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Psychological screening service for newly-admitted inmates in the Parma Penitentiary Institutes: process analysis after 1 year of clinical activity

Servizio di screening psicologico per i nuovi giunti negli istituti penitenziari di Parma: analisi di processo dopo un anno di attività clinica

Lorenzo Pelizza | Enrico Rossi | Ursula Zambelli | Elisa Violante | Melania Scarci | Elena Mammone | Adriana Adriani | Simona Pupo | Giuseppina Paulillo | Emanuela Leuci | Pietro Pellegrini

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Corresponding Author: Lorenzo Pelizza, email: lorenzo.pelizza@unibo.it

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Abstract

Aim - Screening for mental disorders in Italian prisoners is still a problematic issue, although crucial for early detection/intervention on severe psychopathology and pathological addiction, especially in young people. The aims of this study were: (a) to describe a systematic psychological screening (aimed at preventing suicide risk and at early identifying mental disorder and drug abuse in newly admitted inmates) implemented since January 2020 within the service for new prisoners at the Parma Penitentiary Institutes (PPI), and (b) to perform a process analysis after one year of clinical activity. **Methods** - A detailed description of the PPI psychological screening for newly admitted inmates was made. We then performed a descriptive statistical analysis on process indicators after one year of clinical activity. **Results** - 303 newly-admitted prisoners were enrolled in the study (167 [55.1%] affected by primary substance use disorder and 30 [9.9%] by primary mental disorder). 8 (2.6%) prisoners showed current suicidal ideation. 151 (49.8%) subjects were retained in care within the PPI mental healthcare service. **Conclusions** - Our findings support the applicability and a good prisoners' acceptability for a systematic psychological screening service for Italian newly-received inmates, mainly aimed at preventing suicide risk, at early identifying mental disorders and at quickly planning a person-tailored therapeutic-rehabilitation program.

Keywords: Psychological Screening, Prison, Mental Health, Suicide Risk, Italy.

Riassunto

Obiettivo - Lo screening per i disturbi mentali nei detenuti "nuovi giunti" italiani non è ancora una prassi uniformemente applicata, sebbene sia cruciale per la diagnosi/intervento precoce sulle gravi psicopatologie e sulle dipendenze patologiche, specie nei giovani. Gli obiettivi di questa ricerca sono: (a) descrivere la strategia di screening psicologico sistematico (finalizzato primariamente alla prevenzione del rischio di suicidio e all'identificazione precoce dei disturbi mentali nei detenuti "nuovi giunti") implementato a partire dal Gennaio 2020 all'interno degli Istituti Penitenziari di Parma (II.PP.), e (b) eseguire un'analisi degli indicatori di processo dopo un anno di attività clinica. **Metodi** – In questo articolo, viene, anzitutto, riportata la descrizione dettagliata dello screening psicologico per i "Nuovi Giunti" negli II.PP. Successivamente, vengono forniti i risultati di un'analisi statistica descrittiva sugli indicatori di processo dopo un anno di attività clinica. **Risultati** - 303 detenuti "Nuovi Giunti" sono entrati nello studio. Nel corso del 2020 (167 [55.1%] con diagnosi di disturbo da uso di sostanze e 30 [9.9%] con un disturbo mentale primario). 8 (2,6%) detenuti hanno manifestato ideazione suicidaria all'ingresso nel carcere. 151 soggetti (49,8%) sono stati presi in cura all'interno del servizio intramurario per la salute mentale negli II.PP. **Conclusioni** - I nostri risultati evidenziano l'applicabilità e un buon grado di accettabilità da parte dei carcerati di un servizio di screening psicologico strutturato per i detenuti "Nuovi Giunti" italiani finalizzato alla prevenzione del rischio di suicidio, all'identificazione precoce dei disturbi mentali e alla pianificazione tempestiva di programmi terapeutico-riabilitativi personalizzati.

Parole chiave: Screening Psicologico, Carcere, Salute Mentale, Suicidio, Italia.

Lorenzo Pelizza, Department of Biomedical and Neuromotor Sciences, Alma Mater Studiorum Università di Bologna, Italy, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Enrico Rossi, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Ursula Zambelli, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Elisa Violante, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Melania Scarci, Department of Humanities, Social Sciences and Cultural Industries, Università degli Studi di Parma, Parma, Italy | Elena Mammone, Department of Humanities, Social Sciences and Cultural Industries, Università degli Studi di Parma, Parma, Italy | Adriana Adriani, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Simona Pupo, Pain Therapy Service, Department of Medicine and Surgery, Azienda Ospedaliero-Universitari di Parma, Parma, Italy | Giuseppina Paulillo, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Emanuela Leuci, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy | Pietro Pellegrini, Department of Mental Health and Pathological Addiction, Azienda USL di Parma, Parma, Italy.

Psychological screening service for newly-admitted inmates in the Parma Penitentiary Institutes: process analysis after 1 year of clinical activity

Introduction

Over the past thirty years, there has been a constantly growing prison population in Italy (Martin et al., 2018), with consequent overcrowding problems and a relevant increase in the prevalence of mental health problems and substance use disorders (Piselli et al., 2015). Several epidemiological studies suggested that mental disorder rates in prisoners are at least twice as high as in the general population (Fazel & Seewald, 2012), and that the importance of mental illness in jail should currently be considered as a *key public health issue* (Fazel & Baillargeon, 2011). In this respect, the high overcrowding rate registered in Italian prisons (reaching a 119% value compared to the total official capacity in April 2023) (Matucci et al., 2023) specifically induced increasing mental health needs in incarcerated people, in the face of poor economic resources invested and a progressive shortage of intramural healthcare professionals, with consequent, relevant delays in the implementation of mental healthcare services for Italian inmates (Pellegrini et al., 2023).

Mostly for reducing inequalities in health rights between free citizens and prisoners, the Italian government in 2008 decided to transfer responsibility and resources for mental health care in prison from the Ministry of Justice to the National Health System (through funds and organizations directly managed by the Regional mental healthcare systems) (La Cerra et al., 2017). Within this profound change in the political context and responsibility, according to a farsighted resolution of the General Council of the Emilia-Romagna Region (resolution n. 2051/2019: "Regional health program in prisons") (RER, 2019a), the Parma Department of Mental Health implemented an integrated mental health intervention model for prisoners allocated at the local penitentiary institutes, which was modeled on the community-based treatment approach usually offered within its adult mental healthcare services (Pelizza et al., 2020a).

The *Parma integrated model* is based on multi-professional interventions for inmates with mental disorder and/or substance use disorder, and on planning "person-tailored" therapeutic-rehabilitation treatments specifically developed and shared with inmates and their community social/mental healthcare services (so as to ensure the continuity of care along "intramural-extramural" transition) (Pelizza et al., 2021a). This intervention model is structured on three different time phases: (1) reception, (2) detention and (3) release from prison.

(1) The *reception* phase includes a specific *psychological service for newly-admitted inmates* in the Parma Penitentiary Institutes (PPI), including a clinical interview by a psychologist aimed at identifying suicide risk, at carefully evaluating adjustment reaction to prison, and at detecting current mental disorder, drug abuse/dependence and severe psychological distress (Pelizza et al., 2020a). Indeed, inmates have higher rates of mental disorders that are often undetected (Senior et al., 2013) and structured procedures to early screen for mental illness are usually recommended (Martin et al., 2016). During the psychological interview, a detailed assessment of the prisoner's current mental state and information on clinical and life history are collected, along with administration of a specific screening instrument (i.e., the "Jail Screening Assessment Tool" [JSAT]) (Nicholls, 2005).

(2) In the *detention* phase, PPI inmates with mental healthcare needs may be provided with one of the following specialized, person-tailored therapeutic-rehabilitation interventions: psychological consultation, psychiatric consultation, and engagement in the intramural, multidisciplinary Mental Healthcare Service Team (MHST) (when there's a specialist treatment need). PPI prisoners' engagement in the services of the MHST should always be suggested by MHST psychologist and/or psychiatrist, and is based on an "Individualized Therapeutic-Rehabilitation Plan" (ITRP) shared and signed together with inmates. ITRP specificity and personalization are guaranteed by the integrated multi-professional composition of the MHST, combining different mental healthcare professionals (i.e., psychiatrist, toxicologist, clinical psychologist, nurse, professional educator, psychiatric rehabilitation therapist, and social worker). A personalized care pathway requires provision of one of the following person-tailored mental health interventions: integrated mental health intervention, individual psychological treatment, and individual psychiatric treatment.

(3) The *release* phase is often a difficult step. Indeed, it may lead inmates to consider economic, housing, employment and/or interpersonal difficulties that remain "outstanding". Therefore, close to their discharge from prison, the following mental health interventions may be planned: (-) in cases with severe psychological distress due to release from prison, the MHST can implement a specific psychoeducational support to inform prisoners about the local social/healthcare services in their native communities and how to access them. This may reduce fears and anxiety related to the extramural reality return; (-) in prisoners with mental disorder and/or previously engaged in

the services of community mental healthcare centers, the MHST should activate specific network interventions for the continuity of care (Pelizza et al., 2021a).

Therefore, given that prisoners have higher rates of mental disorders that are often undetected and structured procedures to screen for mental disease are usually recommended, the *aims* of this research were: (a) to describe the systematic psychological screening procedures implemented within the PPI service for newly-admitted inmates since January 2020, and (b) to perform a process analysis after one year of its clinical activity. In particular, we wanted to examine the applicability and ability of our screening process in detecting past and current characteristics that are relevant for clinical practice in prison (such as past episodes of suicide/self-harm or/and violent behavior, past and/or current substance use and/or mental disorders, current suicidal ideation and violent risk), as well as in investigating current prevalence rates of retention in care by the PPI MHST and the different kind of treatments provided within an Italian prison context. To the best of our knowledge, no research on systematic psychological screening procedures for newly-admitted prisoners in Italy was reported in the literature to date.

Methods

Setting

Participants were adult males recruited within the PPI service for newly-received inmates between 1st January 2020 and 31st December 2020. All prisoners gave their informed consent prior to their inclusion in the study. Local ethical approval was obtained for the research (AVEN Ethics Committee protocol n. 67506/2020). Study procedures also complied with the Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments including humans.

The *PPI* is an adult male prison for inmates who are not selectively placed due to them having specific mental healthcare needs. Prisoners are located at the PPI based on geographical location of their crimes or because they were accused/convicted of belonging to "mafia" or "mafia-like" organizations (i.e., 416 bis c.p.). Indeed, the PPI also includes maximum security jail sections (Morrone, 2003).

For the purposes of this study, *inclusion criteria* were: (a) age ≥ 18 years, and (b) enrollment within the PPI service for newly-admitted inmates. *Exclusion criteria* were known moderate/severe intellectual disability (Intelligence Quotient < 50), neurological disorders (e.g. dementia, severe head injury) or any other medical condition inducing inability to express a valid consent to participate in the research.

The *psychological screening* for PPI newly-received inmates includes a specific assessment phase for all new prisoners (independently they came from liberty, home, other national jails or alternative measures to detention). It is based on a *clinical interview* by a psychologist of the PPI MHST within 72 hours from entry. This phase is mainly aimed at assessing suicide risk (Pellegrini, 2018) and at early identifying current or past mental disorder, substance use disorder, and symptoms of maladjustment reaction to incarceration (Pelizza et al., 2021a). The initial interview provides a preliminary evaluation of inmates' current mental state and collects detailed information on their past and current critical life events (e.g., drug abuse, self-harm behavior, mental illness, failed migration projects, unresolved bereavement) and on their medical and socio-demographic history. This interview also includes the administration of the *JSAT* (Nicholls et al., 2005). In particular, it is crucial to investigate individual ability in frustration tolerance, as well as mapping protective factors for developing resilience to the prison experience (Mengin et al., 2020).

Instruments

All participants completed the *J-SAT* at entry. It is a structured assessment tool specifically developed to screen inmates on drug dependence/abuse, mental disorder and severe psychological distress, as well as to quickly detect potentially dangerous behavior (i.e., suicide attempt, self-harm behavior, violence) (Nicholls et al., 2004). The J-SAT interview covers the following main socio-demographic, legal and clinical domains: social background and demographic information, current legal status and criminal history, past/current mental health disorders and psychiatric treatment, past/current substance use disorders and related interventions, past/current suicide risk (including suicidal ideation) and current mental status (based on the 24-item Brief Psychiatric Rating Scale [BPRS] – extended version) (Ventura et al., 1993).

In this investigation, we specifically defined *suicide attempt* as a potentially injurious, self-inflicted behavior without a fatal outcome for which there was (implicit or explicit) evidence of intent to die (Silverman et al., 2007), as documented in the clinical notes. The term "suicide attempt" was differentiated from undetermined suicide-related and *self-harm behaviors*, including acts of deliberate self-harm or intoxication with alcohol or drugs, but where there was no clear intention to die (Pelizza et al., 2020b). Moreover, *current suicidal ideation* was defined using a score of 1 (i.e., presence of suicidal ideation at baseline) in the BPRS "Suicidality" item 4 (Nicholls et al., 2005). In the current research, we used the Italian version of the JSAT, which previously showed good psychometric properties in other Italian prison populations (Ciappi, 2011). The JSAT was administered by clinical psychologists of the Parma Department of Mental Health, who were trained through specific regional training courses. However, regular scoring workshops and supervision sessions were performed to ensure the interrater reliability of the JSAT. In this respect, good to excellent Cohen's kappa values (i.e., > 0.70) (McHigh, 2012) on each JSAT item were found.

Procedures

If prisoners with mental health concerns were screened, an in-depth clinical evaluation was performed using the "Structured Clinical Interview for DSM-5 mental disorders" (*SCID-5*) (First et al., 2017). This is crucial for differentiating inmates with serious mental problems from those with severe psychological distress and maladjustment reaction to incarceration (Woodall & Freeman, 2021). In the current investigation, the DSM-5 diagnosis (APA, 2013) was formulated by three trained clinical psychologists of the Parma Department of Mental Health with adequate and comparable years of clinical experience (approximately 15 years). All prisoners with DSM-5 mental disorder (including substance use disorder) were then retained in care within the PPI mental healthcare service and provided with specialized mental health treatments. However, the acceptance of treatment proposals was always on a voluntary basis.

Statistical analysis

Data on newly-received inmates were collected during the psychological interviews along a 1-year period of clinical activity. They were descriptively analyzed using the Statistical Package for Social Science (SPSS) for Windows – version 15.0 – (SPSS Inc., 2010). Frequencies and percentages were calculated for categorical variables. Median and interquartile range were used to represent continuous variables.

Results

A total of 340 adult male prisoners (153 [45.0%] with non-Italian nationality, median age at entry = 39 years [interquartile range = 30-49 years]) entered the PPI service for newly-admitted inmates in 2020. The monthly access rate ranged from 41 inmates in May 2020 to 8 in November 2020. Of them, 303 new PPI prisoners were enrolled in the study. The remaining 37 individuals were not included because of exclusion criteria (e.g., presence of neurological disorders inducing inability to express a valid consent, know intellectual disability) or active refusal to participate in the research.

Clinical, sociodemographic and legal characteristics of PPI participants are shown in the Table 1. Specifically, 235 (77.5%) newly admitted inmates were allocated at the PPI for common crimes and 68 (22.5%) for "mafia" or "mafia-like" crimes; 166 (54.8%) inmates had previous incarceration. The prevalence rate of previous suicide attempts at entry was 11.6% (n = 35), the prevalence rate of previous self-harm behavior was 11.9% (n = 36) and the prevalence rate of current suicidal ideation was 2.6% (n = 8).

According to DSM-5 diagnostic criteria (First et al., 2017), 167 (55.1%) PPI newly-admitted inmates were affected by current substance use disorder. The most frequent substance use disorders were associated with cannabis (n = 116), alcohol (n = 44) and cocaine (n = 34) misuse. Moreover, 57 (34.1%) out of 167 PPI prisoners with current substance use disorder were poly-abusers and 49 (29.3%) showed a past specialist treatment for pathological addiction at entry.

Furthermore, 30 (9.9%) PPI newly-received prisoners were affected by current mental disorder. The most common primary psychiatric diagnoses were depressive and/or anxiety disorders (n = 25). Finally, 151 (49.8%) participants were retained in care by the PPI MHST (128 with an integrated multi-professional treatment and 21 with individual psychotherapy).

Variable	N (%)
JSAT results	
Gender (♂)	303 (100%)
Nationality (Italian)	165 (54.4%)
Age	38 (30-48)
Education (in years)	8 (5-8)
Marital Status (married/domestic partnership)	173 (57.1%)
Crime (common vs "mafia")	235 (77.5%) vs 68 (22.5%)
Previous Incarceration	166 (54.8%)
Previous Suicide Attempts	35 (11.6%)
Previous Self-Harm Behavior	36 (11.9%)
Suicide Attempts during past imprisonment	16 (5.3%)
Aggressive Behavior during past imprisonment	72 (23.8%)
Current Suicidal Ideation (BPRS "Suicidality" item 4 = 1)	8 (2.6%)
Current Violence Risk	3 (1.0%)
DSM-5 diagnoses	
Current Substance Related Disorder	*167 (55.1%)*
Cannabis	116 (38.3%)
Alcohol	44 (14.5%)
Cocaine	34 (11.2%)
Opiates	17 (5.6%)
Sedative, Hypnotic, or AnxiolyticCurrent poliabusers	13 (4.3%)
Past specialist treatment for substance use disorder	57/167 (34.1%) 49/167 (29.3%)
Current Mental Disorders	
Depressive and/or Anxiety disorder	*30 (9.9%)*
Schizophrenia spectrum disorder or other psychotic disorder	25 (8.2%)
Personality disorder	3 (1.0%)
Past specialist treatment for mental disorder	2 (0.7%) 81 (26.7%)
Retention in care in the PPI MHST	*151 (49.8%)*
Integrated multi-professional Treatment	128/151 (84.8%)
Individual Psychological Treatment	21/151 (13.9%)
Individual Psychiatric Treatment	2/151 (1.3%)

Legend – Data were collected using the Jail Screening Assessment Tool (J-SAT). PPI = Parma Penitentiary Institutes; BPRS = Brief Psychiatric Rating Scale; DSM-5 = Diagnostic and Statistical Manual for mental disorders, 5th Edition; MHST = Mental Health Service Team. Frequencies (and percentages) and median with interquartile range are reported.

Table 1 – Sociodemographic, legal and clinical characteristics of PPI participants (n = 303).

Discussion

The main aims of this study were to describe and perform a process analysis on the psychological screening service for PPI newly-admitted inmates after one year of clinical activity in the PPI. This was helpful for examining its applicability within an Italian prison context.

Since January 2020, the Parma Department of Mental Health implemented a systematic, structured psychological screening for newly-received inmates at the PPI, including a *multi-disciplinary team* combining together primary care physicians, nurses, legal-pedagogical educators and professionals of the security area. This multi-professional team is specifically dedicated to detect health and social concerns as soon as possible. In this respect, incarceration may sometimes consent to identify (for the first time) individuals with *mental disorder* (including substance use disorder), which had not previously come to the attention of community mental healthcare services. Moreover, this structured assessment for new PPI incarcerated people is also crucial to detect *suicide risk*, and prevent suicidal thinking and behavior. Indeed, in case of imminent risk of suicide, clinical psychologists of the PPI service for newly-admitted inmates should report the patient to the "Local Unit for Suicide Prevention" for a careful clinical and environmental monitoring. In this respect, it has been found that prisoners have a suicide incidence rate 6 times higher than in the general population (Pompili et al., 2006), especially at their first prison experience (Jenkins et al., 2005). In this sense, clinical interviews by MHST psychologists within the service for newly-received inmates are considered as "first-line" interventions and are not subordinated to a primary care staff request (Garuti, 2012).

After having detected individuals with mental disorder, another important goal of the PPI psychological assessment for newly-admitted inmates is to report them to the PPI MHST for a *quickly retention in care* and for starting an ITRP (Sgarbi et al., 2017). In this respect, a following in-depth psycho-diagnosis is crucial to formulate the most appropriate "person-tailored" intervention plan and to maximize its potential effectiveness (Pelizza et al., 2021b).

At the PPI, each *ITRP* should be planned, shared and signed with inmates (Pelizza et al., 2021a). Specifically, ITRP personalization is primarily allowed by the integrated multi-disciplinary composition of the PPI MHST (including clinical psychologist, toxicologist, psychiatrist, educator, social worker, psychiatric rehabilitation therapist and nurse). In the ITRP formulation process, all the MHST members should collaborate together with inmates, their family components (when possible), and their community social/healthcare services (so as to ensure the continuity of care after discharge from prison and during intramural-extramural transition) (Turu et al., 2019). Specifically, ITRPs at the PPI are offered through the following main person-centered mental health treatments: (1) integrated multi-professional mental health intervention, (2) individual psychotherapy and (3) psychiatric consultation.

Process analysis

Approximately 340 new inmates entered the PPI in 2020. This finding is lower than those reported in the previous 5 years (i.e., 485 in 2015 and 445 in 2018) (RER, 2019b). This is probably related to the putative decrease in crime rates in Italy associated with the COVID-19 pandemic (Cingolani et al., 2021). Indeed, we reported the lowest PPI access peaks in April 2020 and November 2020 (i.e., together with the first two waves of the epidemic in Italy) (Pelizza & Pupo, 2021).

As for sociodemographic data, our result on age at entry was substantially in line with those found in recent years at the PPI (RER, 2019b). Moreover, the high prevalence of new inmates with past incarceration and non-Italian nationality (almost half of the PPI total prison population in 2020) was further confirmed (Di Giacomo et al., 2020).

In the present research, we found a 10% prevalence of both previous suicide attempt and previous self-harm behavior (considered as different and separate phenomena), as well as a 2.6% incidence rate of current suicidal ideation. As reported in a recent meta-analysis on risk factors for suicide in prison (Zhong et al., 2021), our findings confirmed that the condition of *newly-admitted inmate* is one of the most relevant clinical factors associated with suicidal behavior, especially if it is together with current suicidal thinking and a past history of attempted suicide and current primary psychiatric diagnosis. However, our results are slightly higher than those (3.7%) found in newly-admitted inmates at the New York State prison (Way et al., 2008). This may be due to the progressive increase in incarceration rate in Italy over the past two decades and the related increased rate of new inmates with mental healthcare needs and mental disorder (RER, 2019b). In this respect, high levels of psychiatric morbidity are consistently reported in prisoners from many countries over the last four decades (Fazel & Seewald, 2012). For an effective prevention of suicide risk in prison, a systematic psychological service for newly-received prisoners may contribute to carefully investigate the role of clinical, institutional and environmental factors directly influencing suicidal thinking and behavior, especially detecting modifiable targets for mental health intervention (Larney & Farrell, 2017).

In this investigation, 65% of PPI newly-received inmates were affected by current substance use disorder (55%) or other current mental disorder (10%). These findings are substantially in line with what was observed in other Italian prisons (Piselli et al., 2015; RER, 2019b) and slightly higher than those previously reported in new prisoners at the New York State prison (Way et al., 2008). Moreover, concordantly with our results, meta-analytic findings using random-effects models reported a pooled prevalence of psychosis of 3% and a pooled prevalence of major depression of 10% (Fazel & Seewald, 2012). This

confirms the need for specialist mental healthcare interventions in Italian prisons and the importance of implementing structured psychological assessment services aimed at early identifying prisoners with *mental disorders* and at planning appropriate ITRPs for starting timely and potentially effective treatments.

In the present research, 151 (76.6%) out of 197 PPI newly-admitted inmates with mental disorder or substance use disorder were retained in care within the PPI MHST (84.4% with an integrated multi-professional intervention and 13.9% with individual psychotherapy). Since inmates will return to their belonging community, their mental health care in prison should be a priority responsibility of our public mental healthcare system, with which intramural services should regularly collaborate in the ITRP formulation.

Limitations

A first limitation of the current investigation was related to the descriptive nature of our statistical analyses. This exposed the findings of this research to numerous biases. In particular, a single men prison and the lower number of access linked to the COVID-19 pandemic made data unfit for generalization. Moreover, our research design and the limited number of variables that were investigated did not allow effectiveness and outcome evaluations. Future longitudinal studies for monitoring outcome parameters (such as daily functioning, treatment response rate, suicide/self-harm behavior, drop-out rate) are thus needed. Psychometric measures for patient satisfaction and quality of life are also necessary.

Furthermore, the research design was limited to a period of one year. Longer prospective studies to confirm our preliminary process analysis results are therefore needed.

Finally, another limitation was related to potential inconsistencies and inaccuracies in the screening assessment. Indeed, inmates could minimize or maximize their health conditions, and their engagement with screening procedures could vary. A suggestion for future research includes comparing different screening assessment methods and comparing information gathered from screening assessments with information reported in prisoners' health records.

Conclusions

The results of this study support the applicability and a good prisoners' acceptability for a systematic psychological screening service for newly-admitted inmates in an Italian prison. This should be primarily aimed at early detecting mental disorders and substance use disorder and at preventing suicide risk. Moreover, it consents a quick retention in care of prisoners with mental healthcare needs, as well as to plan appropriate and effective ITRPs in close collaboration with prisoners, their family members (when possible), and their social/mental healthcare services in the community.

In this respect, incarceration sometimes induces a greater permeability to psychological change and may lead to a productive, internal therapeutic work (Martin et al., 2016). Furthermore, imprisonment may offer an opportunity to improve identification, treatment and health outcomes on inmates with mental disorder and/or substance use disorder (Ober et al., 2013). Indeed, previous findings suggested that prisoners who were positive on screening procedure at entry generally experienced greater initial adjustment problems (DiCataldo et al., 1995).

Finally, our findings have also other broader implications. Indeed, implementing a systematic, structured psychological screening service might inform future policy and economic investments changes (Ciliberti et al., 2015), the typology of mental health intervention to provide in Italian jails, and additional research within the Italian prison system (so as to replicate ad generalize our preliminary results).

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Conflict of interests

The authors declare to have no conflict of interests.

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