International Journal of Clinical Trials
Foguet-Boreu Q et al. Int J Clin Trials. 2022 May;9(2):129-135
http://www.ijclinicaltrials.com
pISSN 2349-3240 | eISSN 2349-3259

DOI: https://dx.doi.org/10.18203/2349-3259.ijct20221113

Protocol

Effectiveness of a psycho-educational intervention for people with suicidal conduct in the prison environment, N'viu project: a randomized control trial

Quintí Foguet-Boreu[1,2]*, Manel Capdevila-Capdevila[3], Lola Riesco- Miranda[1,4], Ana Sanjuan Torres[5], Berta Framis-Ferrer[3], Judit Pons-Baños[1,6], Saray Valdivieso Muñoz[7]

[1]Department of Psychiatry, Vic University Hospital, C. Francesc Pla el Vigatà, 1, 08500 Vic, Spain
[2]Faculty of Medicine, University of Vic-Central University of Catalonia (UVic-UCC), C. Ctra. de Roda, 70, 08500 Vic, Spain
[3]Research Unit in Criminal Execution, Centre for Legal Studies and Specialised Training, Department of Justice, Government of Catalonia, C. Pau Claris, 158, 08009 Barcelona, Spain
[4]Faculty of Education, Translation, Sport and Psychology, University of Vic-Central University of Catalonia (UVic-UCC), C/ Sagrada Família, 7, 08500 Vic, Spain
[5]Generalist Intervention Programmes Unit, General Directorate of Penitentiary Affairs, Department of Justice, Government of Catalonia, C. Foc, 57, 08038 Barcelona, Spain
[6]Faculty of Health Sciences and Welfare, University of Vic-Central University of Catalonia (UVic-UCC), C. de la Sagrada Família, 7, 08500 Vic, Spain
[7]Quatre Camins penitentiary center, Road Masnou to Granollers, Km. 13,425, 08430 La Roca del Vallès, Barcelona, Spain

Received: 30 December 2021
Revised: 11 February 2022
Accepted: 14 February 2022

***Correspondence:**
Dr. Quintí Foguet-Boreu,
E-mail: 42292qfb@comb.cat

ABSTRACT

Background: Suicide rates are higher in the prison environment than in the general population. Prevention involves strategies to promote mental health, early diagnosis, treatment and identification of precipitating factors. The aim of this study is to evaluate the effectiveness of a psychoeducational group intervention performed by rehabilitation professionals to decrease the number of suicidal behaviors in the penitentiary environment.
Methods: This study has been designed as a multicentric, randomized, two parallel-group, controlled trial. The study population will be male and female inmates of nine prisons of Catalonia (Spain). The primary outcome will be the total number of suicidal behaviours for 12 months of follow-up. Secondary outcomes will be suicide risk evaluated with the international neuropsychiatric interview (MINI); the severity of suicidal ideations assessed with the Columbia-suicide severity rating scale (C-SSRS), the presence of depressive and anxiety symptoms [Hamilton depression rating scale (HDRS) and Hamilton anxiety rating scale (HARS)] and health-related quality of life (EQ-5D). Other variables will be clinical and socio-demographic. Intervention will consist of 17 psychoeducation sessions for the intervention group and information on suicide for the control group.
Conclusions: This project aims to assess the effectiveness of a psycho-educational intervention on reducing the number of suicidal behaviours in the prison environment. If positive, the prison community will have a new tool to curb suicide in prisons.
Trial registration: The trial was registered on clinicalTrials.gov on 19 January 2022 (NCT05195554).

Keywords: Suicide, Suicide behaviour, Suicide prevention, Prison environment, Psychoeducational intervention, Randomized controlled trial

INTRODUCTION

Suicidal behavior is a complex phenomenon that generates great concern in today's society, constituting itself as a serious public health problem. According to world health organization data of 2019, 703,000 people die due to suicide every year. Suicide is 4th leading cause of death in young people (15-29 years old).[1]

The rate of suicide in prisons is significantly higher than the general population rate: 7.5 times higher in remand prisoners and 6 times higher in sentenced prisoners.[2] In Catalonia (Spain), in 2020 the suicide rate for prisoners was 83.2 per 100,000 inmates, higher than the overall population rate.[3,4] The number of deaths in penitentiary centers in Catalonia shows an upward trend in recent years from 8 in 2019 to 11 in 2020. People in prison present suicidal behaviors and thoughts throughout life. There are several facts that converge to suicide in remand prisoners: people who breach legislation often have various suicide risk factors associated with them ("import" the risk); and the suicide rate is higher among the group of people who have committed offences even after release from prison. The risk factors of prisoners are broken down into those related to imprisonment itself (process, environment and personnel), the characteristics of the inmate, and the history of self-injury. A recent systematic review analysed risk factors for suicide in 35,351 cases in 27 countries, concluding that the five factors most strongly associated with the risk of suicide are: a) suicidal ideation during the stay in prison, b) previous suicide attempts, c) history of self-injury, d) occupation of a single cell, and e) presence of a current psychiatric diagnosis.[5] However, this does not mean that prison services have no responsibility for the suicidal conduct of inmates. Moreover, these vulnerable people be given the option of receiving treatment while they are in a closed regime. Being imprisoned is also a stressful event, even for healthy prisoners.[6,7] Given the high prevalence of suicide, as well as the fact that it is a decision taken by individuals themselves (and therefore preventable, if detected and intervened in time), it is no wonder that, lately, different programs and measures have been promoted to prevent suicide. General actions to prevent suicide in Catalan prisons were guided by 1991 program of prevention and intervention of serious self-harming behavior, but, 27 years later, review, assessment and update of question of suicide prevention was necessary.

In 2019, the prisons of Catalonia introduced the N'VIU Framework Program, a psycho-educational program for suicide prevention, which stems from the need to ensure the life, integrity and health of inmates with the aim of reducing mortality by suicide, increasing the survival of those attended to for suicidal behavior and preventing the repetition of suicide attempts. It is called N'VIU for two reasons: first, because it is a program that wishes to keep people alive (viu means 'alive' in Catalan); second, because it aims to be a highly experiential program, in which inmates actively participate in the sessions and acquire coping skills and strategies. In a pilot program carried out in 2020, the program was tested, some functional changes were made, and the randomized control trial described in this protocol was designed to determine the efficacy of the program.

The scientific community shows that suicide can be prevented through strategies to promote mental health, early diagnosis, treatment and identification of precipitating factors and protective actors. N'VIU program will be structured as a psycho-educational intervention for people at greater risk of suicide in prisons. Prisons must be open to these new preventive strategies, involving all agents in the institution with the aim of supporting people. In order to achieve this, we must start talking openly and fight the stigma it generates.

Objectives

The main purpose of this study is to evaluate the effectiveness of a psycho-educational group intervention performed by rehabilitation professionals to decrease the number of suicidal behaviours in the penitentiary environment. Other secondary objectives are to: a) show the impact on the severity of suicidal ideation; b) determine how intervention affects symptoms of anxiety and depression; c) describe the impact of intervention on quality of life; d) check the feasibility of intervention in terms of participant satisfaction and adherence to it; and e) identify whether intervention decreases problematic behaviours in prisons.

METHODS

Study design and population

The study design is a multicentric, randomized, controlled trial with two parallel groups, with blind assessment of the response variables, with a 12-months of follow-up (Figure 1). We used the SPIRIT guidelines (Standard protocol items: Recommendations for interventional trials) to undertake this study protocol.[8]

Table 1: Schedule of enrolment, interventions, and assessments of N'VIU program.

Variables	Study period (January 2022 to December 2022)				
	Enrolment	**Allocation**	**Post-allocation**		**Close-out**
Time point	Day 0		Day 90	Day 180	Day 360
Enrolment					
Eligibility screen	X				
Informed consent	X				
Allocation		X			

Continued.

Variables	Study period (January 2022 to December 2022)						
	Enrolment	Allocation	Post-allocation				Close-out
Interventions							
Intervention group			◆———	———	———◆		
Control group			X		X		
Assessments							
Suicide risk and ideation, anxiety and depression scales, quality of life:		X			X		X
Number of suicidal attempts		X		X	X	X	X
Sociodemographic and medical variables		X					
Satisfaction questionary							X

The study population is inmates of nine different prisons of Catalonia (Spain), a region of the north-east of Spain with a global population of 7,722,203 inhabitants (2020 census).[3] The Catalan prison service consists of 13 prisons (of closed regime and open custody measures) with a total population of 7,884 inmates (2020).

Eligibility criteria

We will include all participants who have presented some kind of suicidal or high-risk behavior in the criterion of self-directed violence according to the RisCanvi. This is an instrument used by penitentiary professionals, based on the individualized and structured assessment of a set of pre-established variables, in order to manage the probabilities of increased and decreased risk of prison inmates for further episodes of violent behavior. The full RisCanvi scale consists of 43 risk factors grouped in the following areas: criminological, personal and biographical, social, family, clinical, and personality. These 43 factors are added to the assessment of the future risk of the emergence of four behaviors: self-directed violence, intra-institutional violence, repeat violence, and prison-breaking. We excluded people with the following mental disorders: decompensation, intellectual disability, and cognitive impairment. In some cases of isolation, the management team will be assessed individually on the suitability of participation in the program.

Interventions

Participants who meet the inclusion criteria will be distributed in two groups: intervention group and control group. The intervention groups will involve a psycho-educational intervention and will consist of between 10 and 12 people led by two professionals, one of whom must be a psychologist, while the other may be any professional in the center (usually social workers). In some sessions, other professionals such as psychiatrists, educators, social workers, among others, will be invited to participate, who will be able to act as external observers or lead the session. The number of sessions will be 17, one or two sessions per week, with a duration of 90 minutes (Table 2). Before the start of the psycho-educational intervention, these professionals will receive training that consists of one in-person session and two online sessions, approximately 4.5 hours per session; 13.5 hours in total. The aim of the training will be to provide specialized training on the phenomenon of suicide by two mental health specialists specialized in suicide (a psychologist and a mental health nurse), and training and guidance in following areas: conduction and observation of groups; behavioral problems and activation techniques; improving skills in leading psycho-educational group sessions in these population groups; how to administer different scales and evaluation instruments; and purpose and methodology of investigation.

Table 2: Summary of N'VIU psychoeducational intervention sessions content.

Sessions	Summary
Session 1	Presentation and elaboration of the norms and the commitment of self-care
Session 2	Myths
Session 3	Conceptualization of suicide. Continuum idea
Session 4	Risk and protective factors
Session 5	Explanation of the suicidal process and how management should be understood. Fire metaphor. Warning signs
Session 6	Emotions: Identification, regulation and expression
Session 7	Emotions and management: the emotional diary
Session 8	Healthy lifestyle habits. Inside and outside the center
Session 9	Training in problem solving 1. Theoretical framework and introduction
Sessions 10 and 11	Training in problem solving 2
Session 12	Communication skills: learning to ask for help
Session 13	Firewall card
Session 14	Self-protection guidelines
Session 15	Building a kit of hope
Session 16	Surviving testimony
Session 17	Farewell

It will also offer the possibility of telephone or video supervision for professionals who apply the program to allow comments of experience, difficulties or concerns that arise during the group interventions. This supervision will be carried out by psychologists from the research team and experts in leading psycho-educational groups.

Participants in the control group will receive information on suicide and advice if the suicidal ideation increases.

Outcomes

The primary outcome will be the total number of suicidal behaviours-which includes both suicide attempts and suicides-registered during the first year after being included in the study. Secondary outcomes will be the following:

Suicide risk

This risk will be evaluated with the international neuropsychiatric interview (MINI). The MINI is a structured diagnostic interview, of short duration, with six yes or no questions. It allows for a score between 0 and 35, with 1-5 corresponding to a slight suicide risk, 6-9 moderate and ≥10 high.[9]

Severity of suicidal ideation

The Columbia-suicide severity rating scale (C-SSRS) will be used to assess the seriousness of the suicidal ideation. C-SSRS is a semi-structured interview that includes four constructs: 1) the severity of ideation, with a subscale that evaluates 5 types of increasing gravity (from 1: wish to be dead; to 5: active suicidal ideation with specific plan and intent); 2) intensity of ideation, consisting of 5 elements-frequency, duration, controllability, deterrents, reasons for ideation-each with a subscale from either 0 to 5 or 1 to 5. 3) suicidal behavior, with a subscale that evaluates with a nominal scale actual, interrupted and aborted attempts, preparatory acts and non-suicidal self-destructive conduct; and 4) lethality of the suicide attempt, which evaluates with an ordinal scale of 6 points (from 0: there is no physical damage to 5: death); if actual lethality is 0, the potential lethality of the attempt is classified according to an ordinal scale of three points.[10,11]

Anxiety and depression scales

We will evaluate the presence of depressive symptoms with the Hamilton Depression Rating Scale (HDRS), a hetero-administered scale consisting of 17 items evaluating the symptomatology profile and severity of the depression. The period is set at the time of the interview, except for some items exploring the previous two days. It has a score of three factors: melancholia (items 1, 2, 7, 8, 10 and 13), anxiety (items 9-11) and insomnia (items 4-6). Each item has between 3 and 5 possible answers with a score of 0-2 or 0-4 respectively. The scale provides a global score of severity of the depression between 0 and 52. The cutting points recommended by the national institute for health and care excellence (NICE) guide are: 0-7: non-depression; 8-13: light depression; 14-18: moderate depression; 19-22: severe depression, and ≥23: very severe depression.[12] And to evaluate the presence of anxiety symptoms, we will use the Hamilton anxiety rating scale (HARS), a hetero-administered scale that aims to assess the intensity of anxiety. It consists of 14 items that evaluate the mental, physical and behavioral aspects of anxiety. The time frame is the previous 3 days on all items except the last. It provides a global measure of anxiety obtained by adding the score obtained in each item, with 0-5 indicating non-anxiety; 6–14 mild anxiety; and ≥15 moderate/severe anxiety. There is a validated Spanish version.[13]

Quality of life

This will be measured through the EuroQoL-5D health questionary (EQ-5D), a self-applied questionnaire consisting of two parts: the first assesses 5 dimensions: mobility, personal care, everyday activities, pain/disease and anxiety/depression. For each dimension, three states are described: absence of problems (1 point), moderate problems (2 points) or severe problems (3 points). The second part is visual analogue scale represented by a graduated vertical line from 0 (worst imaginary state of health) to 100 (best imagined state of health). It is validated in Catalan.[14]

Other outcomes are socio-demographic variables

The variables that form part of the Catalan penitentiary information system (CPIS), which includes personal variables (sex, country, nationality, studies, etc.), criminal variables (antecedents, crime, type of penalty), prison variables (preventive, permits, incidents, etc.) and activity variables (participation in the different programs of the center).

Other variables that will be recorded are the number of psycho-educational sessions performed by the participant in the study and self-reported medical background and self-reported medication. We will also administer a survey of satisfaction of the psycho-educational group intervention at the end of the study.

Participant timeline

Researchers will provide the following data for the data collection questionnaire: sociodemographic and medical variables, suicide risk and ideation, anxiety and depression scales, EQ-5D, and number of suicide attempts at baseline. After the period of interventions (3 months later), participants will be interviewed to collect all the variables listed above, except sociodemographic and medical variables. At 6 months and 12-months follow-up, we will ask about the number of suicidal

behaviours. The period of the study will be from January 2022 to December 2022 (Table 1).

Sample size

Accepting an alpha risk of 0.05 and a beta risk of 0.95 in a bilateral contrast, 74 subjects will be required in each group in order to detect a difference in the effect size of 0.6, using a t test for independent groups.[15] The sample will be extended to 89 people in each group due to the predicted loss of 20%, with a total number of 178 individuals.

Recruitment

A total of 9 penitentiary centers will participate in the study. In each center, pre-enrolment professionals will make an initial proposal to include participants in the clinical trial who: a) have been in the suicide attempt register in the last year; b) have been labelled in the prevention program as high or moderate suicide risk in the last year; c) have been reported in the RisCanvi instrument to have had an episode of risk of self-directed violence in the last year; and d) have participated in the suicide risk prevention program (low risk) in the last year in the prison. Those previously selected will be given an international neuropsychiatric MINI interview.[9] All cases with a light and moderate risk will be included in the study, and those with high risk of suicide will be excluded and derived to psychiatric services from the prison to more intensive monitoring. Each prison will recruit a minimum of 22 participants, with half assigned to the control group and half to the intervention group. Recruitment will be carried out simultaneously in each prison. Participants will be randomly assigned to either the control or intervention group with a 1:1 allocation based on computer-generated random numbers. This assignment will be performed after the selection criteria have been checked and the patient has signed the consent to participate form. An intention-to-treat analysis will be carried out. All persons who agree to participate, sign an informed consent and have had the first initial interview, will be included in the analysis.

Statistical methods

A descriptive statistical analysis of the data will be carried out to evaluate the homogeneity between the intervention group and the control group in the different variables studied. To evaluate the main objective (decreasing the number of suicidal behaviours), a multivariate analysis will be used. The number of suicidal behaviours will be considered a dependent variable, and the group to which the participant belongs an independent variable. The crude and adjusted odds ratio will be calculated. An analysis of repeated measurement variance (ANOVA) will be performed to determine the evolution of dependent variables during follow-up. The difference between the baseline and follow-up values of the C-SSRS scale score and from the other scales will be calculated. To compare the differences between variables of the two groups Student's t-test will be used, while the size of the effect will be estimated using the standardized effect size (SES).[16] The level of statistical significance used by the evidence of hypotheses is fixed at 5%. Analysis will be carried out using the SPSS program for Windows, version 27.

Ethical issues

Clinical research ethics committee of the Vic university hospital approved the study protocol (Protocol No: 2021059) on November 20, 2021. An information sheet will be designed for the participant with comprehensible language and a sheet for written informed consent. At all times, data anonymity will be guaranteed in accordance with national and international standards according to the Helsinki and Tokyo declarations on ethical aspects and standards of good practice in clinical research.

DISCUSSION

Few studies have addressed the problem of suicide in prisons. One of the few published studies, conducted in the United States, analysed a group intervention that was performed in inmates suffering from severe mental disorder and consisted of weekly sessions over eight weeks. They were able to observe an improvement in cognitive ability and motivation at discharge, and participants considered it very useful 88% of the time. The authors show a decrease of psychopathology and psychiatric improvement after the progam.[17] A recent review analyses behavioral health interventions, included six studies which a range of participation from 9 to 76 individuals. Modalities of psychological intervention vary widely and include cognitive-behavioral therapy, dialectical behavioral therapy, peer prevention program, staff intervention training, and uniquely-designed courses that incorporate various aspects from other treatment modalities. However, the absence of a control group in most of them, the lack of relevant evaluation studies, and the inconsistency of behavioral outcome measurements compromise the review's conclusions. Even so, the results suggested that cognitive behavioral therapy and uniquely-tailored intervention programs, could be effective in the prevention of suicidal behaviors.[18] Another study tested the effectiveness and cost-effectiveness of interpersonal psychotherapy (IPT) for major depressive disorder among 181 prisoners of various US prisons. The intervention consisted of 20 90-minute group therapy sessions over 10 weeks with 4 individual sessions. The authors conclude that this program reduced depressive symptoms, hopelessness, and posttraumatic stress disorder symptoms, and increased rates of major depressive disorder remission compared to the control group, with good cost-effectiveness results.[19] In addition, there have been recent specific suicide prevention programs in prison environments, such as the "VigilanS" program, a version of the suicide prevention program designed for the French general population and adapted to the inmate

population.[19] This program is more of an attempt to detect and track suicide attempts, without contemplating group-level psycho-educational actions.[20]

CONCLUSION

This randomized control trial will test the effectiveness of a psycho-educational group intervention performed by rehabilitation professionals to decrease the number of suicidal behaviours in a penitentiary environment. The proposed program involves a multidisciplinary team, made up of professionals in the fields of psychology, social work, psychiatry, and mental health nursing. If the study has positive outcomes, the prison community will have a new tool to curb suicide in prisons. Furthermore, this intervention would also mitigate the personal, family, and social consequences of suicidal behaviour in prisoners.

ACKNOWLEDGMENTS

The authors would like to thanks to members of the work team: Jordi Camps Martí, Xavier Buscà Huertas, Tura Benítez Comas, Ana Haro Royo, Mireia Perez del Olmo, Carme Segarra Mateu, Elisabet Bernad Tarrago, Susana Sanchez Rodríguez, Joan Pere Queralt, Joaquim Lopez Mata, Alicia Casals de Pages, David Raya Munuera, Manuel Noya Sastriques, Yolanda Magri Farnell, Angel Redondo Montenegro, Laia Toro Martí, Jordi Enjuanes Llop, Raquel Jofre Hombrado, Xavier Aranda Nicolas, Estrella Rivas Ribas, Mariona Miquel Capell, Josefa Blanch Bordalba, Vicenta Benitez Rodríguez, Laura Ruiz Sarrión. We would also like to thank the implementers of the psycho-education intervention program: Alejandra Idelsohn Zielonka, Anna Diego Gavaldà, María Rosa Miralpeix Bigas, Lluís Soria Sánchez, Mariela Tamarit Borges, Jade Puertas Álvarez, José Antonio Rubio de la Torre, Lourdes Pulido López, Maria Josep Martínez Sarra, Mireya Moreno Ortín, Rachid M. Mohtar Ahmed, Vanessa Cabrera Ruiz, Sergio Calvo Jiménez, Maria Rita Lastra Garcia, Yesenia Robles Garcia, Silvia Yuqui Amano Casas, José Carlos Moreno Bueno, Sussagna Serrainat Borrell, Sònia Garcia Milagros and Maria Roser Parellada Llobet. Also, to all the institutions and entities that made this study possible, especially the department of justice of the government of Catalonia; the Sub-Directorate general of rehabilitation and health programs of the general directorate of penitentiary service; and the center for legal studies and specialized training. We thank the department of psychiatry and are grateful to Pere Roura, MD, of the department of clinical epidemiology, both part of Vic university hospital. The authors also appreciate the English language review by Paul Marshall, PhD.

Funding: Funding by Center for legal studies and specialized training, department of justice, government of Catalonia.
Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee of the Vic university hospital approved the study protocol (Protocol no: 2021059) on November 20, 2021. This trial is registered on clinicaltrial.gov.

REFERENCES

1. Suicide worldwide in 2019: global health estimates. Geneva: World Health Organization; 2021. Available at: https://www.who.int/teams/mental-health-and-substance-use/data-research/suicide-data. Accessed 10 December 2021.
2. Ministerio del Interior. Mortalidad en Instituciones Penitenciària s (II.PP.) Año 2017. Boletín epidemiológico de Instituciones Penitenciària. 2019;24(2).
3. Generalitat de Catalunya. Statistical Institute of Catalonia. Available at: https://www.idescat.cat. Accessed 10 December 2021.
4. Department of Justice. Penitentiary services. Statistics data 2018. Available at: http://justicia.gencat.cat/ca/departament/Estadistiques/serveis_penitenciaris. Accessed 10 December 2021.
5. Zhong S, Senior M, Yu R, Perry A, Hawton K, Shaw J, Fazel S. Risk factors for suicide in prisons: a systematic review and meta-analysis. Lancet Public Health. 2021;6(3):e164-74.
6. WHO. Preventing suicide in jails and prisons, 2007. Available at: https://apps.who.int/iris/handle/10665/. Accessed 10 December 2021.
7. Cramer RJ, Wechsler HJ, Miller SL, Yenne E. Suicide Prevention in Correctional settings: Current Standards and Recommendations for Research, Prevention, and Training. J Correct Health Care. 2017;23(3):313-28.
8. Chan A-W, Tetzlaff JM, Gøtzsche PC, Altman DG, Mann H, Berlin J et al. SPIRIT 2013 Explanation and Elaboration: Guidance for protocols of clinical trials. BMJ. 2013;346:e7586.
9. Ferrando L, Bobes J, Gibert M, Soto M, Soto O. Mini International Neuropsychiatric Interview. Versión en español 5.0.0.DSM-IV. Instituto IAP, Madrid, 1998;1-28.
10. Posner K, Brown GK, Stanley B, Brent DA, Yershova KV, Oquendo MA et al. The Columbia-Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. Am J Psychiatry. 2011;168(12):1266-77.
11. Al-Hálabí S, Sáiza PA, Burón P, Garrido M, Benabarre A, Jiménez E et al. Validation of a Spanish version of the Columbia-Suicide Severity Rating Scale (C-SSRS). Rev Psiquiatr Salud Ment (Barc). 2016;9(3):134-42.
12. Bobes J, Bulbena A, Luque A, Dal-Ré R, Ballesteros J, Ibarra N; Grupo de Validación en Español de Escalas Psicométricas. A comparative psychometric study of the Spanish versions with 6,

17, and 21 items of the Hamilton Depression Rating Scale. Med Clin (Barc). 2003;120(18):693-700.
13. Lobo, A, Chamorro L, Luque A, Dal-Ré R, Badia X, Baró E. Validation of the Spanish versions of the Montgomery-Asberg Depression and Hamilton Anxiety rating scales. Med Clin (Barc). 2002;118:493-9.
14. Badia X, Shiaffino A, Alonso A, Herdman M. Using the EuroQoL5-D in the Catalan general population: Feasibility and construct validity. Qual Life Res. 1998;7:311-22.
15. Pratt D, Tarrier N, Dunn G, Awenat Y, Shaw J, Ulph F, Gooding P. Cognitive- behavioural suicide prevention for male prisoners: a pilot randomized controlled trial. Psychol Med. 2015;45(16):3441-51.
16. Kazis LE, Anderson JJ, Meenan RF. Effect sizes for interpreting changes in health status. Med Care. 1989;27(S3):S178-89.
17. Leidenfrost CM, Schoelerman RM, Maher M, Antonius D. The development and efficacy of a group intervention program for individuals with serious mental illness in jail. Int J Law Psychiatry. 2017;54:98-106.
18. Winicov N. A systematic review of behavioral health interventions for suicidal and self-harming individuals in prisons and jails. Heliyon. 2019;5(9):e02379.
19. Johnson JE, Stout RL, Miller TR, Zlotnick C, Cerbo LA, Andrade JT et al. Randomized cost-effectiveness trial of group interpersonal psychotherapy (IPT) for prisoners with major depression. J Consult Clin Psychol. 2019;87(4):392-406.
20. Eck M, Scouflaire T, Debien C, Amad A, Sannier O, Chan Chee C et al. Suicide in prison: Epidemiology and prevention. Presse Medicale. 2019;48(1):46-54.

Cite this article as: Foguet-Boreu Q, Capdevila-Capdevila M, Riesco-Miranda L, Torres AS, Framis-Ferrer B, Pons-Baños JP et al. Effectiveness of a psycho-educational intervention for people with suicidal conduct in the prison environment, N'viu project: a randomized control trial. Int J Clin Trials 2022;9(2):129-35.