Article

Rapid Response Unit for Children and Adolescents at Risk of Suicide: Promoting Therapeutic Linkage and Reducing the Risk of Relapse

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Abstract

Introduction: The increase in suicidal behavior among adolescents under 17 years of age in Catalonia between 2019 and 2022 has gone from 473 to 1425 cases, which entails a new healthcare challenge. The objective of the article is to explain the procedure and intervention of the Rapid Response Unit (RRU) for children and adolescents at risk of suicide. The RRU is a multidisciplinary unit designed to prevent relapse and increase link-up to treatment. The cases attended in its 14 months of operation are described.

Methodology: 24 patients, 18 females and 6 males aged between 12 and 17 years, attended for the first time at the Child and Adolescent Health Centre of Cornellà for activation of the Suicide Risk Code (CRS) in hospital emergency departments during the period studied.

Results: After the intervention, high suicidal risk decreased from 29.17% to 0%, medium risk decreased from 37.5% to 20.83% and low risk increased from 33.33% to 79.17%. In addition, there was only one new CRS activation in the 3 months following the first activation. In the RRU, care was intensive: 52.7% of cases with visits once a week and more than once a week in 24.9%. During the intervention months 100% of cases were linked and no interruptions occurred.

Conclusions: Rapid Response Unit (RRU) decreases the risk of recurrence of suicidal behavior and ensures therapeutic linkage.

Keywords

suicidal risk; prevention; adolescents; intervention

Introduction

Suicide is one of the leading causes of death among young people worldwide: 7.3% of all deaths among adolescents aged 15 to 19 years [1]. According to the Suicide Observatory in Spain (2021) [2], suicide is the absolute main cause of non-natural death among those aged 15 to 29 years. Concerning are the data regarding minors under 15 years old, whose suicide rate has doubled compared to 2020 (7 in 2020 compared to 14 in 2021), and for girls under 15 years old, 8 suicides have been recorded for the first time. In Catalonia (with a population of 7.5 million inhabitants) in 2014

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the Suicide Risk Code (CRS) was put into operation. It is a secondary prevention program aimed to reduce mortality from suicide, increasing people's survival treated for suicidal behavior and prevent repeated suicide attempts [3]. According to the Department de Salut [4], the increase in episodes of suicidal behavior in adolescents under 17 years of age in Catalonia between 2014 and 2022 has gone from 39 to 1425, with a significant peak after the pandemic of 1492. Figures that correspond to the activation of the CRS, activation that occurs in the psychiatric emergency services of referral hospitals for care of children and adolescents. Of these, 790 were Suicide Attempts (SA) and 635 Suicidal Ideation (SI) in 2022. We define SI as any thought about the end of one's life, and attempt or SA as self-destructive and non-fatal behavior with inferred intent or current to die [5]. Furthermore, this behavior has a significant gender bias, in 2022, adolescent girls had 676 SA and 506 SI, compared to 129 SA and 114 SI in male adolescents [4].

It is important to consider the context of a key temporal moment where there was an increase in SAs. We refer to the situation generated after the confinement due to the state of alarm caused by COVID-19, which resulted in increased healthcare pressure [6] for pediatric mental illnesses such as depression and symptoms of anxiety [7], eating disorders [8], and suicide attempts [9,10]. Following the pandemic, the average increase in SAs in Catalonia between before and after the pandemic was 300% [11]. According to a study by the Catalan Health Service [12], between January 2017 and June 2022, the CRS recorded 26,458 episodes of suicidal behavior in 21,920 people. In general, the rate of suicidal behavior per month, per 100,000 inhabitants, ranged between 3.06 and 6.17 before the start of the pandemic (2017–2019, both included) and between 7.43 and 9.42 in the last six months of the observation period (January–June 2022). Adolescent girls under 18 years of age were the ones who had the most suicidal behaviors, and this occurred in all groups studied by socioeconomic level.

Durkheim (1897) [13] in his pioneering study "Le suicide. Etude socioloqie" already proposed that certain psychosocial factors increase the risk of suicide. In the case of children and adolescents, the World Health Organization (2006) [14] points out the following: history of abuse, family problems, difficulties with interpersonal relationships, cultural factors, and exposure to chronic or overwhelming stress. These factors increase in the months preceding the attempt [15]. A systematic review of psychosocial risk factors for suicide in children and adolescents [16], points out the following as stressful life events (in interaction with vulnerability factors): family conflicts, academic stressors (including bullying or exam stress), trauma, and other adverse life events (peer conflicts, legal problems, physical abuse, concerns about sexual orientation, romantic breakups, exposure to suicide/suicide attempts, and physical harm and/or sexual violence). According to the authors' own data, in the Cornellà Children and Youth Mental Health Center (CSMIJ), which is the reference public child mental health center in a population sector of 34.500 children under 18 years of age, in 2021 60 CRS and in 2022 a total of 63. 50% of the adolescents had between 1 and 3 risk factors, 39% were immigrant families, 32% were exposed to domestic violence and abuse, 18% had suffered sexual abuse and 11% lived with parents or immediate family members with mental illness. Consequently, all the data point out the importance of incorporating social intervention in the face of signs of suicidal risk. Regarding the diagnoses [17] made at the CSMIJ of Cornellà, we found 28% depressive disorder, 23% adjustment disorder, 14% anxiety disorder and 7% eating disorder. And 63% had carried out self-harm prior to the activation of CRS.

Suicide has a strong emotional impact on survivors, which is why suicide prevention has become a priority in public health systems. Studies on predictors of suicide attempts and death indicate that the most potent clinical predictor is a history of suicide attempts [18], and after hospital discharge for suicide attempt, the risk of suicide increases significantly: one in ten people reattempt suicide within five days of discharge [19]. Furthermore, the risk remains elevated for an extended period [20]. In a meta-analysis by Chung *et al.* (2017) [21] analyzing 100 studies (20 of them with adolescent samples), it was concluded that in the first 3 months after discharge from psychiatric facilities, the suicide rate is approximately 100 times higher than the global suicide rate. Studies show that the immediate period after suicide attempts is crucial for preventing further attempts.

According to the authors' own data, of 60 cases treated in 2021 at the CSMIJ in Cornellà, 21% had made a previous attempt and were repeat offenders. Providing comprehensive help, social support, and follow-up (e.g., phone calls, crisis cards, emails, etc.) reduces the risk of reattempting suicide attempt in the 3 months following emergency care for a suicide attempt [22,23]. Psychotherapy is the treatment of choice for addressing children and adolescents with different manifestations of suicidal behavior, compared to usual treatment [24,25].

Regarding intervention methods, a recent meta-analysis [26] on the effectiveness of psychotherapeutic interventions in the care and treatment after a SA indicates that mentalization-based treatment and cognitive-behavioral therapy were significantly more effective than

control conditions. However, another meta-analysis [25] that included 1126 adolescents (80% female) up to 18 years of age with SA, observed that only mentalization therapy was associated with a decreased risk of repeat suicide attempt. In this meta-analysis, adolescent Dialectical Behavior Therapy (DBT) was not associated with a reduction in the proportion of adolescents who made repeated suicide attempts compared to treatment as usual. They also did not find reductions in the risk of repeat attempts in group treatments, cognitive-behavioral psychotherapy, home-based family intervention, or in the provision of an emergency card. The Clinical Practice Guide for Prevention and Treatment of Suicidal Behavior (2012) [27] indicates that evidence-based treatments include cognitive-behavioral therapy, interpersonal therapy, psychodynamic therapy, and family therapy. Dialectical behavior therapy is recommended with grade A, while interpersonal psychotherapy for adolescents, mentalization-based therapy for adolescents, and integrated family intervention are recommended with grade B. Fonseca Pedrero *et al*. (2022) [24] point out that the most relevant models of care for suicidal behavior in minors focus on: (a) the perception of being a burden to oneself, peers, and family, (b) feeling lonely and disconnected from family, friendships, and valuable social circles for minors, (c) the perception of being blocked and powerless to change aspects of oneself, and (d) hopelessness. They also suggest that the model that has proven most useful in understanding suicidal behavior in the child and adolescent population is the interpersonal theory of suicide.

There are numerous programs for the universal prevention of suicidal behavior in adolescence in schools, although very few for indicated prevention [28]. In the absence of a national plan for the prevention of suicidal behavior, different autonomous communities have developed their own prevention plans. Training is usually given to health professionals in detecting and addressing suicidal behavior. However, there are few clinical units that specifically address this problem in adolescence [29], despite the importance of intervention in the first month after an attempt [30].

The CRS has been implemented in Catalonia by the Department of Health of the Generalitat de Catalunya to shorten the time between hospital discharge and the corresponding Mental Health Center, whether it be the CSMIJ or the Adult Mental Health Center (CSMA). In the case of the child and adolescent population, the CRS protocol includes a visit to the CSMIJ after hospital discharge within 72 business hours. Subsequently, a telephone follow-up is carried out from the emergency medical system after a month to reassess the suicidal risk and ensure that the link has been carried out correctly. The severity and complexity of many of these children and adolescents with CRS activation require preferential and intensive care, with a sufficient frequency of visits to deactivate their risk of self-harm, avoid relapses, and promote therapeutic bonding during moments of crisis. In many cases, this indication further strains an already stressed system and it is difficult to attend with sufficient frequency of visits and prioritizing a psychotherapeutic approach over other indications. For all this, the Cornellà CSMIJ team considered the creation of a pilot unit, the Rapid Response Unit (RRU).

The main objectives of this work are the following: (a) Explain the procedure and intervention of the RRU, and (b) Characterize the cases attended to in the unit during the period 2022 and 2023. The secondary objective is to describe whether this intervention improves the prognosis of these patients, that is, if the number of recurrences decreases.

Materials and Methods

The study design is descriptive, cross-sectional, retrospective and experimental without a control group. The data collected consists of aggregated data extracted from the 2022 CRS report of the CSMIJ Cornellà at the Hospital Sant Joan de Déu [31], identified as ICSMIJ02 (Prepared from episodes included in the CRS Program, and the information recorded in the medical records on follow-up visits at the CSMIJ). This information is part of the Mental Health and Addictions Master Plan of Catalonia. Additionally, descriptive data of individuals who have used the RRU has been collected.

Description of the Rapid Response Unit at the Child and Adolescent Mental Health Center of Cornellà

The increase in CRS following the pandemic, between 2019 and 2021, was 400% at the Child and Adolescent Mental Health Center of Cornellà. This was accompanied by a general increase in healthcare pressure (20% increase in first visits) and a rise in severe disorders such as eating disorders (150%). All of this constituted a demand for assistance that was difficult to manage. In the case of CRS, the risk of relapse and the complexity of cases necessitate preferential attention with a high frequency of visits, which was challenging to organize given the healthcare pressure. In response to this situation, the Rapid Response Unit (RRU) was established in March 2022.

The criteria for care in the RRU are as follows: (a) children and adolescents for whom CRS has been activated in hospital emergencies or hospitalization units due to sui-

<table>
<tr><th colspan="2">Intervention in the Rapid Response Unit (RRU)</th></tr>
<tr><td colspan="2">Psychotherapy

Take into consideration the adolescent's and family's capacity for mentalization.</td></tr>
<tr><td>Reduce risk factors</td><td>Reinforce positive factors</td></tr>
<tr><td>• Feeling of being a burden to others
• Frustrated sense of belonging
• Experience of pain and despair
• Suicidal potential</td><td>• Emotional perception and validation
• Enhance bonding with family, friends, and valuable circles for the individual</td></tr>
<tr><td colspan="2">Social

Seek improvement of existing socio-family conditions.</td></tr>
<tr><td colspan="2">• Assessment of family functioning and living conditions
• Gathering information on various risk factors: bullying, abuse, sexual abuse, exposure to domestic violence, migration, etc.
• Networking with different services for children and adolescent care and education</td></tr>
</table>

Fig. 1. Procedure and intervention of the Rapid Response Unit.

cide attempts or suicidal ideation, (b) individuals under 18 years of age, (c) residing in one of the municipalities within the healthcare sector of the Child and Adolescent Mental Health Center of Cornellà (Cornellà de Llobregat, Esplugues de Llobregat, Sant Joan Despí, and Sant Just Desvern), and (d) first-time visits without a previous open history, and therefore without a clinical reference.

The CRS protocol stipulates that the visit to the Child and Adolescent Mental Health Center must take place within 72 hours of hospital discharge. Children and adolescents with an open history in the center are scheduled with their reference therapist, while cases visiting the center for the first time are scheduled in the RRU (see Fig. 1).

The RRU ensures immediate and intensive interdisciplinary follow-up during this crucial period. Such intensive care is more challenging to provide in standard treatment given the existing healthcare pressure. The RRU is comprised of clinical psychologists, psychiatrists, and social workers.

The objectives of social intervention are focused on reducing potential risk situations through family care:

- Prevention of suicidal behavior: accompaniment, care and surveillance of the family and control of access to medication.

- Assessment and enhancement of the link with relatives and groups of belonging.

The objectives of psychotherapeutic intervention include in turn:

- Emotional validation and mentalization support: emotional support, validation, and clarification.

- Understanding of the complexity of the circumstances and conflicts in which the child or adolescent is caught.

- Stress level reduction.

Psychotherapeutic intervention seeks to strengthen the protective factors and reduce the psychological risk factors associated with suicidal behaviour: feelings of being a burden to others, feelings of frustrated relevance, experiences of pain and despair, the ability to move on to the suicidal act [24,30], improve emotional regulation, favour the mental representation of existing suffering and empathetic understanding of the emotional and interpersonal conflicts in which the adolescent is trapped. It is also necessary to reinforce positive factors, such as emotional perception and validation, and it is essential to enhance the quality of the adolescent's affective bonds with their reference figures, friendships and circles that are valuable to the person [24]. Psychiatric intervention also ensures relevant psychiatric treatment.

Social intervention aims to improve socio-family conditions and activate available community resources. Family functioning and existing risk factors are assessed, including bullying, abuse, sexual abuse, witnessing domestic violence, migration, gender identity, parental rigidity, substance abuse, technology abuse, socialization difficulties, unfavorable socioeconomic situation, self-harm, body image issues, lack of training or leisure projects, excessive self-demand, family health problems, and parental alcohol abuse.

Patients are seen between one and two times per week most of the time during the first three months until the self-harm risk decreases, and they can transition to regular care.

Participants

The sample of the RRU covers the period from 16/03/2022 to 02/05/2023. The population of the RRU consisted of patients from the CSMIJ Cornellà at the Hospital Sant Joan de Déu. The included participants are those who make up the RRU, i.e., all cases where the CRS of the child and adolescent population of Cornellà de Llobregat under 18 years of age has been activated, attended in the first visit, and without a previous open history in the CSMIJ. The exclusion criterion is that the CRS has not been activated. Three cases that were not CRS were excluded.

Instruments

The data were collected by social workers from the CSMIJ Cornellà at the Hospital Sant Joan de Déu. The diagnosis was confirmed using criteria evaluated by clinicians referring to the case, based on the Multiaxial Classification of Child and Adolescent Psychiatric Disorders (ICD-10) [23].

The collected sociodemographic characteristics included sex and age.

The assessment of suicide risk was conducted using the Mini International Neuropsychiatric Interview (MINI) [32]. Different risk levels were identified as follows:

- Low-risk level: MINI scale of 1 to 5 points, passive death thoughts, and a desire to disappear or stop suffering.

- Moderate or medium-risk level: MINI scale of 6 to 9 points, suicidal thoughts, no suicidal behavior planning.

- High-risk level: MINI scale $\geq$10 points, suicidal behavior planning, recent previous attempts, psychiatric assessment.

In all cases, it was necessary to explore the presence of risk factors and health problems that could contribute to increasing the risk of suicide.

The data collected is described in Table 1. The data used in this study is aggregated, meaning it contains summarized or general information pertaining to a number or percentage of individuals within a group, in this case, individuals to whom a CRS has been activated and who are not identified. This aggregated data is used for statistical purposes and does not require the processing of personal data. Additionally, the treatment outcomes in the RRU are not used to support measures or decisions related to specific individuals, in accordance with Consideration 162 of the General Data Protection Regulation (GDPR). So it is not necessary to obtain approval from the Research Committee of Parc Sanitari Sant Joan de Déu or from the Ethics Committee of Sant Joan de Déu. Furthermore, since the data is aggregated, obtaining informed consent from participants is not required.

Statistical Analysis

Statistical analysis of sociodemographic data and variables related to risk factors, personal history, and visits was conducted using Microsoft Excel 2021 (version 18.0, Redmond, Washington). Descriptive statistics of the variables were analyzed according to the type of variable (categorical or scalar): total number, percentage, mean, standard deviation, and range.

Table 1. List of RRU study variables.

Sociodemographic	Social evaluation	RRU visits
Age	Psychosocial risk factors	Professionals and visits made (psychology, psychiatry, social work)
Sex	Sexual abuse, bullying, exposure to domestic violence	Frequency (More than once a week, weekly, biweekly, monthly)
Diagnostics	Emigration	Recurrences
Mode (ideation/attempt)	Socioeconomic vulnerability	
Risk upon entering the RRU (high, medium, low)	Health problems in the family, including alcohol use	
Risk upon discharge from the RRU (high, medium, low)	Severe parent-child conflict	
	Personal history	
	Self-harm	
	Socialization difficulties	
	Toxic consumption/technology problem	
	Gender identity/body image	

Table 2. Sociodemographic Characteristics of the RRU Sample (n = 24).

Characteristics	Mean (SD; Range) or N (%)
Age	15.35 (1.87; 12–17)
Sex	
Female	18 (75)
Male	6 (25)
Diagnoses	
Borderline personality disorder	1 (4.17)
Anxiety disorder	4 (16.67)
Adaptive disorder with depressive mood	5 (20.83)
Depressive disorder[a]	13 (54.17)
Active childhood autism	1 (4.17)
Mode	
Ideation	7 (29.17)
Attempt	17 (70.83)
Risk upon entry to RRU	
High	7 (29.17)
Medium	9 (37.5)
Low	8 (33.33)
Risk at RRU discharge	
High	0
Medium	5 (20.83)
Low	19 (79.17)

Note. [a] In the category of depressive disorder, 8 patients with Major Depressive Disorder have been included.

Results

The total sample analyzed was 24 people between the ages of 12 and 17 (Mean = 15.35, SD = 1.87). Seventy-five percent of the cases in the RRU were females. More than half of the sample, 54.17%, had a diagnosis of depressive disorder, and 70.83% had self-harm attempts. Regarding suicide risk upon entering the RRU: medium risk in 37.5% of cases, low risk in 33.33%, and high risk in 29.17% of cases. Upon exiting the RRU, no cases with high risk were observed, with 20.83% having medium risk and 79.17% having low risk (see Table 2).

Seventy-five percent of the sample treated in the RRU had associated psychosocial risk factors. The most common factor was related to violence (sexual abuse, bullying, and exposure to domestic violence) at 66.67%, followed by migration at 61.11%, and severe conflict between parents and children at 55.55%. Regarding personal history, 37.5% of cases engaged in self-harm, and 20.83% had difficulties in socialization and body image issues (e.g., gender identity) (see Table 3).

During the study period (16/03/2022 to 02/05/2023), a total of 245 visits were made to the 24 patients (see Table 4). Each case was visited an average of 12 times, with a range of visits between 2 and 33. Of these, 12 cases had between 2 and 9 visits, and another 12 had between 11 and 35 visits. Regarding professionals and visit frequency, 57.1% were visited by psychology, 20.4% by psychiatry, and 22.4% by social work. The frequency of visits was mostly weekly (52.7%) and more than once a week in 24.9% of cases. Regarding recurrences, out of the 24 cases visited during the study period, only one visited the emergency department, which accounts for 4.16%. In contrast, in the previous year 2021, before starting the RRU procedure, 10 out of 59 activated CRS cases, or 16.95%, had a second CRS activation within 3 months of the first CRS.

Discussion

The results demonstrate that the RRU is a highly effective intervention for reducing suicide risk in children and adolescents and the intensity of self-harm ideation. Additionally, only one out of 24 cases visited the emergency department in the 3 months following CRS activation, accounting for 4.16% of cases. This represents a significant decrease compared to 2021, where 10 out of 59 CRS activated cases (16.95%) had to return to the emergency department due to risk of a new attempt. These data reinforce the previous conclusion regarding the decrease in suicide

Table 3. Social Assessment: Psychosocial Risk Factors and Personal History.

Social assessment	N (%)
Psychosocial risk factors[a] (n = 18)	
Sexual abuse, bullying, exposure to domestic violence	12 (66.67)
Emigration	11 (61.11)
Socioeconomic vulnerability	6 (33.33)
Family health problems, including alcohol consumption	9 (50)
Severe parent-child conflict	10 (55.55)
Personal history (n = 24)	
Self-harm	9 (37.5)
Socialization difficulties	5 (20.83)
Substance/technology use issues	2 (8.33)
Gender identity/body image	5 (20.83)

Note. [a] n = 18, 75% of the total sample (n = 24).

Table 4. Descriptive Statistics of RRU Visits.

Descriptive of RRU visits	N (%)
Professionals and visits made (n = 245)	
Psychology	140 (57.1)
Psychiatry	50 (20.4)
Social work	55 (22.4)
Frecuency (n = 241)	
More than once a week	61 (24.9)
Weekly	129 (52.7)
Fortnightly	35 (15.9)
Monthly	16 (6.5)
Recurrences	
Year 2021, cases attended in emergencies 3 months after the CRS[a]	10 de 59 (16.95)
Period from 16/03/2022 to 02/05/2023, cases attended in emergencies 3 months after the intervention	1 de 24 (4.16)

Note: [a] Data recorded from the Government of Catalonia 2021.

risk. The frequency of visits among all professionals in the RRU is high, with half of the cases receiving weekly care and a quarter receiving care more than once a week. This intensity of treatment, greater than what could be offered in standard care, is a protective factor, as indicated by the literature [22,23].

The RRU is a multidisciplinary unit, where cases are attended to by psychologists, psychiatrists, and social workers. Almost two-thirds of the visits focus on psychological intervention (57.1%), while the rest are divided between psychiatry (20.4%) and social work (22.4%). These professional roles are the most suitable given the clinical and psychosocial characteristics of the cases treated, and both need to be considered. In fact, for some authors like Villar (2022) [30], psychosocial risk factors carry more weight in triggering suicidal behavior episodes than the diagnosis itself. In the study sample, the main psychopathological problems observed are depressive disorder (54.17%), self-harm (37.5%), and difficulties in socialization (20.83%) and body image (e.g., gender identity). However, 75% also have associated psychosocial risk factors, with the most common factor (66.67%) being related to violence (sexual abuse, bullying, and exposure to domestic violence), followed by migration (61.11%), and severe conflict between parents and children (55.55%). These factors, along with others such as parental health problems and social factors (economic and employment factors), constitute the focus of social work intervention.

The psychotherapeutic technique is based on mentalization, as advised in the literature [25]. The adolescent and family find themselves collapsed in their ability to mentalize, mentally blocked, which makes it difficult to find solutions to interpersonal and psychosocial conflicts and favors the transition to suicidal acts [33,34]. Understanding and intervening in these complex situations lead to improved therapeutic bonding, the strengthening of resilient relationships, and the reduction of suicide risk. Improved therapeutic bonding has prevented interruptions. All cases have

remained in treatment and have been referred to other units, when necessary, without any of them disengaging at the time of referral. The study validates the psychotherapeutic factors indicated in the literature in terms of reducing the main psychological risk factors, reducing potential suicide risk situations, and enhancing the protective factors previously mentioned [24,30].

The description and development of the RRU aim to enhance protective factors to promote a mental representation of existing suffering and an empathetic understanding of emotional and interpersonal conflicts, while also valuing the emotional bonds of children or adolescents. Therefore, it is important to focus on preventive interventions, as well as on the care and follow-up of individuals after a suicide attempt. This reminds us that we should consider models such as the Assess, Intervene and Monitor-Suicide Prevention (AIM-SP) Model [35]. This model works for suicide prevention in clinical practice, and it is important to be able to implement these models in our routine clinical practice. As a medium-term perspective in the RRU, validating the intervention program and incorporating new evidence-based resources are crucial steps.

An implication of this study is that the organization of a multidisciplinary functional unit such as the RRU provides a good organizational solution to outpatient child and youth mental health centers in cost-benefit terms. These centers must provide preferential and intensive care to patients at risk of suicide during the first weeks after hospital discharge, under usual conditions of high care pressure, and the RRU does so effectively. A second, but not less important implication is that it confirms the priority of the psychotherapeutic approach over other therapeutic possibilities, as stated in the literature, as well as the interest in having professionals trained in psychotherapeutic modalities based on mentalization.

This work has some limitations. The first one is that the data we have are descriptive, which provides valuable but limited information to assess effectiveness. So, the next step would be to evaluate the effectiveness of RRU including more robust factors such as a greater number of participants and adding a control group. The second limitation is related to internal risk factors [36], such as lack of problem-solving skills, ineffective coping with difficulties, excessive smartphone use, and unhealthy lifestyles. All of these could be recorded at entry and exit from the RRU and worked on during the intervention process.

Conclusions

The RRU is a multidisciplinary functional unit organized within an outpatient child and youth mental health team, designed to provide preferential and intensive care after hospital discharge to adolescent patients who have attempted suicide or have committed suicide rated with a high-risk ideation. The results show that psychosocial intervention is highly effective in reducing the risk of suicide in children and adolescents and the intensity of self-harm ideation. Given the increase in this serious health problem in recent years, this study has practical implications for mental health teams. It would be advisable to carry out new and more robust studies in the future to validate the results of this study and the interest of this intervention program.

Availability of Data and Materials

The data used in the analysis is not freely available. The access is managed only by PI of study: Fernando Lacasa and Anna Butjosa.

Author Contributions

FL, DC, and AB contributed to the design, data interpretation, and writing of the paper. FL and AB were involved in the statistical analysis. TR, DC, and FL collaborated in data collection. MRT contributed to the interpretation of the data and participated in the translation of the manuscript and its final revision. TR and the CCAMH Group participated in patient care and critical manuscript review. All authors approved the final manuscript. All authors agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Ethics Approval and Consent to Participate

The treatment outcomes in the RRU are not used to support measures or decisions related to specific individuals, in accordance with Consideration 162 of the General Data Protection Regulation (GDPR). The data is aggregated, obtaining informed consent from participants is not required. Therefore, this study did not need to obtain approval from the Research Committee of Parc Sanitari Sant Joan de Déu or from the Ethics Committee of Sant Joan de Déu.

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Conflict of Interest

The authors declare no conflict of interest.

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