal factors of self-harm are needed, both situational (do certain situations increase the risk of self-harm in vulnerable individuals?) and personality-based (how do people prone to self-harm perceive social interactions?). Such studies are starting to emerge, but more longitudinal studies are still needed to better understand the emergence of self-harm.

Interpersonal sensitivity in general, and fear of rejection in particular, can potentially become targets for prevention and intervention programs in adolescent and youth populations. While there is preliminary evidence that some types of therapy decrease interpersonal sensitivity, along with self-harm [36, 37], studies should identify the relationship of interpersonal sensitivity to other risk factors of self-harm in order to develop ways of influencing emotional, personal, and interpersonal dimensions in parallel. The impact of psychopathological symptoms on self-harm corroborates the necessity of developing complex treatment programs, especially in cases when self-harm materializes as a combination of behaviors of varying severity (which were described by the participants of 'self-destructive-behaviors' group).

Given that young people who self-harm often do so in secret and prefer to look for help in anonymous online communities, psychoeducation programs and therapy tailored specifically to this audience could be of high significance. This includes not only implementing guidelines on communicating about self-harm in social networks and monitoring their content [38], but also distinguishing between harmful and supportive content [39]. Further research is needed to identify the criteria of the latter and to establish the feasibility of running web-based support groups that wouldn't promote or exacerbate self-harm.

CONCLUSION

Both superficial self-injuries, on their own, and self-destructive behaviors, combined with superficial self-injuries, are associated with increasing psychopathological symptoms and appending interpersonal sensitivity dimensions, especially fear of rejection. Younger people are more susceptible to superficial self-injuries than more severe self-destructive behavior compared to 20- to 26-year-olds. However, the impact of psychopathological symptoms and fear of rejection on self-harm severity is also more pronounced in younger people, making them more vulnerable to contemplating more severe self-harm in the future.

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Supplementary data

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Community Mental Health Care in Aotearoa New Zealand: Past, Present, and the Road Ahead

Организация амбулаторной психиатрической службы в Новой Зеландии: прошлое, настоящее и будущее

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Short communication

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ABSTRACT

The healthcare system in Aotearoa New Zealand is currently undergoing a far-reaching overhaul. When it comes to mental health reforms, it is helpful to look at the road ahead, while paying attention to the road behind. Policies and services concerning the mental health and addiction sectors have undergone various reforms; first, during the transition from a hospital-centered to the current community-based system, and second, in the successive attempts to improve this system. In this article, we provide an overview of the current mental health and addiction health care system. We also discuss the impact of colonization on community mental health, the emergence of community-based mental health and addiction policy and services in Aotearoa New Zealand, and the challenges along the way. Finally, we identify five key areas requiring special attention during the current period of reform. Over all, we believe there is broad support for reducing the emphasis on individualized approaches to mental wellbeing and moving all systems and structures towards models inclusive of social context, including approaches that incorporate service users' perspectives, family, communities, and culture. We look forward to policy and services with a much stronger orientation to the diverse needs of our population.

АННОТАЦИЯ

Существующая система здравоохранения Новой Зеландии (маори. *Aotearoa*) переживает период значительных изменений. Реформация сферы охраны психического здоровья требует прогнозирования, оценки перспектив и накопленного опыта. Принципы оказания помощи в области психиатрии и наркологии и услуги в этой сфере претерпели ряд реформ: первая была связана с переходом от стационарной системы психиатрической помощи к амбулаторной, вторая — с последовательными попытками улучшения амбулаторной помощи. В данной статье мы представили обзор современной системы здравоохранения в области психиатрии и наркологии. Также в формате дискуссии мы обсудили влияние колониального исторического прошлого на психическое здоровье населения, появление психиатрической и наркологической амбулаторной службы в Новой Зеландии, а также проблемы на пути становления этих служб. Мы выделили пять ключевых областей, которые требуют пристального внимания в ходе текущего реформирования системы амбулаторной помощи. Была выявлена тенденция к уменьшению значимости индивидуализированных подходов к психическому благополучию, все системы и структуры должны учитывать социальный контекст, потребности людей, которым оказывается помощь, роль семьи пациента и его сообщества, культурную составляющую. Мы надеемся, что в будущем принципы оказания помощи и службы охраны психического здоровья Новой Зеландии будут в значительной степени ориентированы на разнообразие потребностей местного населения.

Keywords: *mental health; Aotearoa; New Zealand; community health services; community mental health care; deinstitutionalization*

Ключевые слова: *психическое здоровье; Аотеароа; Новая Зеландия; службы общественного здравоохранения; амбулаторная психиатрическая служба; деинституционализация*

INTRODUCTION

A relatively remote island nation situated in the southwestern Pacific Ocean, geographically, Aotearoa New Zealand (from here on Aotearoa NZ) encompasses two main landmasses, with a combined total mass of about 268.021 km. These landmasses refer to the North Island, or Te Ika-a-Māui (the fish of Maui), and the South Island, or Te Waipounamu (the water[s] of greenstone) — as well as many smaller surrounding islands. Aotearoa NZ has an estimated resident population of five million people, with most New Zealanders concentrated in rapidly expanding urban centers on both main islands. This growing population includes people of Māori (16.5%) (the Indigenous people of Aotearoa NZ), European (70.2%), Asian (15.1%), and Pacific (8.1%) descent, as well as other ethnicities, such as Middle Eastern, Latin American, and African (MELAA) [1].

The healthcare system in Aotearoa NZ is currently under a large-scale reform effort, with the development of Te Whatu Ora — Health New Zealand, a newly developed overarching organization responsible for the national health service. At the same time, a recently published in-depth and independent Inquiry into Mental Health and Addiction, *He Ara Oranga* [2], has put forward 40 recommendations that will require significant changes in the system if it is to respond effectively to the country's needs. The impact of these reforms is yet to be seen. However, when it comes to mental health reforms, it is helpful to look at the road ahead, while paying attention to the road behind [3, 4]. This includes paying particular attention to the ongoing impact of colonization and the various health reforms the country has faced in the past. To help with this goal, the aim of this paper is to provide an overview of the country's historical transition from an institutional model to a community-based mental health care model, discussing challenges along the way, and key areas to pay attention to on the road ahead.

Our paper is structured as follows: In the following section, we begin with a discussion of Aotearoa NZ's colonial history as a precursor to the disruption of

community mental health, particularly for Māori. Next, we offer a brief overview of the mental health system in the country. This is followed by a description of, first, the policy landscape, and, second, mental health and addiction services, including details from Aotearoa NZ's early mental health provision to contemporary efforts to respond to our diverse communities' needs. Finally, we discuss the road ahead, suggesting key areas requiring substantial change moving forward.

COLONIZATION AS A DISRUPTION TO COMMUNITY MENTAL HEALTH

By the 1790s, Europeans had begun to settle in earnest in Aotearoa NZ. Initially, they were highly dependent on Māori goodwill and economic and social support [5]. In 1840, the Treaty of Waitangi (English version) and Te Tiriti o Waitangi (Māori version) were signed between the British Crown and several tribal leaders and these are considered the country's founding documents. These were documents that “had the potential to deliver benefits to all parties” [6]. This was unique, as even at the height of British imperialism, fueled primarily by greed and pseudo-scientific racism [7, 8], the colonial government could not dismiss Indigenous claims for political recognition [9]. While the development of Aotearoa NZ as a bicultural nation-state would appear to be firmly grounded in egalitarian values, historical and ongoing colonial processes posit that this is not always so in practice.

The settler government quickly imposed British notions of title and ownership. The resulting land alienation and the confiscation of land and resources from Māori who resisted meant that by the mid-1800s the Crown and the New Zealand Company had obtained nearly 99 percent of the South Island and 20 percent of the North Island [6, 10]. With colonialism came urbanization, displacement, disease, war, death, and knowledge suppression, resulting in the degradation of Māori kinship systems, economic capacity, culture, and spiritual connectedness [11]. In contemporary Aotearoa NZ, histories of domination and repression carry grave consequences for the mental

health and wellbeing of Māori [12]. As such, Māori live with constant reminders of the ongoing impacts of colonization in terms of the disproportionate rates of suicide, domestic violence, homicide, substance abuse, and addiction, incarceration, hospitalization, children taken into state care, mental illness, homelessness, and ill health in comparison to Aotearoa NZ's settler society [13].

In the framework of the Te Tiriti o Waitangi, the Crown is required to provide services that meet the needs of Māori. For example, the Ministry of Health, as a department of public service, has a responsibility to meet its obligations under Te Tiriti o Waitangi. This means that Māori service users and providers need to be included in the research, definition, planning, implementation, and evaluation of mental health services to ensure they are informed by Māori values. Further, kaupapa Māori service providers (holistic and humanistic approaches embedded within Māori cultural practices) are best able to provide support for those Māori with mental health and addiction issues. Government agencies and many non-Māori service providers are frequently not well equipped to offer a culturally dynamic service due to an undersupply of speakers of te Reo Māori, staff trained in bicultural protocols, and referral processes that allow for working constructively with Māori service providers. Although colonial structural intrusions have posed significant challenges to Māori wellness, it is important to note that Māori are not, and never have been, passive in the face of socio-political upheavals [14]. Claims to, and the affirmation of, cultural identities and Indigenous mental health practices by Indigenous peoples are common responses to such histories of oppression and offer authenticity, a sense of belonging, and the basis for gaining human rights [15, 16].

THE MENTAL HEALTH SYSTEM OF AOTEAROA NEW ZEALAND

In Aotearoa NZ, the health system is primarily funded by the central government via the Ministry of Health. The country's total health and disability expenditure is about 9.5% of the gross domestic product (GDP), and taxpayers fund most of this health expenditure, about 7% of GDP [17]. Until July 2022, the Ministry of Health funded 20 District Health Boards (DHBs), which were local systems responsible for planning, funding, and overseeing care for their population. Each DHB funds public hospitals, primary health organizations, and

community-based services. The system is currently under reform, and in July 2022, all twenty DHBs merged their functions into one large agency, Te Whatu Ora — Health New Zealand, which now oversees the whole country.

Nearly all hospitals and specialty healthcare services are free for residents at the entry point. Although funded by the DHBs, primary health care services sit outside them and include general practitioners, private practitioners, and various non-governmental organizations. The country also has a national Accident Compensation (ACC) scheme, which covers most costs from treatment and rehabilitation resulting from accidents for both residents and visitors. Still, over a third of New Zealanders also have some form of private health insurance, mainly for elective and specialist services, as they provide only non-urgent services [18]. The mental health system in Aotearoa NZ, up until recently, included services within DHBs and outside of them. Each DHB oversaw tertiary and secondary services, such as inpatient services and community mental health services. In the mid-90s, a 'ring fence' was introduced around mental health and addiction funding to prevent this funding from being reallocated to other service areas.

Mental health and addiction services in Aotearoa NZ are largely community-based. Community mental health and addiction services are set up to provide care for those with moderate-severe or high-risk mental health needs. People accessing these services are normally referred to them by primary care providers. However, most of the population with mental health and addiction issues, those with mild-moderate needs, are seen by primary care services for which people are charged a fee. Depending on the DHB, mental health services also include special programs, such as early psychosis intervention teams, mental health crisis teams, child and youth mental health services, older adults services, medical detoxification services, opioid treatment services, Pacific mental health, and Māori mental health and addictions services. A more recent development in the system includes the funding of Health Improvement Practitioners (HIP) who are placed in primary care services to respond to mild-to-moderate mental health and addiction concerns. In hospital settings, particularly in the larger hospitals, mental health liaison teams provide mental health support across the hospital.

The mental health and addiction sector comprises a clinical and a non-clinical workforce, plus the administration and management team [19]. The clinical workforce includes

medical professionals, nursing, and allied health workers, such as social workers, addiction practitioners, and co-existing problems clinicians. The non-clinical workforce includes support workers, such as residential support workers, peer workers, and family support workers, and cultural advice and support, such as Māori health practitioners and Pasifika cultural advisors. The District Health Board's workforce is largely made up of people in clinical roles (about 77%), while non-government services are primarily non-clinical staff and mainly support workers (about 60%) [19]. In the country, per 100,000 population, there is an average of 8.66 psychiatrists, 9.62 psychologists, 11.86 other specialized mental health workers, and 71.59 mental health nurses [20]. The majority of this workforce work in community-based services linked to small inpatient units within general hospitals.

Mental health policies

Throughout the years, various mental health policies have informed mental health care in Aotearoa NZ. From the beginning, these various legislations provided alternatives to hospitalized institutional care — although these alternatives were not widely enacted at first. The *Lunatics Ordinance* of 1846 was the country's first mental health legislation. The Ordinance set a framework where a person with a certified mental illness would be incarcerated or sent to a public hospital. As such, this legislation prioritized seclusion over care and support, providing an impetus for the development of asylums [21]. The legislation also allowed relatives and friends to care for the person in mental distress, albeit following the approval granted by a Judge or two Justices of the Peace that the person was a 'peaceful' individual [22].

Numerous asylums were developed during the 1860s and 1870s. Around the same time, the country adopted a more comprehensive mental health legislation, the 1868 *Lunatics Act*. This legislation made further provisions for the care of people with mental illness outside these institutions. Among these additional provisions were the "licensed houses." These houses, overseen by a medical practitioner, could accommodate up to, and in some cases more than, 100 patients. But, the rapid development of the asylums, and reports of poor standards of care in them (further discussed below), led to the development of a Lunatics Asylum Department in 1876. This department was set up to oversee the functioning of these institutions

at a national level. These changes in legislation also rooted an institutional system in mental health care, and by 1886 most people categorized as lunatics at the time were secluded in asylums [23].

The 1911 *Mental Defectives Act* placed further emphasis on the role of healthcare providers, particularly medical practitioners, in mental health. As such, it represented a shift from containment to care in mental health legislation. It also allowed voluntary admissions for the first time [24]. Still, the asylums were overwhelmed by a continuously growing number of secluded patients, including large groups of institutionally aging patients [23]. It was the 1969 *Mental Health Act* that legally ratified the shift toward deinstitutionalization and community care. It also formed the basis of the following mental health legislation, including the Mental Health Act of 1992, which redefined mental illness and put further emphasis on patients' rights.

In 1994, the country adopted a National Mental Health Strategy titled *Looking Forward* [25] and a ministerial committee was developed to monitor its implementation. *Looking Forward* provided five strategic directions to a developing mental health system. These strategic directions included developing community-based and comprehensive mental health services, designing services appropriate to Māori needs, ensuring Māori involvement in the planning of services, increasing the quality of care, balancing individual rights and public protection, and developing a national alcohol and drugs policy. The Mental Health Commission, established in 1996 to replace the ministerial committee, monitored the implementation of the National Mental Health Strategy. As part of their role, the Commission published the *Blueprint for Mental Health Services in New Zealand: How things need to be* [26]. The Blueprint called for adopting a recovery approach in all mental health services. It provided guidance about the importance of meeting people's needs, how to do it, and who should do it — discussing the type of workforce required.

In 1997, a new strategy called *Moving Forward* was adopted [27]. The new strategy was built on the previous one. Amongst the seven strategic directions it presented, the need for more and better health services and strengthened promotion and prevention were included. In 2012, the Mental Health Commission published its *Blueprint II* [28], which adopted people-centeredness and people-directed recovery and resiliency as its core values, supporting various mental health and addiction

reforms. Despite these growing efforts to strengthen the nation-wide adopted transition to community-based mental health care, it became increasingly evident that mental health services were not delivered adequately. In the 2010s, this situation became even more glaring. Mental health statistics highlighted ongoing high suicide rates, poor access to services (particularly for Māori, Pacific, LGBTIQ+ and rural communities), a lack of services for mild-to-moderate mental health concerns, and treatment approaches that were not responsive to family needs, culture, and context.

Something needed to change, and in 2017 the Government ordered a Royal Commission inquiry that eventuated in the *He Ara Oranga* report [2]. This report provided many recommendations for change that emphasized greater inclusion of service users, Māori and Pacific models, and community and family-oriented approaches. In 2020, a newly constituted Mental Health and Wellbeing Commission was set up and is currently in the process of developing frameworks for implementing these recommendations.

The following two sections provide a brief overview of key phases and milestones in the emergence of mental health and addiction services in Aotearoa NZ. This overview will focus first on mental health services and then on the parallel development of addiction services.

Mental health services

The first large-scale investment into mental health services was the construction of large psychiatric hospitals (initially termed “Asylums for the Mentally Insane”). They included Karori (near Wellington 1854), Dunedin and Sunnyside (near Christchurch 1863), the Whau (Auckland, later Carrington Hospital 1867), Seaview, Hokitika (1872), Nelson (1876) Seacliff (near Dunedin 1879) and Porirua (near Wellington 1887) [29]. These psychiatric hospitals were mainly sited outside major population centers, in the countryside. The majority of service users were compulsorily admitted under the *Lunatics Ordinance 1846* and the *Mental Defectives Act 1911*, and the use of coercive forms of restraint, such as seclusion and straitjackets, were commonplace. By the 1930s, new forms of treatment were introduced that included the use of insulin coma, prefrontal leucotomy, and electroconvulsive therapy (ECT). From the mid-1950s, new psychotropic drugs became available and hospital admissions moved from

22% voluntary in 1939 to 71% voluntary by 1964 [29]. The increasing voluntary admissions placed more emphasis on the therapeutic value of hospital care.

During the late 1960s, the need for large psychiatric hospitals was being questioned. Criticisms arose due to, on the one hand, the extent to which the institutionalization of service users was leading to increasing numbers of permanent residents, and on the other hand, the introduction of improved psychiatric medication, which made control and confinement less ‘necessary’. However, institutionalization was not the only concern. The use of coercive treatment methods was being challenged from a human rights perspective. Also, people expressed uneasiness with accounts of neglect and physical, emotional, and sexual abuse.

The full extent of the abuse did not become apparent until many years later. In 2001, former judge Rodney Gallen conducted an inquiry into abuse at Lake Alice Hospital that prompted a Government apology and the establishment of a “Confidential Forum,” to which, between 2005 and 2007, 493 people reported their experiences of abuse [30]. In subsequent years this contributed to a string of individual citizens taking court action, insisting on the Government’s responsibility for the abuse. However, the most revealing process has been a Royal Commission of Inquiry into *Abuse in Care*, an ongoing series of investigations into in-state and church institutions, with over two thousand people sharing their stories of abuse [31].

During the 1970s and 1980s, a process of reform sought the closure of the large psychiatric hospitals and their replacement with community care [32, 33]. This was a long process that required the placement of institutionalized service users into alternative locations and the development of services in the community. These initially consisted of a network of boarding houses and the setting up of community mental health centers in suburban areas. Also, during this time, the mental health workforce began to diversify, with social workers, occupational therapists, and psychologists developing specialist pathways. Alongside these developments was the emergence of new roles in initiatives seeking to advance employment opportunities and supportive accommodation. These changes were further supported by non-governmental organizations (NGO) such as the Schizophrenia Fellowship (formed 1977) and Mental Health Foundation (formed 1977).

However, progress was hampered because successive governments failed to invest adequately in the realization of a community approach. This contributed to poor quality of life for service users and the tendency for community mental health centers to function more as psychiatric wards placed in the community rather than genuinely community-oriented organizations [34]. The practices of psychiatry and psychiatric nursing still dominated services, and the diversifying workforce tended to be relegated to support roles.

During the 1990s, the service landscape changed in more fundamental ways due to the influence of three important social movements that emerged outside mainstream services. First, there was a clearer articulation of *kaupapa Māori* (Indigenous approaches) to mental wellbeing. Second, there was the development of *recovery approaches* and the strengthening of service user voice. Third, there was the application of public health approaches chiefly in the form of *mental health promotion*. The following briefly summarizes each of these in turn.

Kaupapa Māori approaches to Māori mental health gathered momentum in the wake of work by prominent Māori psychiatrist Mason Durie, which articulated a holistic understanding of wellbeing based on the interaction between *taha tinana* (physical wellbeing), *taha hinengaro* (mental wellbeing), *taha whānau* (family and social wellbeing), and *taha wairua* (spiritual wellbeing) [35, 36]. His work and the work of other Māori scholars demanded the development of services that adopted Māori cultural principles and practices, as well as developing systems for evaluation [37].

Recovery approaches took off in response to three inquiries in the late 1980s and early 90s into mental health services led by Judge Ken Mason, resulting in the controversial *Mason Reports* [38, 39]. The reports identified a wide range of ways in which service users had been poorly served and recommended wide-range reforms, including the appointment of a mental health commissioner to oversee the changes. In 1996, the Mental Health Commission was established, and it set to work in compiling its *Blueprint I* [26] (see above), in which they advocated for improving resources for people with serious mental health concerns and stronger participation of those with lived experience of mental illness in the planning and delivery of services [40]. By the 2000s, service users were finding a voice in articles, books, the media, and their own forums [41, 42],

and the Commission became a key advocate for the incorporation of recovery approaches into services and a shift in emphasis to people pursuing quality of life with mental illness rather than letting mental illness define them [43].

Mental health promotion focuses on ways of promoting wellbeing and reducing psychological distress through applying health-promotion principles of community empowerment and community capacity building [44]. The Ministry of Health outlined a range of potential approaches in *Building on Strengths* [45]. Unfortunately, no funding was allocated to develop this further, but, despite this, some initiatives did manage to get off the ground. One example of a successful approach is the *Like Minds, Like Mine* campaign, launched in 1997 and involving a series of public awareness campaigns aimed at destigmatizing people with mental health concerns [46]. Those participating in the campaign included service users, national leaders, and media personalities. Another approach, with an addiction focus, involved the setting-up of a network of initiatives on Community Action on Youth and Drugs (CAYAD). These projects use health promotion principles in engaging communities in reducing alcohol and drug-related harm [47]. Each community interprets this mission in its own way, and while, initially, projects occurred in only a few sites, there are now over twenty communities in which CAYADs are taking place.

Addiction Services

Addiction services have followed a separate trajectory that has, at times, converged on and, at other times, has diverged away from how mental health services have evolved. Following the Second World War, the first major services took the form of twelve-step self-help groups championed by Alcoholics Anonymous (AA). This approach, developed in the United States, led to the spreading-out of a network of regular local meetings providing assistance to those with addiction issues (through AA and Narcotics Anonymous (NA)) and affected families (through AlAnon and NarAnon). As a grassroots movement, it generated public interest in improving responses to addiction. This then contributed to the setting-up of twelve-step residential programs attached to hospital services (such as Wolfe Home at Auckland's Carrington Hospital and Canterbury's Queen Mary's Hospital at Hamner Springs). The Salvation Army, which had been providing care services for alcoholism since

1907, also set up their residential “Bridge Programs” along similar lines [48]. In 1954, the National Society on Alcoholism (later the National Society for Alcohol and Drugs, NSAD) was founded. It was responsible for a number of innovations, including, in 1972, setting up the first methadone clinics in Wellington and Christchurch, and founding community-oriented treatment programs at Plimmerton and Featherstone (later to become part of Care NZ).

During the 1970s, the closure of large psychiatric hospitals contributed to the unwinding of hospital-based residential services for addiction. These programs then shifted across to community NGOs such as Odyssey Trust and CareNZ. Hospitals chose to concentrate their efforts on shorter-term counseling approaches offered by a network of community alcohol and drug services (CADS). While this was happening, public and Government interest in addiction services were on the rise and discussions began about setting up a peak agency to oversee developments. Services at that time were anticipating this agency would take primarily a treatment approach. To their surprise, in 1976, the Government passed an Act that established the Alcohol Liquor Advisory Council (ALAC), funded by a levy on alcohol consumption and with a primary focus on public health and harm reduction approaches to addiction-related harm. ALAC became a key agency in the 1980s and 90s in fostering a range of innovative approaches that included brief intervention in primary care, social marketing campaigns, workplace innovations, and host responsibility. However, during the 2000s, concerns were raised regarding the influence of the alcohol industry on ALAC [49, 50] and in 2012 ALAC was absorbed into the newly formed Health Promotion Agency [51]. Also, alongside these agencies, the Drug Foundation has played a major role in improvements to both alcohol and other drug legislation.

During the 1990s, gambling legislation was liberalized, leading to the widespread availability of gambling in the form of electronic gambling machines and casinos. The subsequent rise in consumption led to rapid increases in gambling harm, including poverty impacts and the debilitating effects of problem gambling on individuals and families [52]. The 2003 *Gambling Act* only partially addressed the broader issues of availability, leading to a consolidation of gambling harm [53]. Service responses to this have consisted of public health

and individual service initiatives, with an emphasis in more recent years on integrating gambling into addiction services.

The relationship between addiction and mental health services has been a mixed bag. In some ways, the needs are similar, but under the banner of “mental health and addictions,” a number of agencies, including the Mental Health Commission, the Ministry of Health, and many hospital organizations, have paid scant attention to appropriate approaches to addiction and have more often transplanted mental health approaches onto the field [54]. For example, *Blueprint 1* focused attention on the top three percent of people with serious mental illness [26], and in the process, the addiction field’s focus on primary health languished from both a lack of interest and a lack of funding. Interestingly, one of the main recommendations from the Mental Health Inquiry (discussed below) was for reform of alcohol legislation. However, this is one of the two-out of the forty- recommendations that the Government has chosen not to act on.

THE ROAD AHEAD

The in-depth inquiry into mental health mentioned earlier, *He Ara Oranga* [2], identified widespread acceptance that the mental health system was failing to achieve its goals and that what is needed is a radical re-orientation of how the system operates. In 2021 the newly constituted Mental Health and Wellbeing Commission was charged and resourced to begin this process of re-orientation. Overall, there is broad support for reducing the emphasis on individualized approaches to mental wellbeing and moving all systems and structures towards models inclusive of social context, including approaches that incorporate family, communities, culture, and the needs of the broader society. Breaking this down, we interpret this as requiring substantial changes in the following key areas:

The first area where work is already underway is increasing Māori (Indigenous) participation in planning for all services and the incorporation of Māori models of care across the board. As it was mentioned above, Māori service users and providers need to be included in the development and evaluation of mental health services to ensure they are informed by Māori values and culturally safe.

The second major area of change concerns the recognition of the need for service users to have a stronger

say in design, implementation, and evaluation throughout the system. Lived experience perspectives need to be integrated throughout services both in hospitals and in the community, coupled with improved support services for long-term recovery.

The third area, which is related to the second area, concerns the scaling-down and, in some cases, the elimination of coercive practices such as the use of seclusion, restraints, and compulsory treatment orders. Changes here will require repeal and replacement of the Mental Health Act and rethinking of the relationship between mental health and the law.

The fourth area concerns incorporating both public health and primary health approaches into existing systems. This will require investment in innovative programs involving the application of mental health promotion principles in neighborhood and community contexts. Some changes are already underway in primary health, with the funding of health improvement professionals (HIP) who deliver services for those with mild-to-moderate mental health issues turning up in general practices. For addiction services, this also means further expansion of screening, brief intervention, and referral to treatment (SBIRT) approaches.

The fifth area relates specifically to addictions and calls for urgent legislative reform regarding tobacco, alcohol, gambling, and illicit drugs: for alcohol, the focus is on price reforms and reduced availability; for gambling, it is on reduced availability and product modifications; and, for illicit drugs, it is on moving away from approaches that criminalize users and towards health-oriented harm-reduction approaches.

The road ahead for all five of these key areas will call on a workforce that is capable of supporting the reorientation. This will mean improving the current workforce in areas such as cultural safety, particularly as it relates to Māori, Pasifika, and Asian populations, as well as a sound knowledge of cultural and recovery models. The changes will also require a workforce capable of working appropriately in both public health and primary health, as well as developing new roles in service user support services and family and community initiatives. The Government's 2019 Budget committed NZ\$1.9 billion (US\$1.2 billion) to improve mental health and addiction services. This, along with additional funds in subsequent budgets, is a big commitment for the country. Nevertheless, there is optimism in the sector that

services will be successfully re-oriented to better respond to the diverse mental health needs of the population.

CONCLUSION

Aotearoa NZ has a relatively long history of providing community-based mental health care. During that time, policies and services concerning the mental health and addiction sectors have undergone a variety of reforms. However, it is obvious to everyone involved that more changes are required, and that we are now entering a period of significant reform. In this paper, we have provided an historical overview of the emergence of and changes in mental health and addiction policies and services. We have also identified the key challenges for delivering community-based services and some of the priorities ahead. After the disruptions from COVID-19 settle, we are looking forward to policy and services with a much stronger orientation to the diverse needs of our population.

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Recent Developments in Community-Based Mental Health Care in Japan: A Narrative Review

Последние достижения амбулаторной психиатрической помощи в Японии: нарративный обзор

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Review

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ABSTRACT

BACKGROUND: Since the 1950s, mental health care in Japan has been hospital-centered. A set of legislative initiatives were undertaken in 1995, emphasizing the importance of community-based mental health care. However, despite these attempts to develop a community-based mental health care system, the rate of inpatient-based treatment has remained high and the shift from hospital-centered care to community-based has still not fully materialized.

AIM: This study aims to conduct a review of the available literature on the development of community-based mental health care in Japan between 2010 and 2020.

METHODS: We conducted a standardized literature search in the electronic database Igaku Chuo Zasshi, aiming to identify original studies published between 2010 and 2020 that explored community mental health care in Japan. The included studies' outcomes were categorized as performance surveys, service user reports, service provider reports, and educational activities. A descriptive-analytical method was implemented in the current review.

RESULTS: A total of 25 studies were examined. Six studies reported surveys assessing the performance of community-based mental health care on the assertive community treatment (ACT), compulsory treatment, home-visit nursing care, physical complications, and a welfare medicine collaboration on a remote islands. Four studies investigated the perspectives of service users or their families on home-visit nursing care, social participation, community program, and legislative revision. Ten studies focused on social withdrawal, service providers perspectives on local population needs, supporting skills, care programs, and the professional growth of psychiatric social workers. Five studies focused on educational approaches for future healthcare professionals and efforts to improve mental health literacy among adolescents.

CONCLUSION: This paper provided the first comprehensive review of Japan's community-based mental health care. Between 2010 and 2020, community mental health care in Japan evolved in many directions, with the understanding that various needs should be met. Home-visit nursing care and ACT can be considered as the most thoroughly investigated and better developed. Research that adopt rigorous methodologies such as randomized controlled trials is required if the goal is to achieve solid conclusions.

АННОТАЦИЯ

ВВЕДЕНИЕ: С 1950-х годов психиатрическая помощь в Японии была главным образом сосредоточена в стационарах. В 1995 г. в законодательство был внесен ряд изменений, которые подчеркнули важность амбулаторной психиатрической помощи. Однако, несмотря на попытки развития системы амбулаторной психиатрической помощи, уровень стационарного лечения остается высоким, а переход от больничного лечения к амбулаторному так и не осуществился в полной мере.

ЦЕЛЬ: Целью данного исследования является обзор доступной литературы, посвященной развитию амбулаторной психиатрической помощи в Японии в период с 2010 по 2020 гг.

МЕТОДЫ: Мы провели стандартизированный литературный поиск в электронной базе данных Igaku Chuo Zasshi с целью найти оригинальные исследования об амбулаторной психиатрической помощи в Японии, опубликованные в период с 2010 по 2020 гг. Результаты выбранных исследований были классифицированы как опросы эффективности, отчеты пользователей услуг, отчеты поставщиков услуг и образовательные мероприятия. В настоящем обзоре использован описательно-аналитический метод.

РЕЗУЛЬТАТЫ: Всего включено 25 исследований. В шести исследованиях сообщалось об опросах, оценивающих эффективность амбулаторной психиатрической помощи в проведении асертивной амбулаторной терапии, принудительного лечения, сестринского ухода на дому, соматических осложнений и социально-медицинском сотрудничестве на отдаленных островах. В четырех исследованиях изучали представления потребителей услуг или их семей о сестринском уходе на дому, социализацию, общественные программы и изменения в законодательстве. Десять исследований были посвящены социальному отчуждению, представлениям поставщиков услуг о потребностях населения, навыкам обслуживания, программам ухода и профессиональному росту психиатрических социальных работников. Пять исследований были посвящены подходам к обучению будущих медицинских работников и мерам по повышению грамотности подростков в вопросах психического здоровья.

ЗАКЛЮЧЕНИЕ: В данной статье представлен первый всеобъемлющий обзор амбулаторной психиатрической помощи в Японии. В период с 2010 по 2020 гг. в Японии наблюдалось развитие амбулаторной психиатрической помощи во многих областях благодаря растущему пониманию необходимости удовлетворения существующей потребности. Наиболее изученными и разработанными видами помощи можно считать сестринский уход на дому и асертивную амбулаторную терапию (ААТ). Исследования, в которых используется строгая методология, такая как рандомизированные контролируемые испытания, необходимы, если целью является получение надежных выводов.

Keywords: *community-based mental health; assertive community treatment; compulsory treatment; home-visit nursing care; physical complication*

Ключевые слова: *амбулаторная психиатрическая помощь; асертивная амбулаторная терапия; недобровольное лечение; сестринский уход на дому; соматическое осложнение*

INTRODUCTION

The effectiveness of community-based mental health is being increasingly recognized worldwide [1, 2]. The approach encourages not just a deinstitutionalized and decentralized treatment view, but it also advocates interacting with persons with mental illnesses in a community setting [3, 4]. The foundational principles of

community-based mental health care are the following:

1) consider every person experiencing a mental illness as a multifaceted individual and avoid any stigma-heavy attitude such as perceiving the person as a mere 'patient' [5, 6]; 2) focus not only on the person's deficit and disability (an illness perspective), but more so on the person's strength, capacity, and aspiration (a recovery-emphasizing

perspective) [7]; 3) plan a person-centered care execution based on the needs of the user, their values, and preferences [8]; 4) find and identify the needs of every local population [7]; 5) implement a care approach that is accessible and acceptable to those with mental illnesses [7], and 6) advance the coordination of care by promoting wide networks of support and service across different mental health and other health structures [9].

Japan's legislative origin of its hospital-centered system can be traced to the 1950s, when home confinement was prohibited, and involuntary admission was enacted. In 1957, a discriminatory law for psychiatric wards was passed, setting the physician/patient and nurse/patient ratio three times and one-and-a-half times higher, respectively. Since psychiatric hospitals did not need to hire many physicians and nurses, the number of psychiatric hospitals considerably increased in the 1960s and 1970s. This increase caused untoward growth in inpatient admissions, deterioration in the quality

of inpatient treatment, and prolonged hospitalization in Japan. General characteristics of the mental health care system in Japan are illustrated in Table 1.

A set of legislative revisions were made in 1995, emphasizing the importance of community-based mental health care. Consequently, the number of psychiatric outpatient clinics rapidly increased and "home-visit nursing stations" have become available. Also, the provision of administrative home-visit services was transferred from the larger administrative entity of the prefecture to the smaller one of the municipality, making the service more accessible. Currently, community-based mental health care includes the following: home-visit nursing care, administered by medical institutions, outpatient clinics, nursing stations, and administrative home-visit services arranged by municipalities and Public Health Centers (PHCs). The Mental Health and Welfare Centers (MHWCs), operated by prefectures and designated cities, are central to community-based mental health care.

Table 1. General characteristics of the mental health care system in Japan

Mental health care facility	Number
Psychiatric hospital [49]	1,054 (2019)
General hospital with a psychiatric department [49]	1,760 (2019)
Psychiatric outpatient clinic [50]	6,864 (2017)
Home-visit nursing station ^a [51]	11,580 (2019)
ACT team [10]	26 (2021)
Public Health Center [52]	470 (2021)
In-hospital psychiatric treatment [49]	Number/Length
Psychiatric bed	326,666 (2019)
Inpatients in a day (mean)	
Psychiatric hospital	213,237 (2019)
Psychiatric ward of general hospital	68,089 (2019)
Inpatient treatment (days, mean)	265.8 (2019)
Home-visit psychiatric nursing service [50]	Number
Hospital	838 (2017)
Visit in a month per hospital (mean)	135.9 (2017)
Psychiatric clinic	457 (2017)
Visit in a month per clinic (mean)	54.0 (2017)
Medical expenditure^b [53]	Expenditure (billion JPY)
For persons with mental and behavioral disorders	1,921 (2018)
In-hospital treatment	1,362 (2018)
Other than in-hospital treatment	559 (2018)

Note: Abbreviations — JPY, Japanese Yen; ^a — Home-visit nursing stations' include all nursing stations providing medical home-visit nursing care, not restricted to stations providing psychiatric nursing care; ^b — medical expenditure' does not include expenditure for home-visit nursing care.

The Assertive Community Treatment (ACT) program was commenced as a research project in 2001 [10]. Furthermore, the Japanese government launched the second five-year period of the “Vision for the Reform of Mental Health and Medical Welfare” program in 2009. Following this program, the Ministry of Health, Labor, and Welfare’s Department of Health and Welfare established the “Study Team for the Establishment of a New Regional Mental Health Care System” in 2010.

Despite the attempts to develop community-based mental health care, the rate of inpatient-based treatment remains high. Hospital-centered care transformation has not yet been completed [11], and an in-depth analysis of the situation is required [3]. This study aims to review the available literature on the development of community-based mental health care in Japan.

METHODS

Search strategy

A standardized literature search was conducted in the electronic database called Igaku Chuo Zasshi (Ichushi), issued by the Japan Medical Abstracts Society in January 2021, using a “community-based mental health services” keyword for titles, abstracts, and keywords. Ichushi is a bibliographic database established in 1903, containing bibliographic citations and abstracts from more than 2,500 biomedical journals and other serial studies published in Japan.

Selection criteria

Studies were eligible if they met the following conditions: (a) they were original research articles of any design reporting findings on the development of community-based mental health care in Japan, and (b) were published between 2010 and 2020. This timeframe was chosen, because the development of community-based mental health care supported by the government started in 2010. Meeting reports, perspectives, reviews, opinions, and commentaries were not eligible for inclusion.

Identification and data extraction

A review author (YT) screened all abstracts to find studies that met the inclusion criteria and retrieved all full-text copies that might be relevant. Two review authors (JI and TA) independently assessed full-text articles for eligibility. Any disagreements about the selection process were resolved by discussion. Primary findings were

extracted into a spreadsheet as reported by the authors of the included studies, avoiding re-interpretation [13]. The final extraction form included the following categories: study design, aim, population, data collection methods, number of enrolled participants (response rate), and data analysis method.

Data analysis

A descriptive-analytical method was employed for the current review. The findings of the included studies were categorized as performance surveys, service user reports, service provider reports, and educational activities.

RESULTS

The original search identified 243 potentially relevant studies. Among them, 212 were meeting reports, perspectives, reviews, opinions, and commentaries, which were excluded during the abstract screening stage. The full texts of 31 articles were assessed. Six studies were excluded, since they concerned mental health care outside of Japan. As a result, 25 studies were included (Figure 1). The overall characteristics of the included studies are presented in Table 2.

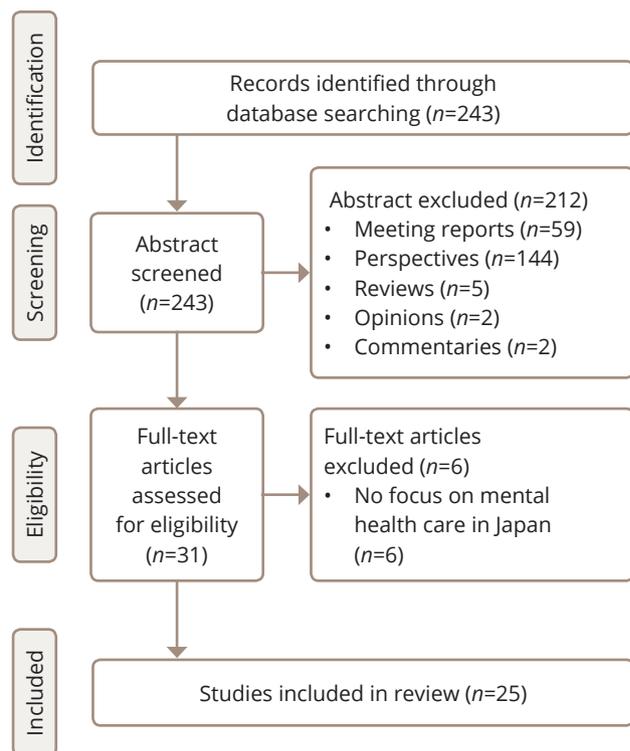


Figure 1. Flow diagram of the study search and inclusion process.

Table 2. Overall characteristics of the included studies

Study	Design	Focus	Population	Data collection methods	No of enrolled participants (response rate)	Analysis method
<i>Performance surveys</i>						
Yoshida et al. 2011 [14]	Cross-sectional study	ACT	Service users of ACT and usual home-visit nursing service	Questionnaire for supporter	42 ACT users from 6 teams 124 home-visit nursing users from 21 stations	t-test
Yoshida et al. 2013 [15]	Prospective double-cohort study	ACT	Participants of the previous study [13]	Questionnaire for supporter	32 ACT users from 5 teams (follow-up rate: 76.2%) 96 home-visit nursing users from 21 stations (follow-up rate 77.4%)	Repeated measures two-way ANOVA
Nagata et al. 2016 [16]	Retrospective cohort study	Compulsory treatment	Recipients ordered in-hospital treatment	Questionnaire for rehabilitation coordinator	402 users from 25 designated medical institutions	Survival time analysis
Tsujimoto et al. 2017a [17]	Cross-sectional study	Compulsory treatment	PHCs and MHWCs	Questionnaire for public nurse or psychiatric social worker	329 PHCs (response rate: 66.6%) and 69 MHWCs (response rate: 100%)	Descriptive statistics
Tsujimoto et al. 2017b [17]	Serial cross-sectional study	Compulsory treatment	Recipients ordered treatment	Questionnaire for public nurse or psychiatric social worker	785 users (2012, response rate 72.1%); 1,124 users (2013, response rate 65.0%); 1,202 users (2014, response rate 66.6%)	Descriptive statistics
Noguchi 2014 [18]	Case study	Home-visit treatment and care	Service users with physical complications	Existing record	3 users	-
Hanashiro et al. 2016 [19]	Practice report	Home-visit welfare service	Welfare Institutions	Existing record	3 institutions	-
<i>Service user reports</i>						
Narita et al. 2014 [21]	Cross-sectional study	Home-visit nursing care by public nurse	Service users	Semi-structured interview	5 users	Qualitative analysis
Inoue et al. 2011 [22]	Cross-sectional study	Social participation	Service user participants in volunteer activities	Focus group interview	6 users	Qualitative analysis
Komatsu 2020 [23]	Cross-sectional study	Community program (stigma eradication)	Participants in a program	Questionnaire	10 respondents among 16 participants (response rate 62.5%)	Qualitative analysis
Matsushita 2018 [24]	Cross-sectional study	Legislative Revision	Members of Family Associations	Questionnaire	219 among 270 members from 4 associations (response rate 81.8%)	χ-square test
<i>Service provider reports</i>						
Tsujimoto et al. 2017 [25]	Cross-sectional study	Social withdrawal	PHCs	Questionnaire	353 among 485 PHCs (response rate 72.8%)	Descriptive statistics
Hirokawa et al. 2013 [26]	Cross-sectional study	Public assistance recipient	Municipalities	Semi-structured interview	5 municipalities	Qualitative analysis
Yoshioka-Maeda et al. 2017 [27]	Cross-sectional study	Clinical supervision	Service users supported by a municipality	Existing records	309 of 372 users, 5 supervisors	Qualitative analysis
Okada 2017 [28]	Cross-sectional study	Technical support	Psychiatric social workers in prefectures	Semi-structured interview	7 psychiatric social workers among 20 candidates	Qualitative analysis

Table 2. Overall characteristics of the included studies (continued)

Study	Design	Focus	Population	Data collection methods	No of enrolled participants (response rate)	Analysis method
Suzuki et al. 2010 [29]	Cross-sectional study	Disaster mental health service	Public nurse participants in training workshops	Questionnaire	523 respondents among 1,031 participants (response rate 51.3%)	Descriptive statistics
Fujisawa et al. 2019 [30]	Cross-sectional study	Disaster mental health service	Member of clinical psychologist society in a disaster site	Questionnaire	81 among 220 members (collection rate 36.8%)	Multiple logistic regression analysis
Taneda et al. 2016 [31]	Cross-sectional study	Disaster mental health service	On-site supporters in Great East-Japan Earthquake site	Focus group interview	55 supporters from 7 sites	Qualitative analysis
Yamamoto et al. 2010 [32]	Case study	Child-adolescent mental health service	Service user of Child Welfare Center	Existing record	1 user	-
Yoshino et al. 2018 [33]	Case study	Home-visit nursing care program	Service user participants in Meriden Family Programme	Existing records	2 users	-
Shiimitsu 2012 [34]	Cross-sectional study	Service provider's growing process	Psychiatric social workers in leadership position	Semi-structured interview	7 psychiatric social workers	Qualitative analysis
<i>Educational activities</i>						
Hisai 2010 [35]	Cross-sectional study	Learning in Community	Nursing students and training officers of work-support institutions	Existing records for students; Questionnaire for training officers	11 students and 2 training officers	Qualitative analysis
Higashi et al. 2012 [36]	Cross-sectional study	Learning in Community	Nursing students	Questionnaire	54 students	χ-square test
Arai 2011 [37]	Cross-sectional study	Learning in Community	Welfare institutions receiving nursing student' practical learning	Questionnaire	52 users and 12 staff from 4 institutions (response rate 100%)	Qualitative analysis
Omori et al. 2011 [38]	Cross-sectional study	Social participation	Nursing student participants in community activities	Focus group interview	7 students	Qualitative analysis
Uematsu et al. 2017 [39]	Practice report	Community program (mental health literacy)	Public schools	Existing record	8 junior high schools and 1 high school	-

Note: Abbreviations — ACT, Assertive Community Treatment; PHCs, Public Health Centers; MHWCs, Mental Health and Welfare Centers.

Performance surveys

Six studies reported on surveys assessing the performance of community-based mental health care on the ACT, compulsory treatment, home-visit nursing care, physical complications, and a welfare medicine collaboration on a remote island [14–19]. One article reported on two sets of results obtained using two different research designs [17].

In the study by Yoshida et al. (2011), two types of home-visit services, the ACT program and usual home-visit psychiatric nursing care, were compared in terms of service quality for persons with severe mental illnesses. According to the results, the ACT provided substantial support in managing psychiatric symptoms and daily living. In contrast, usual nursing care included more assessments on drug side effects and coping with physical

symptoms. In contrast, standard home-visit nursing care was shorter and less frequent for users with higher Global Assessment of Functioning (GAF) Scale scores ($p=0.001$, respectively) [14].

Yoshida et al. (2013) analyzed the characteristics of ACT and home-visit nursing care. They reported that ACT extended intensive care to users with low scores based on the (GAF) scale. ACT users could actively utilize three service items: assistance with shopping, building relationships with staff, and aid in relations with other health and social care staff. However, home-visit nursing care shifted from direct to indirect nature after one year of service [15].

Recipients of compulsory treatment because they had committed serious crimes were considered as another population group. Compulsory treatment was legalized by the Medical Treatment and Supervision Act in 2005. In the nine-year follow-up study of 402 patients, Nagata et al. (2016) reported that five persons committed seven severe re-offenses, 14 persons attempted 18 suicides, six suicides were completed, and 157 re-admissions were registered to designated institutions under the Medical Treatment and Supervision Act and psychiatric wards under the Mental Health and Welfare Act. The standardized mortality ratio was 3.84 (95% CI 0.1–7.6) (P-value was not provided) [16].

In the study by Tsujimoto et al. (2017), the effectiveness of the treatment order in the context of changes in recipients' living arrangements was examined from the viewpoint of PHCs and MHWCs. Overall, 266 out of 329 PHCs (80.9%) and 51 out of 69 MHWCs (73.9%) supported recipients under compulsory treatment. The number of recipients supported by PHCs increased from 785 to 1,202 in three years. In the same three years, the number of persons who underwent treatment under the Mental Health and Welfare Act increased from 51 to 87. However, the employment rate in the third year of follow-up was only 9.3% (10 out of 107 persons) for regular work and 5.6% (6 out of 107 persons) for welfare employment [17].

Co-occurring physical complications for persons with a mental illness represent another set of challenges for community-based mental healthcare. A case report by Noguchi (2014) proposed a team-based home-visit service involving psychiatric treatment to address these challenges. It was suggested that regular home visits, visits to the physical department in a hospital,

psychiatrist-physician cooperation, and management of care would help persons with a severe mental illness to recognize symptoms properly and receive the necessary treatment [18].

A welfare-medicine collaboration on a remote island without psychiatric facilities was reported by Hanashiro et al. (2016). Among home visits provided by a Core Consultation Support Center, 85 out of 268 (31.7%) were accompanied by home-visit treatment or nursing care. Furthermore, 122 visits (45.5%) were provided in partnership with another welfare institution called Place of Business for Consultation Support [19].

Service user reports

Four studies investigated the perspectives of service users or their families regarding home-visit nursing care, social participation, community program, and legislative revision [20–23].

In the study by Narita et al. (2014), persons with schizophrenia evaluated home-visit nursing care by public health nurses. Positive feedback regarding home-visit nursing care was received concerning “advice regarding living arrangements”, “listening and watching” with concerns, and “support by forming familiar relationships” [20]. According to Inoue et al. (2011), persons with mental disabilities who helped persons with intellectual disabilities as volunteers reported that they (persons with mental disabilities) had not only “acquired skills of living in the community” and “broadened the area of daily living”, but also “felt fulfillment and satisfaction” and “experienced a sense of being a member of society”. Volunteer service users were encouraged by self-help groups and intimate supporters in a comfortable environment [21].

Komatsu (2020) investigated the effectiveness of community programs and reported that, after a two-hour community group work program aimed at doing away with stigma, nine out of ten participants reported being “highly satisfied/satisfied” with the program. Although stigma often puts limits on relationships and mutual understanding, peer support was gained as participants shared their experiences from their perspectives [22].

Although the Mental Health and Welfare Act (2013 revision) abolished the requirement that family members perform as guardians of persons with mental illness, the compulsory hospitalization system was not

dismantled. In the study by Matsushita (2018), only 57 out of 219 (26.0%) family members said they “strongly agree or agree” with the revision of the law that maintained compulsory hospitalization. At the same time, 186 out of 219 (84.9%) of the respondents wanted change in the current system, such as employment support, disability pensions, support in admission and discharge from the hospital, support centers for community activities, general support for independence, and decreasing cost of services. Members of the Family Associations considered the revision with ambivalence [23].

Service provider reports

Ten studies focused on social withdrawal, the service providers’ perspectives on local population needs, supporting skills, care programs, and the professional growth of psychiatric social workers [24–33].

Tsujimoto et al. (2017) investigated the current state of and challenges to support activities for social withdrawal and reported that out of 334 PHCs 265 (94.6%) were involved in programs for persons with severe social withdrawal, and 188 (53.3%) were provided continuous service. More than 40% of service providers indicated that they “often feel” worried about patients’ withdrawal due to the following factors: 1) dissolution of professional relationships with the person who is withdrawing, 2) concerns about patients’ future life and household finances, 3) concerns about patients’ independent living after the death of a parent, 4) the person has nowhere else to go, and 5) possibility of violence toward family members/trouble with neighbors [24].

Hirokawa et al. (2013) investigated the difficulties in establishing supportive relationships between welfare recipients and municipality staff. The supportive measures included regular or repeated home visits via which relationships through daily conversations were built and all family members were assessed. The municipality staff highlighted that providing support to welfare recipients was challenging due to various issues, including household issues, withdrawing family members, isolation of the family from society, trouble with neighbors, and refusal to accept support [25].

A study by Yoshioka-Maeda et al. (2017) analyzed the assessment strategies used by supervisors of municipality mental healthcare providers (psychiatrists, psychiatric social workers, and public health nurses) working

in community mental health care. It was reported that supervisors identified who was in need, assessed the relationships and problem-solving skills within the family, anticipated potentially challenging situations, and encouraged collaboration among healthcare providers. In this study, two themes were extracted from municipality mental health care providers’ records: “clarification of the present and future health issues of a person with mental illness and his/her family members” and “preparation of a support plan” [26].

Okada (2017) investigated the technical support provided to municipal staff by prefectural psychiatric social workers (PSWs), and they reported that while assisting municipality staff, PSWs “created complementary relationships”, “made decisions based on a wide range of information”, “put in place support policies”, “collaborated to support”, and “evaluated the support rendered by PSWs to the municipality staff”. The skills taught by PSWs included problem-solving, person-centered care, and understanding of the needs of residents [27].

Suzuki et al. (2010) investigated the preparedness of public health nurses for disasters and reported that nurses lacked in experience in extending support to disaster victims. Among public health nurses, 183 out of 509 (36.0%) had experience supporting disaster victims, 308 out of 514 (59.9%) nurses had experience helping those affected by the death of a family member, and 253 out of 512 (49.4%) nurses had experience in how to assist victims of child abuse. In addition, 331 out of 508 (65.2%) were unsure about how to respond to a mental health crisis, indicating that nurses were unprepared to cushion the mental health crisis of disaster victims [28].

Fujisawa et al. (2019) surveyed clinical psychologists in the affected areas to explore the experiences they consider essential when providing community mental health services. Clinical psychologists in the affected regions suggested that “collaboration among supporters,” “experience of participating in care teams in affected areas”, and “experience in welfare provision and educational facilities” were essential factors in developing a community-based mental health services framework [29].

Taneda et al. (2016) explored the role external actors can play following a disaster. They noted that actors in areas affected by a disaster often hesitate to collaborate with their “outside” homologues. The burden on these

actors in the affected areas is likely to be made lighter through a collaboration with and supervision by “outside actors” [30].

As an example of “participation in care teams,” Yamamoto et al. (2010) explored the essential role of a child-adolescent psychiatrist in diagnosing and supervising a child welfare center team. The issues of an accurate diagnosis as the basis for appropriate assistance and the importance of transitioning from child psychiatry to general psychiatry beyond the age of 18 were discussed [31].

In the study by Yoshino et al. (2018), the implementation of the Meriden Family Program was assessed. The Meriden Family Program is a type of care that puts the highest value on both the service user and the family. Through 18–20 home sessions, service users and their families were given opportunities to learn about each other’s experiences and perspectives [32].

Shiomitsu (2012) analyzed the professional development of PSWs working in local welfare facilities. The author identified different issues, depending on a practitioner’s stage of professional development: Newcomers tend to focus on searching for the correct answer, while the mid-career staff are committed to trying their professional knowledge in practice, and experienced staff aim to build relationships with service users [33].

Educational activities

Five studies focused on the future of healthcare professionals’ education and efforts to improve mental health literacy among adolescents [34–38].

Hisai (2010) explored the training of nursing students practicing in local welfare facilities. Practicum at the welfare facility was seen as helping nursing students to identify the “healthy aspects of persons with a mental illness”, “insufficient understanding in the society”, the “need to take the family into consideration”, “the important role of community facilities”, the “need for continued involvement”, and the “awareness of one’s own emotional changes” [34].

The study by Higashi et al. (2012) investigated how visits to people with mental disabilities at their homes and welfare facilities influence nursing students’ understanding of community mental health. Nursing students who completed the practicum rated visits to welfare facilities (23 out of 30, 76.6%) and patients’ home visits (9 out of 11, 81.8%) as the most valuable

information-yielding experiences about the mental healthcare community [35].

Arai (2011) analyzed the evaluation of nursing students’ training at a community welfare facility through the eyes of its users and staff. Overall, 42 out of 52 (80.1%) users and 9 out of 12 (75.0%) staff members said they considered practice training of nursing students as “very good/good”. Service users enjoyed conversations with nursing students, felt that their stories were valued, and received good stimulation [36].

In a study by Omori et al. (2011), nursing students participated in horticultural activities with persons with mental illnesses for four years. The students reported having “pleasure of the activity”, “preoccupation with the situation of involvement”, “establishment of role awareness”, building “natural relationships without walls”, and being “part of the community-based mental health activity”. The confusion after knowing the person as a “patient” was overcome through the rebuilding of human relationships [37].

Since no official school program in Japan is dedicated to mental health, Uematsu et al. (2017) reported on efforts to improve mental health literacy. The importance of starting a mental health education program in at least one school per region was discussed. Launching such a program requires recognition by the affiliated organizations, families, and students [38].

DISCUSSION

This review shows that the study of community mental health care in Japan covers diverse themes. It was determined that home-visit nursing care and ACT can be considered the most thoroughly investigated and highly developed. While ACT provides an effective service, home-visit nursing care seems to be more widely accepted because of its non-invasive and caring nature. Apart from the ACT and home-visit nursing care, physical complications, welfare medicine collaboration on a remote island, social participation, stigma eradication as a community program, and legislative remedies were also widely explored. Studies on social withdrawal, service providers’ perspectives on local population needs, supporting skills, care programs, and the professional growth of psychiatric social workers are still in their infancy. Also, studies focused on how to better educate future healthcare professionals and improve mental health literacy remain scarce.

Comparison with the existing literature

Regarding community-based mental health in Japan, there have been two reviews [40, 41]. Aikawa (2018) pointed out the importance of ACT and discussed the issues, such as ethical dilemmas, informed consent, over-treatment, protection of privacy, and resource allocation in mental health care [40]. Aikawa's review aligns with the findings of this review, indicating that community mental health care needs to meet a wide range of needs. Noguchi (2018) reported on the importance of the various roles played by public health nurses, including home-visit nursing care [41]. However, the scope of these two reviews was limited to the ACT and the roles of public health nurses.

Strengths and limitations of the study

To our knowledge, this is the first comprehensive review of community-based mental health care in Japan. Another strength of this review is that it applied a robust methodology, leading to comprehensive results and discussions. However, the methodological quality of the obtained evidence was not high enough. No randomized controlled trials (RCTs) were found, and causal relationships, such as treatment/care effectiveness, were not confirmed. Also, since the field of community-based mental health care in Japan is in evolution, the themes in the studies proved highly atomized, making it difficult to categorize the study findings and draw readily actionable conclusions.

Implications for future research and practice

Although community mental health care in Japan was developed with good awareness of what should be entailed, there is still room for improvement. For practical purposes, an international exchange should be helpful. Also, the role of service users should be emphasized and improved. Users should be more actively drawn into the decision-making process and given the chance to better voice their perspectives regarding the design, delivery, and evaluation of care. For research, it is indispensable to develop reliable assessment tools and conduct RCTs, ascertaining the effectiveness of the care.

CONCLUSION

Between 2010 and 2020, community mental health care in Japan developed in many directions with the awareness that various needs have to be met. Home-visit nursing care and ACT are the most thoroughly investigated and

seriously developed. Research using more rigorous methodologies, such as randomized controlled trials, is required if we want to arrive at conclusions that can be trusted with a high degree of certainty.

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DC:0–5™ Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood: Promotion in Russia

«Диагностическая классификация нарушений психического здоровья и развития в младенчестве и раннем детстве» DC:0–5™: продвижение в России

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Commentary

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ABSTRACT

The purpose of the report is to inform the community of Russian pediatric mental health professionals about the international DC:0–5™ Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood: its purpose, target age, structure and content of diagnostic axes, as well as about the steps already taken domestically to promote the Classification in Russia. We show that the diagnostic Classification is the brainchild of leading foreign experts in the mental health of children and that it is based on an analysis and extrapolation of a large body of clinical data from around the world and covers a wide range of mental disorders experienced by children during their first five years of life. The interdisciplinary focus of DC:0–5™ is emphasized, as well as the presence in it of a crosswalk to the DSM-5 and ICD-10 systems, and the possibility to supplement these classifications taking into account the age specificity of disorders. It was made note that this diagnostic classification is almost unknown among Russian specialists. The report briefly touches on the results of the research activities of the interdisciplinary research group of the Scientific Center for Mental Health (Moscow) carried out in the period between 2002 and 2017 and aimed at analyzing the diagnostic approaches proposed in the Classification and testing them on Russian sample populations. The release of the Russian version of DC:0–5™ in 2022 by the non-profit organization Caritas Social School (St. Petersburg), with the official consent of the DC:0–5™ developer and in cooperation with the Faculty of Psychology of St. Petersburg State University, and an accompanying DC:0–5™ introduction course developed by this team for Russian child mental health professionals were announced.

АННОТАЦИЯ

Цель сообщения — информировать российских специалистов в области детского психического здоровья о международной Диагностической классификации нарушений психического здоровья и развития в младенчестве и раннем детстве DC:0–5™: ее назначении, возрастной направленности, структуре и содержании диагностических осей, а также о тех шагах, которые были предприняты отечественными специалистами по ее популяризации в России. Показано, что данная диагностическая классификация разрабатывалась ведущими зарубежными специалистами в области психического здоровья детей, основана на анализе и обобщении большого объема клинических данных со всего мира и охватывает широкий диапазон психических отклонений у детей первых пяти лет жизни. Подчеркнута междисциплинарная направленность DC:0–5™, а также наличие в ней перекрестных

ссылок с системами DSM-5 и МКБ-10 и способность дополнять эти классификации, учитывая возрастную специфику нарушений. Отмечен тот факт, что среди российских специалистов данная диагностическая классификация практически не известна. В сообщении кратко освещены результаты научно-исследовательской деятельности междисциплинарной научной группы Научного центра психического здоровья (г. Москва), проводимой в период с 2002 по 2017 гг. и направленной на анализ предлагаемых классификацией диагностических подходов и их апробацию на российских выборках. Анонсирован выход русского издания DC:0-5™, осуществленный в 2022 г. некоммерческой организацией «Социальная школа Каритас» (г. Санкт-Петербург) с официального согласия компании-разработчика DC:0-5™ и в сотрудничестве с факультетом психологии СПбГУ, а также сопровождающий его ознакомительный курс по использованию DC:0-5™, разработанный этим коллективом для российских специалистов в области детского психического здоровья.

Keywords: *infancy; early childhood; mental disorders; diagnostic classifications; DC:0-5™*

Ключевые слова: *младенчество; раннее детство; психические расстройства; диагностические классификации; DC:0-5™*

The Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (abbreviated as DC:0-5™) is a comprehensive diagnostic system accepted today in many countries outside Russia as a standard in assessing the condition of children in their early years of life with signs of mental disorder or mental developmental disorder [1]. The DC:0-5™ classification was developed and continues to be improved through the efforts of the international organization ZERO TO THREE (<https://www.zerotothree.org>), which, since the 1970s, has brought together leading experts in the development and mental health of children in their early years of life. Initially, the remit of the organization was to analyze case reports from medical institutions in a search for behavioral patterns that accompany developmental problems in infancy and early childhood, describe groups of disorders, create a set of diagnostic categories, and so on. Later, ZERO TO THREE developed an extensive diagnostic system based on five axes. DC:0-5™ was released in 2016 and is now in the third version of its diagnostic manual. The previous versions of 1994 (DC:0-3) [2] and 2005 (DC:0-3R) [3] had a limit on the age range of the children at the first three and four years of life, respectively. The updated version of DC:0-5™ covers the period from birth to 5 years inclusive; i.e., until the child reaches the age of six.

In accordance with current global practices, DC:0-5™ is designed for the conduct of a comprehensive interdisciplinary assessment of mental disorders in a child, and, therefore, its structure is multi-axial. Diagnostics is conducted in five directions (axes).

Axis I: Clinical Disorders is the central one. It contains a description of more than forty types of mental disorders that can afflict children from birth up to the age of six. All early mental disorders are grouped under eight headings: Neurodevelopmental Disorders, Sensory Processing Disorders, Anxiety Disorders, Mood Disorders, Obsessive Compulsive and Related Disorders, Sleep, Eating and Crying Disorders, Trauma, Stress and Deprivation Disorders, and Relationship Disorders. All disorders are presented based on the following scheme: 1. The diagnostic algorithm in the form of specific criteria for the disorder and non-specific symptoms of impaired social functioning of the child and/or their family, as well as the age of onset of the disorder and its duration; 2. The diagnostic details of the disorder; 3. Additional data to support the diagnosis; 4. The features of the development of this disorder; 5. The population frequency; 6. Data on the course of the disease; 7. The risk factors and prognosis; 8. The diagnostic problems associated with the cultural characteristics of the family; 9. Gender differences; 10. The differential diagnosis; 11. Information about comorbidities; and 12. Where the diagnosis fits into the DC:0-5™ diagnostic categories in the ICD-10 and DSM-5 systems. The correlation of DC:0-5™ with the DSM-5 and ICD-10 systems allows one to use the classification as an additional one, taking into account the pronounced specificity of the mental disorders of infancy and early childhood. DC:0-5™ also contains the special section "Crosswalk to DSM-5 and ICD-10."

Axes II-V are designed to assess environmental and organic factors in terms of their impact in the

development of the disease, its course, prognosis, and also as a resource for the treatment and social rehabilitation of the child. Thus, Axis II: Relational context proposes to evaluate a number of aspects of the parental attitude towards a child with mental disabilities: e.g., the parent's ability to ensure the child's physical safety, meet his/her basic needs, educate the child, encourage his/her involvement in societal interactions, show interest in his/her personality and development prospects, etc. Axis III: Physical Health Conditions and Considerations reflects the perinatal conditions and influences that are significant from the point of view of a psychiatric diagnosis, the presence of congenital anomalies and genetic syndromes, sensory deficits, chronic somatic, neurological and other diseases, acute medical conditions, as well as the vaccination status. Axis IV: Psychosocial Stressors provides a framework for identifying and evaluating the strength of the stress factors that can influence the onset and course of a mental illness in an infant or young child, including age-specific stress factors. The latter include long-term separation from a parent or a person replacing him/her, remarriage of a parent, the birth of a sibling, placement in a foster family, and many others. Axis V: Developmental Competence is aimed at assessing the skills acquired by the child in the emotional, cognitive, speech, social, and motor dimensions. This assessment may be based on observations of the child's interactions with close adults, parent reports, formalized developmental tests, and data from the Developmental Milestones Table provided in the manual.

With each new edition, the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood has increased in volume and detail, including more and more information about the issue of early mental disorders, as well as the approaches used to define and identify them. A working group consisting of leading child psychiatrists and psychologists from Europe and North America set out to analyze and summarize the wide international experience gained from practitioners on six continents [1]. Unfortunately, Russian specialists in child mental health failed to participate. Awareness on the part of our domestic child psychiatrists and psychologists both of this initiative and its result — the publication of a diagnostic manual has been and remains extremely poor. At the same time, the demand in modern clinical practice for such developments is huge.

In an effort to fill this gap to some extent, the scientific group of the FSBRI "Scientific Center for Mental Health", headed by G.V. Skoblo, conducted a number of studies in the period from 2002 to 2017 in order to analyze the scientific and practical approaches offered by the Classification [4–8]. During the studies, a working version of the translation was made of the text of all editions, diagnostic approaches were tested in Russian sample populations, an analysis of conceptual approaches to assessing the mental health of a small child was undertaken, and parallels with diagnostics in Russian child psychiatry and clinical psychology were identified. This topic was covered in numerous materials published in Russian scientific journals, as well as in a number of reports at Russian and international scientific conferences and university lectures.

A significant step forward in increasing awareness about the DC:0–5™ classification in Russia will undoubtedly be its Russian version, which has been published this year [9]. It was published under the international grant "Mental Health and Early Care", implemented by the non-profit organization Caritas Social School (<https://caritas-edu.ru>), in cooperation with the Department of Mental Health and Early Support for Children and Parents of the Faculty of Psychology of the St. Petersburg State University. All work was performed with the official consent and assistance of the developer, ZERO TO THREE. In addition, in October–December 2022, the Caritas Social School plans to conduct an introductory online course on DC:0–5™ in Russian. It is intended for a broad audience of pediatric mental health professionals and corresponds to the first stage of training in its use. This course is included in the program of additional professional education "Mental Health of Infants and Young Children" (<https://caritas-edu.ru/?events=psihicheskoe-zdorovlemladenczev-i-detej-rannego-vozrasta>).

Thus, the DC:0–5™ classification, slowly but consistently, is coming to the attention of Russian child psychiatrists, psychologists, and other specialists charged with addressing the mental health of the smallest of patients. At the same time, a number of its provisions require further acquaintance by the domestic professional community, with a view to establishing a correlation with the diagnostic and therapeutic practices in Russia, the terminology, the ideas in the country about progress in the development of children with mental illness, etc. We have already covered some of these issues in publications [5–7].

However, the range of topics touching on the use of DC:0–5™ in Russia is quite wide and the very issue of a possible adoption of the approaches developed in DC:0–5™ in the Russian psychiatric and clinical psychological practice deserves separate consideration and analysis.

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The Experience of the Crisis Clinic at the Scientific and Practical Center for Mental Health of Children and Adolescents named after G.E. Sukhareva

Опыт работы Клиники кризисной помощи ГБУЗ «Научно-практический центр психического здоровья детей и подростков им. Г.Е. Сухаревой»

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ABSTRACT

BACKGROUND: Suicidal behavior by children and adolescents has been and remains one of the most intractable of our social ills. Despite the general downward trend in suicide rates, children and adolescents remain one of the most at-risk groups. Suicidal behavior in all its manifestations is a biopsychosocial problem in which the superiority of one approach or the other cannot be unambiguously justified. It flows from this that strategies that aim to prevent suicide should weave together not just the medical and psychological aspects of the issue, but the social, legal, pedagogical, and other dimensions as well.

AIM: To develop an integrated approach that could provide primary, secondary, and tertiary prevention of suicidal behavior in children, provide the routing of patients, and coordinate actions both between the outpatient link and inpatient specialized care and between different departments, primarily between the Moscow Department of Healthcare and the Department of Education.

METHODS: We analyzed the dynamics of the number of admissions to the Scientific and Practical Center for Mental Health of Children and Adolescents named after G.E. Sukhareva of Moscow Health Department (Sukhareva Center) with suicidal manifestations in 2019–2022. Organization of the Crisis Care Clinic (Crisis Clinic), which specializes in helping children and adolescents aged 11 to 17 who find themselves in a situation of psychological crisis, have suicidal tendencies, display self-injurious behavior, experience grief, violence, or have suffered abuse.

RESULTS: A comprehensive multi-disciplinary approach is identified as the most efficient way to treat and prevent suicidal behavior in children and adolescents. Psychopharmacotherapy is used to influence severe depressive symptomatology, reduce anxiety, moderate sedation, correct behavioral disorders, etc. In addition to medication, comprehensive psychotherapeutic assistance is recommended. The leading therapeutic approaches are cognitive-behavioral, including DBT, and family therapy, with the efforts of therapists concentrated on alleviating post-traumatic stress, depression, and behavioral problems, as well as resolving intrafamily conflicts.

CONCLUSION: The need to remedy severe crisis conditions and their associated psychopathological repercussions (including suicidal and self-harming behavior) calls for coordinated efforts on the part of specialists from different fields of knowledge related to childhood and adolescence. Our analysis of the experience of working with children and adolescents in the Crisis Clinic at the Sukhareva Center shows that there is high demand for such highly specialized institutions and that the basic principles laid down at its creation, urgency, stage, and continuity of care, poly-professionalism with a focus on non-drug treatment methods, orientation towards the patient's family are relevant.

АННОТАЦИЯ

ВВЕДЕНИЕ: Суицидальное поведение детей и подростков было и остается одной из наиболее значимых социальных проблем. Не смотря на общую тенденцию к снижению уровня суицидов, подростковый и юношеский возраст остается одной из основных групп риска. Суицидальное поведение во всех его проявлениях представляет собой биопсихосоциальную проблему, в которой невозможно выделить преобладание того или иного подхода. Соответственно, стратегии превенции суицида должны включать не только медицинские и психологические, но и социальные, юридические, педагогические и другие аспекты.

ЦЕЛЬ: Разработка комплексного подхода, позволяющего обеспечить первичную, вторичную и третичную профилактику суицидального поведения у детей, обеспечить маршрутизацию пациентов, согласовав действия как между амбулаторным звеном и стационарной специализированной помощью, так и между различными ведомствами, в первую очередь, между Департаментом здравоохранения и Департаментом образования г. Москвы.

МЕТОДЫ: Анализ динамики числа госпитализаций в Центр им. Г.Е. Сухаревой с суицидальными проявлениями в 2019–2022 гг. Организация клиники кризисной помощи, специализирующейся на оказании помощи детям и подросткам 11–17 лет, находящимся в ситуации психологического кризиса, имеющим суицидальные тенденции, самоповреждающее поведение, переживающим горе, насилие, жестокое обращение.

РЕЗУЛЬТАТЫ: Наиболее эффективным для лечения и профилактики суицидального поведения у детей и подростков признан комплексный полипрофессиональный подход. Психофармакотерапия используется для воздействия на тяжелую депрессивную симптоматику, для снижения тревоги, умеренной седации, коррекции нарушений поведения и т.п. Помимо медикаментозной, рекомендовано широкое применение психотерапевтической помощи. Ведущими психотерапевтическими подходами является когнитивно-поведенческая, в том числе DBT, и семейная психотерапия, при этом усилия психотерапевтов направлены на купирование посттравматического стресса, депрессии и поведенческих проблем, а также разрешение внутрисемейных конфликтов.

ЗАКЛЮЧЕНИЕ: Таким образом, необходимость коррекции острых кризисных состояний и ассоциированных с ними психопатологических феноменов (в том числе суицидального и самоповреждающего поведения), требует скоординированных усилий специалистов из различных областей знания, связанных с детским и подростковым возрастом. Анализ опыта работы с детьми и подростками в условиях Клиники кризисной

помощи при ГБУЗ «НПЦ ПЗДП им. Г.Е. Сухаревой ДЗМ» показывает высокую востребованность такого рода узкоспециализированных структур, а основные принципы, заложенные при ее создании — безотлагательность, этапность и преемственность помощи, полипрофессиональность с фокусом на нелекарственных методах лечения, ориентацию на семью пациента — актуальными.

Keywords: *child and adolescent psychiatry; suicidal behavior in children and adolescents; crisis states; crisis clinic; polyprofessional approach*

Ключевые слова: *детская и подростковая психиатрия; суицидальное поведение детей и подростков; кризисные состояния; клиника кризисной помощи; полипрофессиональный подход*

Suicidal behavior by children and adolescents is one of the most pressing and painful issues not only in psychiatry and pediatrics, but also in society as a whole. It is known that only 5% of suicide attempts in adolescence have psychotic motives, while personality disorders account for up to 20–30%, the remaining causes being found mainly in the so-called “adolescence crises”. The social factors that provoke suicidal behavior in children and adolescents can include difficult situations and chronic conflictual relationships in the family and at school, sexual and physical abuse, experience of domestic violence, parental divorce, death of loved ones, substance abuse, having a family member with a severe mental or physical illness, own illness, and family history of suicide. Acute periods of grief, fallout of violent episodes, bullying, and long-lasting family and social conflicts can lead to the formation of several psychopathological conditions, often complicated by a propensity for self-harming and suicidal behavior. It is known that the vulnerability adolescents present against different, potentially psychogenic factors is much more acute than it is at any other age because of their high emotional vulnerability, the instability of their emotional reactions, weakness of their regulatory mechanisms, and volitional processes that display a deficiency of forecasting and control over one's own actions. When analyzing the completed suicides among children and adolescents, researchers from different countries have come to conclude that conflict in the family environment is the main trigger in those who commit suicide. Children from single-parent families or children that have difficult relationships with their parents are at the highest point of risk as regards suicide. About 5% of survivors of childhood abuse attempt suicide within 10 years of the experience, and more than 36% of them repeat the suicide attempt within 20 years. At the same time, a parent that attempts suicide can result

in an almost 5-fold increase in the likelihood of children committing suicide.

According to the WHO, the worldwide suicide rate averages 10.5 (13.7 for men and 7.5 for women) per 100,000 population, ranging from 5 to 30 per 100,000 population in different countries. About 800,000 people die by suicide each year [1]. In adolescents aged 15–19, suicide becomes the second (for girls) and third (for boys) cause of death, second only to traffic accidents and homicide [2, 3]. It is believed that, for every completed youth suicide, there are 100–200 suicide attempts [4]. By age 18, about 4.1% of adolescents have made at least one attempt at suicide [5]. In the Russian Federation, annually one in 12 teenager makes a suicide attempt, after which the risk of repeated suicide attempts increases by 10–15 times in comparison with the general population [6].

Suicide attempts remain not only the most important risk factor for committing suicide in the future, but they also lead to hospitalizations, injuries, inability to work, and disabilities, putting a heavy financial burden on society.

Therefore, as the WHO stresses, the prevention of suicidal behavior is a global imperative for the whole world [1].

Suicidal behavior is a biopsychosocial problem in which the biological, psychological/psychopathological and social aspects are equally implicated. Prevention, help, and rehabilitation of children and teenagers with suicidal behavior is a multidisciplinary problem.

Thus, it is known that one of the major factors that influence the occurrence and progression of suicidal thoughts and intentions is a depressive syndrome of varying etiologies, from psychogenic to endogenous and exogenous-organic.

Depression in children and adolescents has been found to increase their risk of suicide attempt by 6 times

compared to the general population [5]. Approximately 14–25% of children and adolescents have experienced at least one depressive episode by the time they reach adulthood [7]. According to the British Epidemiological Society, 41% of children aged 11 to 15 with depressive disorders have attempted suicide [8].

Nevertheless, the scholarship of the motives of suicidal behavior indicates that a large role is played by micro- and macrosocial factors. The social factors likely to lead to suicidal behavior in children and adolescents can run the gamut of acute situations and chronic conflict relationships in the family and school, sexual and physical violence, being a witness of domestic violence, parental divorce, death of loved ones, substance abuse, having a family member with a severe mental or physical illness, somatic illness, suicide history in the family [9, 10]. Therefore, effective help to an adolescent displaying suicidal behavior is possible only through a multidisciplinary approach, with the participation of the psychiatrist, psychologists, and, in some cases, specialists in social welfare, police, etc.

A look at the medical records of the Sukhareva Center indicates an increase in hospitalized adolescent

patients with suicidal behavior. This reflects the dynamics of suicidal behavior in Moscow as a whole, since the Sukhareva Center is the only ambulance psychiatric hospital in the city (Figure 1).

Of course, these figures are likely an underestimation, since not all children and adolescents with suicidal behavior are seen by a psychiatrist. Indirectly, the scale of the problem can be assessed through the number of corresponding inquiries on the Internet. In 2020, 833 adolescents with suicidal behavior were hospitalized at the Sukhareva Center while the number of search queries in Moscow on the Yandex platform, for example, containing the key words “kill yourself at school” amounted to 12,134 [11].

It is safe to say that there is a growing need for inpatient care for this category of patients in Moscow. To solve this problem, a Crisis Clinic was created at the Sukhareva Center in 2019 by order of the Moscow Department of Health [12].

The Crisis Clinic or Department of Critical Crisis Conditions, which is an integral part of the Sukhareva Center, specializes in helping children and adolescents aged 11 to 17 that suffer from autoaggressive, including reactive or endoreactive, suicidal behavior.

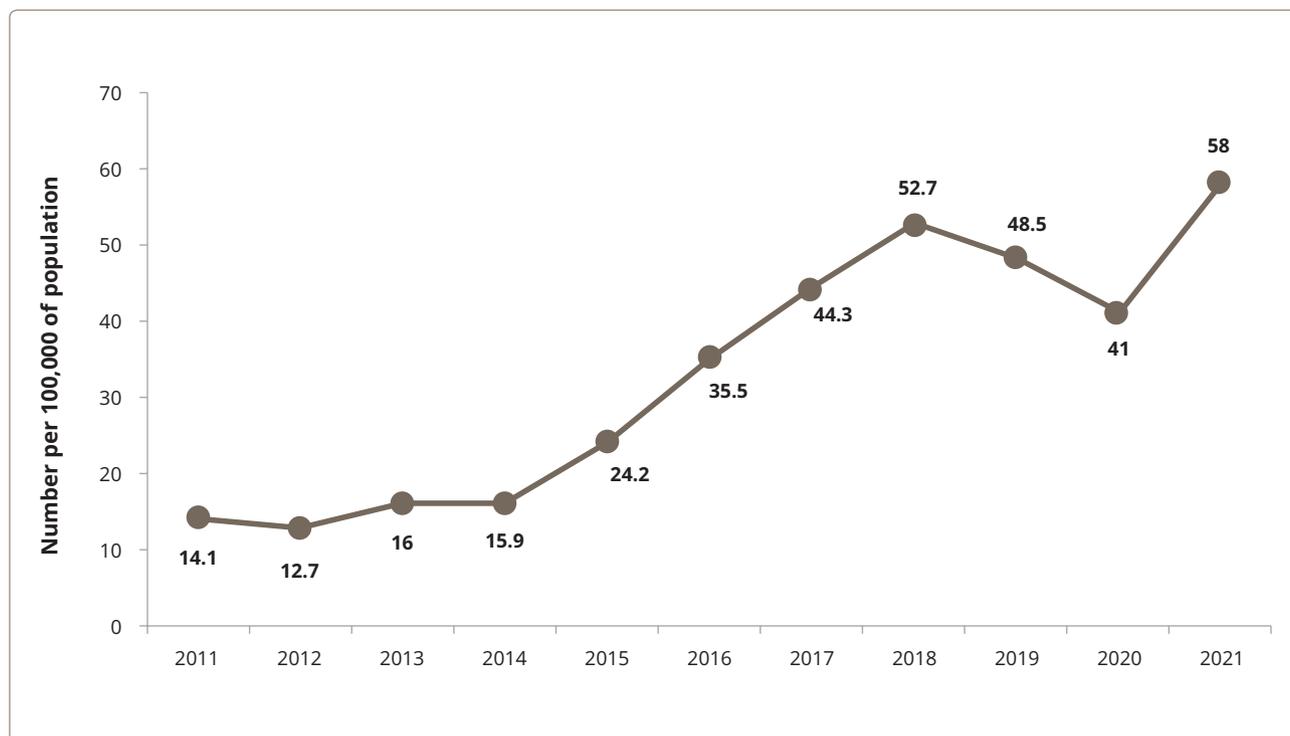


Figure 1. Number of children and adolescents displaying suicidal behavior per 100,000 of Moscow's child population.

The main principles upon which assistance at the Crisis Clinic is built are multi-disciplinarity (collective work amongst psychiatrists, psychologists, teachers, pediatricians, and other specialists), patient-centeredness (an individual approach to each case), staging of help with continuity of each stage, orientation towards the teenager’s family, and trust between patients and specialists.

The Crisis Clinic is located in a large, one-story historical building (Medvednikovsky No. 14), surrounded by landscaped courtyards and promenade areas. The Crisis Clinic rooms are separate specialized structures — hospital part (including isolated rooms), day hospital, and post-hospital support office. This topology was dictated by the need to provide both a staged approach to crisis care and compliance with sanitary and epidemiological requirements. At the same time, maintaining the structural unity of the Crisis Clinic allows for the necessary continuity in the care to crisis patients by psychiatrists, psychologists, and specialists in family work, as well as educators, which promotes a higher quality of adaptation of patients during the transition to the next stage of treatment. The doctor and psychologist “receive” the adolescent and his family in the boxed area of the department (10 beds), “guide” them through the 24-hour hospital (30 beds), “pick them up” in the day hospital of the department (60 beds for patients), and support them after discharge in the office of post-hospital support (Figure 2).

The Crisis Care Cabinet operates on the platform of the Sukhareva Center Clinical Diagnostic Department and provides emergency consultative medical and psychological assistance to children, adolescents, and

their families in crisis. In addition to medical care and immediate decisions on necessary medical interventions, the office provides psychological help to the families of children in crisis, as well as family and individual counseling. Patients can show up at the office without first filling out an application form. Families with children and adolescents in crisis can receive counseling in the office without an appointment, on the day they present themselves. A therapist and a psychologist are both available at the office. During the first consultation, the level of crisis and severity of the patient’s condition are determined. If the child’s current condition threatens their life and health, and medical care must be provided immediately, emergency hospitalization is offered. If there is no need for emergency hospitalization, but there are indications for inpatient medical care, the patient and family are offered planned hospitalization at the Sukhareva Center, the specifics of the child’s condition, the reasons for which inpatient treatment is recommended, and the goals and objectives of hospitalization are explained.

At the first stage of hospitalization, patients are admitted to the adjacent unit that includes 8 isolated rooms with a total of 12 to 15 beds, intended for emergency hospitalization of patients in an acute crisis situation, including those referred by psychiatrists of the State Budgetary Institution of the city of Moscow “Station of Emergency Medical Care named after A.S. Puchkov” of the Moscow Health Department, district psychiatrists, and specialists from the consultative and diagnostic department of the Center. Isolation measures are taken until the results of the research are in hand, after which the child is transferred to the main section of the department.

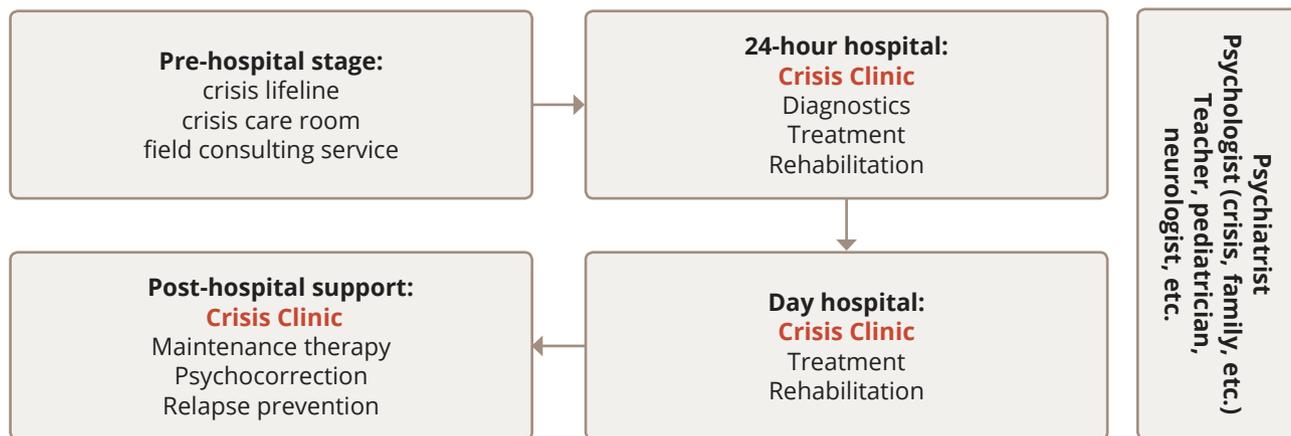


Figure 2. The structure of the Crisis Clinic at the Sukhareva Center.

As soon as an adolescent is admitted to the department, they are examined by a team of specialists, including the head of the department, a child psychiatrist, and medical psychologists (a pathopsychologist, an individual psychologist, and a family psychologist). The priorities at this stage are solving diagnostic questions, determining the initial targets of individual and family psychological corrective work, and prescribing emergency psychopharmacotherapy, if needed.

As the appropriate examinations are conducted (on average, within 5–7 days), patients are transferred to the general hospital wards, the arrangement for which (up to 8 people per ward) is done taking into account clinical, as well as gender and age (including the grade of schooling), specifics. The organization of the wards is carried out with an emphasis on increasing the comfort of the patient's stay and creating a favorable psychological (psychocorrectional) climate in the Department (including engendering an atmosphere of mutual help and support among patients and staff, the ability to store personal items and toys that have a special meaning, clothing, the presence of "active" areas and lounging areas, regular meetings, and phone calls with parents, etc.). Additionally, the Department has specialized rooms for school and rehabilitation sessions, individual, group, and family psychological intervention.

The next stage in creating conditions for crisis resolution is the continuation of treatment in the environment of the Clinic's day hospital. Children and adolescents report to the Crisis Clinic daily for the beginning of classes and procedures, while they may spend a significant portion of the day, as well as weekends, at home. Such a significant relaxation of routine requirements is possible if the patient and their relatives have been convinced to seek help and treatment and abandon the idea of suicide in the presence of good family support. At this stage, the entire scope of therapeutic and correctional measures begun in the 24-hour inpatient hospital is preserved, including school and rehabilitation classes, various psychological interventions, and the work of a family psychologist.

After a stabilization of the mental condition, elimination of the most pronounced psychopathological manifestations, and discharge, further observation of children and adolescents under crisis is performed on an outpatient basis in the psychiatric inpatient post-hospital support office. In such cases, the patients are treated by physicians and psychologists at the clinic, which ensures the

necessary continuity and uninterrupted use of medication and therapy. The post-hospital support system is located in a separate wing of the Crisis Clinic and has a separate entrance, lobby, and sanitary block.

Between October 1, 2019, and September 30, 2022, crisis-room specialists conducted 8,481 consultations, with a total of 3,711 patients contacting the room during this period. Among them, 654 (17.6% of those contacted) were referred for emergency hospitalization with consultation in the office, and 1,542 (41.6%) were referred for planned hospitalization in the Center. The remaining patients received outpatient care in the office. The age of those who reached out for help ranged from 6 to 17 years, most often parents with adolescents applied to the office, and the most numerous contingent was adolescents aged 14–17 years. Girls were treated twice as often as boys. Patients were most often diagnosed with disorders from the groups F90–F98 "Emotional disorders, conduct disorders that usually begin in childhood and adolescence" (32.73%), F30–F39 "Mood disorders" (25.22%), and F40–F48 "Neurotic, stress-related and somatoform disorders" (18.36%).

From October 2019 to September 2022, 2,465 children (13.9% of all admissions) were admitted to the crisis unit. Most patients (76.4%) were admitted as emergency cases upon referral from the psychiatrist on duty at the "Station of Emergency Medical Care named after A.S. Puchkov" of the Moscow Health Department (44.8%) or upon direct admission to a psychiatrist at the Sukhareva Center (31.6%). At the same time, 72.6% of the children were hospitalized initially, 13.3% were repeatedly hospitalized, and 14.1% were repeatedly hospitalized within a year after the previous discharge.

The vast majority of children and adolescents (over 94.5%) admitted to the Crisis Clinic were living in their families, with 88 children (4.8%) being in foster care and only 9 patients (0.4% of all hospitalized) being institutionalized. School-age children were predominant among those admitted to the Crisis Clinic (more than 86.8%), with another 8.7% attending colleges and universities, with only 4.1% of the patients not enrolled in educational institutions.

The majority of children and adolescents admitted to the Crisis Clinic displayed some suicidal manifestations (62.07%). Among them, 14.93% were admitted after a suicide attempt, while the rest had suicidal thoughts and intentions.

Among the methods of realization of a suicide attempt in the general group of patients, vein dissection, poisoning, falling from a height, stabbing, strangulation, and hanging were predominant (Table 1).

The overwhelming majority of patients, along with suicidal behavior, experienced episodes of non-suicidal self-harm behavior (87%). The motive behind such behavior had to do with a desire to calm down, “to let off steam”, “to relieve tension”, etc. Self-injurious behavior was superficial, did not threaten the patient’s life, and was not conditioned by the intention to end one’s life.

For example, an adolescent 16-year-old girl had been making surface cuts on her forearms with a pencil sharpener blade over the past 2–3 years, usually after an argument with her parents or peers. She did not seek to kill herself, she was trying to “calm down” in this way, she took precautionary measures, including treating the

cuts with antiseptic. At the same time, she did not deny having thoughts about not wanting to live, but she did not act on them.

More than 81.22% of the children and adolescents who sought help at the Crisis Clinic were young females. The average age of those admitted for treatment was 14.7 years and that of the boys was 15.0 years.

The diagnostic categories of all children and adolescents hospitalized between October 2019 and September 2022 were determined using ICD-10 criteria (Table 2). Depressive syndromes of various nosological affiliations dominated the clinical picture in the vast majority of children. The most frequently diagnosed were depressive episodes (39.8% F32) and disorders of emotions and behavior, with onset in childhood and adolescence (25.8% F92, F98). Schizophrenic spectrum disorders (15.1%); predominantly schizotypal disorder F21; and, even more rarely, stress-related neurotic disorders (10.9% F40–48) were observed less frequently. A small number of patients had eating disorders (F50 — 6.1%), organic brain damage (F06–07 — 1.6%), and mental retardation (F70 — 0.7%). The relatively small share of patients with neurotic and stress-related disorders can be explained by the fact that in many cases their manifestations at admission were considered to be symptoms of affective disorders, which are associated with age-specific features of the course of psychogenesis in children and adolescents in the form of an atypical and incomplete clinical picture and dynamics.

The central role in the care provided at the clinic is played by psychotherapeutic methods of treatment and rehabilitation: sessions with a family psychologist, individual and group work with a crisis psychologist, art therapy, clinical career guidance, sand therapy, dance and movement therapy, theater workshop, biofeedback, creative workshops, a cooking studio, and many more activities for the patient and their family. Corrective work is built around a family-oriented approach and consists of individual and group psychological corrective sessions, work with family psychologists, psychopharmacotherapy, physiotherapy, and medical and pedagogical remediation with the staff of the clinic.

Work with a family psychologist begins, as a rule, during the first week of hospitalization; parents and the teenager are invited to a meeting with the family psychologist; often, other family members are also invited. The subsequent format of intervention and

Table 1. Methods used in suicide attempts among children and adolescents admitted to the Crisis Clinic between October 2019 and September 2022

Method	Total group, % (n=2.465)
Vein dissection	50.5
Poisoning	28.0
Falling from a height	15.6
Stab wounds	2.0
Asphyxiation, hanging	2.4
Transport related methods	1.0
Others	0.5
Total	100.0

Table 2. ICD-10 diagnostic categories of patients admitted to the Crisis Clinic in 2019–2022

Diagnosis	Total group, % (n=2.465)
F31–F38	39.8
F92, F98	25.8
F20, F21	15.1
F40–F48	10.9
F06–F07	1.6
F50	6.1
F70	0.7
Total	100

frequency of meetings for each family is determined together with the attending physician and psychologists; the most standard frequency is 1–2 times a week. As a rule, during family therapy, parents and the teenager and sometimes only parents are assigned homework: the tasks can be very different, from the organization of board games to the creation of a family genogram — and performance of a task between meetings, along with the use of other original aids, is an important moment in the process of rehabilitation for the child.

No less important are individual and group psychological remediation sessions, which begin from the first days of the patient's stay at the Crisis Clinic. Specialists at the Crisis Clinic have developed three original programs of psychological correction: intensive, basic, and supportive, and the choice of a particular program is made based on the opinions of the members of the multi-disciplinary team of specialists. Psychological care is focused on increasing psychological differentiation, which can manifest itself in an increase of emotional intelligence and the degree of self-control (development of adaptive coping strategies); in a qualitative transformation of self-awareness related to the separation and individualization of the personality, search for oneself; in improving the quality of cognitive and personal abilities related to the understanding and relevant evaluation of one's capabilities, resources, and how they correlate with the desired qualities. The most successfully applied models, on which psychological help to children and teenagers is based, are the following: therapy based on mentalization (within the framework of the psychodynamic approach); functional behavior analysis, and training in functional communication (within the framework of the cognitive-behavioral approach); and communicative training directed at improving the quality of interpersonal interaction (for group work). Group psychological remediation sessions are presented in the following basic directions and variants: group skills (DBT, communicative training); "Me and Family"; body image and eating behavior; and stress management. To increase the effectiveness of psychologically corrective interventions with children and teenagers, the specialists at the Clinic developed original manuals (including workbooks for psychological sessions, individual and anti-crisis plans, etc.) and methods.

In addition, adolescents attend various therapeutic and remedial activities supervised by the Center's rehabilitation units: cooking studios, classes in the

theater studio, creative studio, photo club, DJ and guitar workshops, yoga, therapeutic physical training, painting, mime therapy, and more. Educational outreach projects of communication between patients and art historians in the form of lectures, master classes, and discussions take place regularly. One of the important areas of scientific and practical work at the Crisis Clinic and Sukhareva Center is the reduction of stigmatization of mental illness. In this area, discussion clubs, mental health festivals, lectures, and master classes are held with adolescents and parents.

Most patients at the Crisis Clinic receive psychopharmacotherapy with medications from various nomenclature groups, including neuroleptics, antidepressants, tranquilizers, and mood stabilizers. All medication is prescribed on an individual basis, at minimum or average age dosages, and with consideration of possible somatoneurologic side effects and age restrictions. Therapy with neuroleptics of mainly anxiolytic action (Alimemazine, Thioridazine, Chlorprotixen, etc.) and tranquilizers (Hydroxyzine, Tofizopam, Fabomotizole, etc.) are administered in the presence of acute or moderately acute neurological side effects and are used for acute and subacute anxiety disorders, while broader spectrum neuroleptics (Aripiprazole, Quetiapine, Clozapine, Paliperidone, Perphenazine, Risperidone, Sulpiride, etc.) are prescribed for endogenous and endoreactive depression in bipolar disorder. Antidepressants (Amitriptyline, Clomipramine, Sertraline, Pirlindol, Fluvoxamine, etc.) are also used to relieve depressive manifestations. Nomothetic drugs (Lamotrigine, Carbamazepine, salts of valproic acid, etc.) are used as a component of complex pharmacotherapy, in combination with neuroleptics and antidepressants. To suppress the development of side effects from the use of psychopharmacotherapy and any exacerbation of chronic somatic pathology, all patients are regularly examined by a pediatrician and, if necessary, by a neurologist, cardiologist, ophthalmologist, dentist, or gynecologist.

When we analyze the work of the Crisis Clinic, preliminary conclusions can be drawn about the effectiveness of the multidisciplinary approach, with a focus on family forms of assistance in the treatment of children and adolescents who display suicidal manifestations. Consequently, the analysis of the number of repeated hospitalizations compared to the involvement of family therapy suggests a decrease in the number

of repeated hospitalizations, a more stable remission pattern, more significant compliance with therapy, and a decrease in the stigmatization of mental health services, which facilitates the further “management” of such patients.

The four years that have passed since the Crisis Clinic opened have shown how relevant it is, the effectiveness of its founding principles, and the need to involve the child’s family in all stages of their treatment and rehabilitation.

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