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## The psychological assessment of the conflict family in the forensic setting: food for thought

Luisa Puddu | Rosalba Raffagnino | Cristina Ceci

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### Abstract

The possibility of adopting an evaluative approach towards psychological assessment, aimed at promoting the best interests of the child in custody cases, is proposed for the attention of forensic practitioners. The authors present this perspective through theoretical and methodological considerations gained from literature and experience.

Beginning with the identification of the epistemological, theoretical and methodological limitations of the 'photographic' assessment, which is currently widely used in the forensic field, the authors propose the possibility of shifting towards an *evolutionary assessment*. Considering the centrality of parental conflict with respect to the negative psychological experiences of children in family separation cases, the advantages of this proposal are illustrated.

Within the limits of the nonclinical context and the specific demands of the judge, the goal of this approach is to evaluate the potential for changing the combative dynamic that exists within families involved in this intervention, taking into account their limitations and resources. After a brief discussion of the operational procedures that could be used in practice, this approach is then assessed with regard to the *Cartabia reform* recently enacted in the Italian legal system. The conclusions are reassuring and point towards constructive reflection among various forensic professionals involved in the process.

**Keywords:** psychological assessment, court-appointed expert witness, *Cartabia reform*, parental conflict, child custody.

## The psychological assessment of the conflict family in the forensic setting: food for thought

### Introduction

Psychological assessment in cases of separation and child custody agreements deserves continuous study in light of applied and theoretical scientific knowledge to reevaluate its purpose and effects. This assessment should remain open to possible evolutionary changes in the objectives of forensic psychological counselling and the modes of operation adopted by the expert.

It seems natural that the inevitable socio-cultural and epistemological transformations that occur over time should prompt correlated processes of reflection and change in the various cognitive, existential and organisational contexts, just as the legal field must adapt to the recurrent legislative updates. From our point of view, the recently enacted Cartabia reform acts as a significant testament to this idea, urging us to participate in an evolutionary rethinking of the forensic psychological assessment.

This contribution stems precisely from the desire to verify the compatibility of the objectives posed by the Cartabia law, strengthened by the study, reflection and experience we have gained over the years. Therefore, we will first proceed to illustrate our thoughts on the potential to modify the psychological assessment towards an evolutionary perspective, beginning with the processes, attitudes and methods that can be adopted in the context of the assessment. This will be followed by the legal perspective of a lawyer evaluating the viability of the proposed ideas with respect to the latest legislative developments, rectius *Cartabia Reform*, and the intention of better clarifying the relevant legislation. Indeed, we have turned to an expert in family law because enacting change within the intersection between psychology and law – known as *forensic psychology* – requires suggestions and critical perspectives from both disciplines.

Our hope is that the ideas outlined here prompt reflection of the current practices and serve as a catalyst for debate, cultivating new methods that enable psychological assessment to move beyond the risk of stagnation.

### Beyond the 'photographic' assessment

As it has been established, the purpose of assessments in child custody cases is to inform judicial intervention. They occur when a psychologist is called upon to serve as an expert witness, providing the judge with information that aids them in making decisions in the best interests of the child. Given this purpose, the current prevailing approach is one in which the professional

observes the family as objectively as possible to obtain a neutral perspective. They subsequently report their perspective and its psychological interpretation to the judge and the parties involved. This approach, with its emphasis on impartiality, is what we call a '*photographic*' assessment, similarly to other scholars (Bandini, Alfano, & Ciliberti, 2008).

However, this presumption of objectivity clashes with what Popper and other distinguished scientific philosophers have been addressing for more than half a century: the observer is not external to the knowledge process, but an integral part of it. The field of quantum mechanics itself highlights this point. It explains how, for example, depending on the type of instrument the scientist uses, the same entity can be seen as a wave or particle.

This perspective is not only significant to the forensic field but is widely shared by scholars from various disciplines. It implies that assessment is a dynamic process, especially because it occurs during an interview, in which a structured relationship forms between the involved parties. And precisely because it is an assessment, the observer-observed discussion is central since the assessor is in the role of the observer and the family constitutes the 'object' of his or her observation. In this position, the psychologist – according to the epistemological contributions mentioned above – cannot be neutral and is instead an integral part of the evaluative dynamic. Therefore, it must be considered that the family and each element of the system will be viewed differently depending on the approach, model, attitude, and techniques of the consulting psychologist. This is further illustrated by the fact that different experts may provide conflicting evaluations of the same family dynamics and issues.

Therefore, we believe that photographic assessment is not only ineffective but also involves certain operational implications:

1. The need to maintain *distance* between the observer (the psychologist) and the observed (the family) and to adopt a neutral stance regarding what the other expresses. This requires the psychologist to disregard their own emotional and cognitive resonances, which are considered potentially disruptive elements.
2. The tendency to establish largely asymmetrical relationships in which members of the family unit undertake a *passive* role while the expert has the authority to interpret their dynamics and provide insight into their lives, upon which the judge may base their decisions.
3. The propensity to concentrate on the *static* aspects of the family's psychological dynamics. It involves assessing the situation from fixed points in time, which overlooks the potential for circumstances to change.

These are consequences of the photographic assessment that negatively affect the relationship between the psychologist and the family being evaluated, as well as the data collected. As our experience indicates, people who feel that they are being assessed often report experiences of discomfort, misunderstanding, and difficulty in expressing themselves effectively. These are all possible indications that a contentious relationship can affect both the course of interactions between the parties and the validity of the information acquired. We cannot assume that the quality of the relationship between the observer and those being observed is irrelevant to the data collected. The data is already impacted by the artificial nature of the situation, as well as the context, which families may perceive as judgmental. It is not uncommon for families to feel that they are under scrutiny, causing them to try to present themselves in a socially desirable light. Especially due to the serious nature of the circumstances, a family member's desire to be viewed as a perfect caregiver can influence their responses. In addition, the family often experiences the court context as a stressor, and the stress is considered by scholars a risk factor for parent-child relational quality (Pajardi et al., 2018).

### Towards the evolution of forensic psychological counselling

Given the limitations of the photographic assessment and the need for a paradigmatic shift in forensic evaluations, in considering the possible directions of change in the approach we have turned toward an assessment that we have defined as *evolutionary*, in accordance with what other scholars have already suggested (Bandini, Alfano, & Ciliberti, 2008; Cesaro & Loddo, 2007).

The approach towards evaluation that we are proposing stems from the centrality of parental conflict in child custody cases and how its pervasiveness can harm the child (Camisasca, Miragoli & Di Blasio, 2013; Miragoli, Camisasca & Di Blasio, 2016; Puddu & Raffagnino 2015, 2016a, 2016b, 2018; Raffagnino & Puddu 2023; Sabatello, Verrastro & Thomas, 2018). Sometimes the effects of high conflict divorce on children have been assessed similar to those observed in neglect cases (Joyce, 2016).

Beginning with the centrality of this assessment, some scholars have proposed major features, processes and critical factors of parental conflict in order to provide judges useful information for their decisions (Pajardi et al., 2019) or to practicing counselors working with high conflict separation/divorce (Schmidt & Grigg, 2024).

In a comprehensive assessment that is meant to evaluate each parent's caregiving capacity and personality characteristics, the intense conflict that generally defines their relationship can become a central focal point, overshadowing other significant factors. To remedy this, we consider whether – remaining within the confines of the judicial mandate – there are alternative methods to provide the judge with information that do not cement

the current family dynamic, especially its problematic aspects, but consider and foster its potential to evolve.

An initial step that seems relevant in this regard is to think of the psychological assessment as a valuable opportunity for the family system, especially because disputing parents are unlikely to be capable of taking autonomous initiatives towards overcoming their conflicts. The psychologist, by nature of their third-party status, could play a crucial role in promoting awareness regarding dysfunctional dynamics the parents must modify, to enhance the cooperation of the family system. This awareness is considered particularly important by scholars who use the hermeneutic approach to understanding the meaning of what happens in and through conflict (Barbieri & Verde, 2008); the goal of fostering cooperative capacity among former partners as a function of changing the dynamics of conflict has long been emphasized by other authors, such as Bandini et al. (2008).

However, for this to be effective, the parents must maintain a functional openness towards the goal of co-parenting. Psychologically, this is expressed in their capacity for collaboration in order to serve the best interests of the child, unhindered by conflict dynamics. Parental capacity cannot be reduced to positive individual or relational characteristics towards the child; it concerns the way the parents manage to converge in their roles to optimise the child's functioning. By exploring the potential to modify the conflict dynamics, the expert can identify latent resources within the family, as well as the risk of potential violence in situations where discord caused by one party is the primary cause of the custody dispute.

Though we do not intend to transform the expert evaluation into a clinical context in the classical sense, we believe that exploring the potential for change in family conflict can function as an *intermediate space*, borrowing an expression from Florenskij, between a non-clinical and clinical framework. It can be thought of as a 'para-clinical, pre-clinical, pseudo-clinical opportunity...' in which the insights gleaned from the court-ordered assessment enhance the parents' awareness of the gravity of the current situation and its effects on the psycho-physical and relational health of the child. Simultaneously, it can introduce parents to individual and systemic resources that may allow for positive change within family relations.

In the face of a recurring and pervasive conflict dynamic, this intervention may challenge the perception of such conflict as enduring, if not irreversible. This perception may be exacerbated by the lawyers themselves, who can inadvertently fuel the dispute through their legal claims and by emphasising the shortcomings of the opposing party. In other words, it is a matter of shifting from a static *zero-sum game* marked by escalating conflict, where everyone loses despite each parent acting under the illusion that they can win, to a *non-zero-sum game* aimed at evolutionary change. This shift can be achieved by placing the attention on the child and recognising the harm parental conflict inflicts on their well-being. This necessitates the parents' ability to extend beyond mere verbal recognition of the child's suffering because of their

conflict and to enact attitudes aimed at actively breaking free from the dysfunctional dynamics in which they find themselves trapped. The role that lawyers can play toward this dynamic is recognized by several authors, including those who consider it an ethical duty of the lawyer to work in the direction of change in the best interests of the child (Bala, Hebert & Birnbaum, 2017).

### The *how* of an evolutionary assessment

Though the expert must respond and adhere to the judge's questions, the distinction between a photographic assessment and the proposed evolutionary one lies in how the expert approaches their role in the process. It involves how one navigates the situation effectively and responsibly when called upon to conduct an assessment. This refers to the way the expert conducts themselves and their attitude toward the family members, the aspects on which they focus their attention or gloss over, and the way they pose questions, for example.

If photographic assessment implies the psychologist's neutrality and distance from the family unit, an evolutionary approach suggests undertaking an attitude of nonjudgmental participation aimed at understanding the family's ongoing dynamics. This understanding requires reflecting on one's own experiences: what they perceive, feel, and hear. In this way, the expert considers themselves an integral part of the evaluative process. Of course, this requires a strong degree of psychological sensitivity, which can be acquired through specific training processes, differentiating the expert from other professionals. They are not a mere executor of protocol, but an active participant in the evaluation process itself.

In terms of methodology or the approach the psychologist can adopt, the evolutionary perspective of assessment can benefit from insights derived from the complexity approach (Bocchi & Ceruti, 1985; Ceruti & Morin, 1988; Morin, 2021). This approach, our main epistemological reference for years, provides a valid frame of reference in which to place the various steps and their outcomes. When considering the limitations and possibilities for change in the conflict dynamic, it is imperative to have a comprehensive view of the various dimensions – subjective, objective, intersubjective, historical, and current – that characterize the family system. These dimensions are integrated, that is, interwoven, as the etymology of the word 'complex' (cum-plexus) suggests. Therefore, the psychologist must aim for a panoramic view of the family system in which the various elements, which gradually emerge, acquire a meaning that must be contextualized and shared with the parties during the interaction. What sets this approach, apart from cases in which the contextualization is only expressed in formal, written documents, is that it happens in real-time. Hence, it is not simply a matter of collecting data and reporting it to the judge, but of enhancing the potential for change in the conflict dynamic while referring to available resources and possible obstacles. It highlights links between different areas – parenting,

individual and couple history, behaviour of the child, ways of relating to one another, how the family dynamic is expressed – and brings them to the attention of the family. In this way, the psychologist can understand how individuals respond to the information gathered and determine their willingness to adapt and work through problems, adding substance to the assessment. For example, when discussing their personal history, elements may emerge that relate to one's current way of parenting in the face of ongoing marital conflict. The psychologist can help them to see the concrete negative effects of their conflict on the child's health and well-being. If they are able to grasp and accept this evidence, there is potential for change. Conversely, if they deny the negative impact or place blame solely on the other parent, this mindset becomes a major obstacle to the evolutionary process.

Although the psychologist may use other classical (e.g., Lausanne Triogue Test, Joint Family Drawing) or creative modalities, the ability of parents to recognize their shortcomings and acknowledge the impact of their discord on the child appears to be an effective litmus test of the family's potential to overcome conflict. Highlighted in the psychologist's report, this recognition may provide a useful informational basis for the work of any other expert that is appointed by the judge following the assessment. Because these appointments typically occur at the request of the parties, it is more likely to take place if they are motivated by shared awareness, even though this awareness does not imply clinical intervention in the forensic setting.

Considering that the assessment occurs within the forensic context, it is crucial that the expert to account for its specificities. Among others, they must gather information explicitly requested by the judge and adhere to the deadline of the assignment and boundaries related to the evaluative activity. Additionally, they must navigate the idiosyncrasies of the parties involved and the various relational dynamics of the family system. This encompasses the presence and influence of families of origin, new partners, and adult siblings; any psychological paths already taken by the family, the presence of significant issues such as addiction, and the interventions of different institutions or external services. The psychologist must also remember that their work fits within established relationships between parents and their lawyers, and is developed alongside the intervention of other colleagues, such as party-appointed expert witnesses.

All these aspects are significant in developing the comprehensive perspective related to the complex view mentioned above but also in creating a context that fosters a willingness to adapt based on the findings of the assessment in order to overcome the conflict. It is beneficial for the psychologist to promote a context of collaboration with both their colleagues and each party's attorney. Instead of viewing them as peripheral to the intervention, understanding that they are jointly pursuing the best interests of the child can prevent fuelling the animosity between the parents. Promoting the idea that everyone is working towards the same goal – benefiting the child – can reduce opposition towards the other party,



allowing families to work towards collaboration instead of conflict. The question arises: how does this evolutionary proposal align with the current legislation?

### The viability of the evolutionary orientation according to the so-called *Cartabia Reform*

The evolutionary orientation of psychological assessment in the forensic setting, as portrayed above, aligns perfectly with the new guidelines dictated by the *Cartabia Reform* in Art. 473-bis.25 c.p.c. under the heading '*Office Technical Consultancy*'.

As is well-known, in family matters the judge takes protective measures regarding the interests of the child, prioritising their mental and physical well-being. Though the ideal scenario is considered to be one in which the child remains in the care of both parents, the judge may also designate one parent to be entrusted with the child's care, specifying the time and manner of the child's presence with each parent (see Article 337 ter of the Civil Code). The judge may grant custody of the child to only one parent if they deem that granting custody to the other would contradict the best interests of the child (see Article 337c of the Civil Code). The identification of the most suitable parent must be made based on a prognostic judgment of their ability to raise and educate the child. In cases with excessive levels of conflict that occur in the presence of the child, or those characterized by the presence of critical issues, such as violent conduct or mistreatment, addictions that impair one's ability to perform parental duties, serious neglect by one parent, mental problems or serious psychological distress, or dysfunctional behaviour contrary to the principle of co-parenting, the judge will utilise the assistance of a court-appointed expert witness. In these situations, where legal knowledge alone is not sufficient to resolve issues requiring specialised technical knowledge, the judge – pursuant to Articles 61 ff. (*Technical Consultant*) and 191 ff. c.p.c. (*Appointment of the Technical Consultant*) – appoints a psychologist, formulates the questions to be answered and sets the hearing at which the expert must appear.

Following the guidelines outlined by the *Cartabia Reform*, the expert is tasked with more than answering the judge's questions, respecting the adversarial process, and drafting an intelligible report within the procedural timeframe. The expert should also prepare a report that distinguishes facts they observed directly and the statements made by the parties and third parties involved, supporting their evaluations with scientific evidence or indicating the parameters on which they are based. Furthermore, concrete proposals for interventions to support the family unit and children should be included in the report. It is precisely this aspect that makes these guidelines compatible with the proposed evolutionary perspective of assessment. The expert, by elucidating the potential for change within the family conflict dynamic, is able to 'formulate concrete proposals for intervention in support of the family unit' as mandated by the reform (see art. 473-bis. 25 c.p.c.)(GU, 2022, October 19).

These proposals for intervention within the family landscape no longer remain in the realm of the 'possible' but can be immediately implemented, even during the judicial proceedings. Notably, Article 473-bis.26 c.p.c. affirms the authority of the judge, at the request of both parties, to appoint a professional chosen from the register of court-appointed expert witnesses (or beyond it upon the joint request of the parties) with specific skills capable of assisting the judge in intervening on the family unit to overcome conflicts between the parties, provide assistance to minors and facilitate the recovery or improvement of the relations between parents and children.

This rule is inspired by best practices observed in certain courts, which recognize the judge's need for assistance from professionals who are experts in a specialised field, not only for evaluation purposes but also to implement specific interventions. Accordingly, the rule grants the judge the authority to appoint professionals – pursuant to Article 68 c.p.c. – to carry out specific activities, expressly mandated by the judge. These activities are deemed necessary to resolve the family conflict or to support the parent-child relationship. Consider, for example, the numerous cases in which, even in the absence of seriously prejudicial conduct by a parent, parent-child relationships are disrupted by familial conflict. Other instances occur in which one parent is reluctant to allow the child to have access to the other parent, whom they deem unsuitable, or when minors have difficulty relating to the outside world because of the conflict within the family. In these cases, the use of professionals (e.g., psychologists, social workers, family mediators, educationalists) can be a valuable and often decisive aid.

In order to regulate the professional's role, however, it is necessary to place it in a procedural framework, as identified in Article 68 c.p.c. As part of the proceedings, the professional will be appointed as an auxiliary to the judge under the aforementioned Article 68 of the Code of Criminal Procedure. This establishes them as an 'expert in a particular profession' designated to assist the judge under Article 337-ter of the Civil Code, a provision that requires the judge to act in the best interests of the children. The role of the professional is to assist the judge in ensuring that the child maintains a healthy relationship with each of the parents, when possible.

The rule stipulates that these professionals can only be called upon with the prior consent of both parties to civil proceedings. This is firstly because the financial cost is assumed by the parties (unless they are eligible for financial assistance). Secondly, the intervention requires the cooperation and active participation of the parties. When met with opposition from the parents, the judge may resort to conventional methods of intervention, such as assignments to the social welfare service (GU, 2022, October 19).

It is evident that the parties themselves, even if required by the court to participate in the proceedings, will agree with the decision to appoint an experienced professional 'with specific skills capable of assisting the judge for certain interventions in the family unit, to overcome conflicts between the parties, to provide aid for minors and for the

resumption or improvement of relations between parents and children' (cf. Article 473a.26 c.p.c.), if, within the scope of the assessment, the defects and strengths of the family nucleus have been outlined, concrete proposals have been developed for overcoming conflict, or a better exercise of parental responsibility and intervention strategies to aid minors have been suggested.

Within this framework, the judge determines the objectives and terms of the intervention, which may follow a specified timeline if the intervention is lengthy. Upon its completion, the auxiliary must file a report on the activities conducted, and parties are allowed to file written comments. This intervention is different from the psychological assessment previously discussed in that it is aimed at resolving situations in which parent-child relationships are compromised, or specific difficulties emerge for the child.

In this new legal framework, the potential to utilise an evolutionary approach to judicial intervention may be realised. The expert, while being mindful of developing their report within the confines of the judicial mandate, will be able to submit to the attention of the judge and the parties what resources are available to improve upon the weaknesses of the parents and highlight the potential for change within the family dynamic.

## Conclusions

The purpose of this contribution is to revise the traditional approach to the psychological assessment conducted by experts in a forensic setting, moving towards an evolutionary assessment. Since parental conflict is a key aspect of these cases which strongly affects children's well-being, the main objective of the evolutionary assessment is to detect the potential for change within the dysfunctional family dynamic. Thus, the expert's role should not simply be to record the family profile and its limitations at the present moment, but should instead be concerned with identifying the resources the family can use to mitigate conflict.

The perspective of the lawyer, well-versed in family law, on the compatibility of the approach proposed here with the objectives of the Cartabia reform, strengthens our optimism about its legal feasibility. The ensuing debate seems to be focussed primarily at the psychological level, illustrating the need for convergence among professionals regarding the meaning, substance and methodology of conducting a psychological evaluation in the forensic context.

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## Forensic assessment via videoconferences in family law proceedings: from the experience during the COVID-19 pandemic to the new perspectives

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### Abstract

The literature has long been interested in using videoconferencing in the clinical context, while its applications in the psycho-forensic context have been little studied. The diffusion of COVID-19 has forced experts to use forensic telepsychology, and this work aimed to evaluate the representations of a group of experts in child custody disputes in family proceedings.

**Method:** Two focus groups were conducted with 13 experts (psychologists, psychiatrists, neuropsychiatrists, and psychodiagnostics) with a mean age of 57.08 (SD=9.88). Focuses were transcribed verbatim and analyzed according to Grounded Theory (Glaser & Strauss, 1967). We coded and classified the raw data by analyzing the transcripts for potential conceptual categories; the data collected were grouped into five macro-categories and twenty-one sub-categories (Difficulties linked to the methodological issues, Positive aspects, Emotions, Locus of control, Beliefs for the future). Descriptive and correlational analyses were carried out.

**Results:** Experts identified methodological difficulties in the pandemic period related to the setting in online interviews, the use of PPE in face-to-face interviews, the assessment of non-verbal communication, increased complexity, and the assessment of minors. Positive aspects related to the acquisition of new skills and the development of alternative strategies also emerged. They expressed negative emotions such as rejection, uncertainty, confusion, fatigue and difficulty, and even optimism, and confidence, especially among older experts. The tendency to self-attribute difficulties and the need for guidance emerged. For the future, the idea of sustainable change emerged.

**Conclusions:** The data confirm the importance of expanding research on the effectiveness of VC in the forensic context.

**Keywords:** child custody, forensic assessment, videoconferencing (VC), forensic telepsychology, COVID-19.

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## Forensic assessment via videoconferences in family law proceedings: from the experience during the COVID-19 pandemic to the new perspectives

### Introduction

Conducting an online forensic assessment via videoconferencing (VC) is a possibility that has been explored in the literature for several years (Adjorlolo & Chan, 2015; Brett & Blumberg, 2006; Saleem & Stankard, 2006), but in fact, has been little used in the forensic field (Batastini et al., 2020) and even almost forgotten (Bernhard et al. 2021), which according to Khalifa et al. (2008) is also due to a lack of willingness on the part of professionals to get involved.

So-called telepsychology was therefore considered a working method to be used in forensics only in exceptional cases, mainly to reduce time and costs and to overcome geographical distances, especially in countries where distances can be considerable (Adjorlolo & Chan, 2015).

On the other hand, telepsychology in forensics became necessary during the COVID-19 pandemic to conduct forensic assessments during lockdown periods or when social distancing rules and personal protective measures (PPE) were in place. During these periods, many court hearings were suspended or conducted online or in writing, and forensic experts in various fields also had to find solutions online.

This paper aims to trace the initial concerns, resistance, and hopes that forensic child custody experts had about having to carry out interviews, observations of family relationships, and tests via videoconferencing to reflect on how these constraints have influenced attitudes toward online assessment.

Telepsychology is a topical issue in all professional and social contexts because, although the return to face-to-face work is now predominant, the long experience of working online during the pandemic has led in several contexts to the retention of some activities online, not only because of the economic and organizational advantages, but also because of the possibility of being more inclusive, allowing greater participation, and timely, given the possibility of completing work in reduced time frames (Dale & Smith, 2021; Drogin, 2020).

Forensic evaluations have covered a range of areas, particularly those involving children with an urgent need for intervention decisions, including during the COVID-19 pandemic.

Brown et al. (2021) noted that online interviews with children in cases of maltreatment and abuse allowed for early intervention, which was beneficial for recall and decision on the case.

Concerns about telepsychology in a forensic context have mainly related to technical difficulties with

connectivity (Batastini et al. 2020, 2023; Dale & Smith, 2021) and the use of the computer medium, both by the practitioner and the interviewer (Daffern et al., 2021). Networking and technological difficulties have often proved to be a more complex reality to manage than anticipated (Bernhard, McDowell, & Vincent, 2021; Dale & Smith, 2021).

It should be borne in mind that, more generally, psychology and psychiatry have long since adopted the system of videoconferencing in health care and therapeutic interviews, also trying to highlight the extent to which the online context produces adaptations and changes in the manifestation of symptomatology and personality traits (Recupero, 2010), not to mention the further development of telemedicine following the pandemic, while forensic psychology has lagged just for the use of online assessments (Kois et al., 2021).

The perplexities noted are related to distrust in one's training and individual negative incidents of VC use in one's professional life (Adjorlolo & Chan, 2015; Mulay et al., 2021).

In addition to IT resistance, there are also concerns about one's ability to manage an online assessment and the reliability of standardized tests and assessment instruments administered via VC, as well as the need for training and guidelines: For example, Batastini et al. (2020) found that 85% of forensic experts expressed concerns about their ability to administer assessment tools via VC.

In addition to personal resistance, many experts objected to the lack of validity of online administration of instruments (e.g., self-report inventory). In this respect, research has already shown positive correspondences between face-to-face and online psychodiagnostic methods (Brodey et al., 2000). Some psychodiagnostics tools have been tested for remote and face-to-face administration without significant differences (Lexcen et al., 2006).

In the case of family law and child custody decision-making, the need to continue to make decisions and intervene to protect children, even during the pandemic, has led to extensive use of VC in evaluations, and Dale and Smith (2021) have named these evaluations Remote Child Custody Evaluations (RCCEs).

Therefore, it seems very important to study experts' opinions on the difficulties encountered in online family assessment, which is considered one of the most complex, given the number of subjects involved, both adults and minors, the different dimensions to be assessed (parenting skills, individual characteristics), the several evaluation tools, the importance of the consequences for people's lives

(Austin et al., 2016; Otto et al., 2000; Pajardi, 2024; Procaccia et al., 2020), the necessary involvement of party counselors (Verde & Passoni, 2009) or social services and additional intervention figures (Pajardi et al., 2019).

Dale and Smith (2021) pointed out that the emotional dimension is central to these assessments; therefore, concerns have arisen among experts about the difficulty of empathizing with the people being assessed and correctly understanding their non-verbal communication in online interviews. Grady et al. (2011) had already highlighted the communication problem by pointing out that, when using VC, the experts' interaction style should also adapt to this channel and be more flexible and creative.

Even before the increase in VC administration that occurred with the pandemic, there was research interest in the reliability of tests administered via VC and the validity of their results (Adjorlolo & Chan, 2015). However, this issue has since been more thoroughly addressed by professional practice guidelines that also consider the ethical standards of this application (Corey & Ben Porath, 2020).

However, specific procedures have been developed via VC for administering certain tests, such as the MMPI, Millon, and PAI (Dale & Smith, 2021).

The scientific literature considers essential training in telepsychology, and demand for it has increased significantly since the pandemic's start (Bernhard et al., 2021). Authoritative references have been identified as a need for professional methodological support and greater credibility with adjudicators (Luxton & Lexcen, 2018).

As a result of the massive use of telepsychology in the forensic field, this need has become particularly urgent. It has led to the development of guidelines, both internationally and locally. From an international perspective, the APA has published on its website both guidelines for the administration of tests to minors (Banks & Butcher, 2020) and an update of the literature on the subject. In terms of APA guidelines, the 2022 update of the 'APA Guidelines for Child Custody Evaluations in Family Law Proceedings' encourages the use of telepsychology in situations of emergency, distance, financial constraints, and deadlines, recognizing that it can make a significant contribution when used responsibly. The APA recommends assessing whether the technology used affects the results' reliability and implementing appropriate strategies to ensure privacy, working alliance, and safety with the evaluatees.

However, at the national level, some associations and expert groups have developed guidelines that could support professionals in this delicate phase of their professional activities. One example is the Association of Forensic Clinicians for Families (Associazione Clinici Forensi per le Famiglie - ACFF) in Italy, which already, in May 2020, developed and published (www.acff.it) indications on child custody assessments. These guidelines are addressed to professionals for online assessments concerning adult and child interviews and psychodiagnosis.

## Methods

### Participants

In order to better understand how experts have approached VC assessments in child custody evaluations, this study aims to explore experts' opinions, attitudes, and perceived difficulties regarding the new opportunities opened up by the 'forced' situation created by the pandemic.

The study sample consisted of 13 participants (12 female, 1 male) aged 42-74 years (mean age=57.08, SD=9.88). Inclusion criteria were: 1) to work as a forensic expert in the evaluation of child custody in legal proceedings in the case of separation and divorce; 2) to be a mental health professional (psychologist, psychiatrist, etc.); 3) to have worked in the field for at least 5 years; 4) to be a member of ACFF (Association of Forensic Clinicians for Families). 69.2% were psychologists, 15.4% were psychiatrists/neuropsychiatrists, and 15.4% were experts in psychodiagnosis.

We randomly divided into two groups with a similar distribution of age and profession (Table 1).

Total number	13	
<b>Occupational status</b>		
psychologist	9	69.2%
psychiatrist or neuropsychiatrist	2	15.4%
experts in psychodiagnosis	2	15.4%
<b>Gender</b>		
male	1	7.7%
female	12	92.3%
<b>Age (years)</b>		
mean (SD)	57.08	9.88
min-max	42	74

Table 1 – sample characteristics

### Procedures and Instruments

Participants took part in two focus groups moderated by two experts in the tool: the first had 6 participants, and the second had 7 participants. Each focus lasted two hours and occurred in February 2021 during the pandemic emergency related to Covid-19. It followed the traditional qualitative research methodology (Powell & Single, 1996).

Each participant completed an informed consent form, which described the study's aims and permitted the focus to be audio recorded. The study complied with the Ethical Code of the Italian Psychological Association and was approved by the Ethics Committee of e-Campus University (prot. n. 6/2021).

The participants' data were handled in accordance with the General Data Protection Regulation (GDPR) and EU Regulation 2016/679.

Specifically, the moderators worked with a non-prescriptive, semi-structured interview schedule that included the following topics: methodological issues in

forensic evaluation during COVID-19, disadvantages and problems, strengths and new acquisitions, feelings and emotions, and beliefs about the future. We divided each focus into two phases: a free narrative phase prompted by an open-ended question and a more directive phase prompted by the moderators through specific questions. The focus group was the first step in a multi-method research aimed at gathering information about changes in forensic assessment during and after the pandemic to construct a questionnaire to be administered to a larger sample of forensic assessment experts.

The results of the second phase will be presented in a forthcoming paper.

*Strategies of analysis*

Each focus was audio recorded and transcribed verbatim. The methodological approach to analyzing the texts followed grounded theory (Glaser & Strauss, 1967). We coded and classified the raw data by examining the

transcribed discussions for potential conceptual categories, using the guiding questions as initial categories. The utterances made by each participant during the focus were pooled, and all words and/or phrases that met an analysis criterion, which was mutually exclusive, were counted for each participant. We converted the raw data into percentages based on the number of words produced by each participant.

Two independent judges coded the texts, with a third judge intervening in case of disagreement (inter-judge agreement=0.80). We grouped the coded data into five macro-categories and twenty-one sub-categories (Table 2).

Finally, the data were analyzed using IBM SPSS Statistics version 21.0 through descriptive analysis (mean and SD of each analysis category transformed into percentages based on the number of words spoken) and correlation analysis between age and analysis categories.

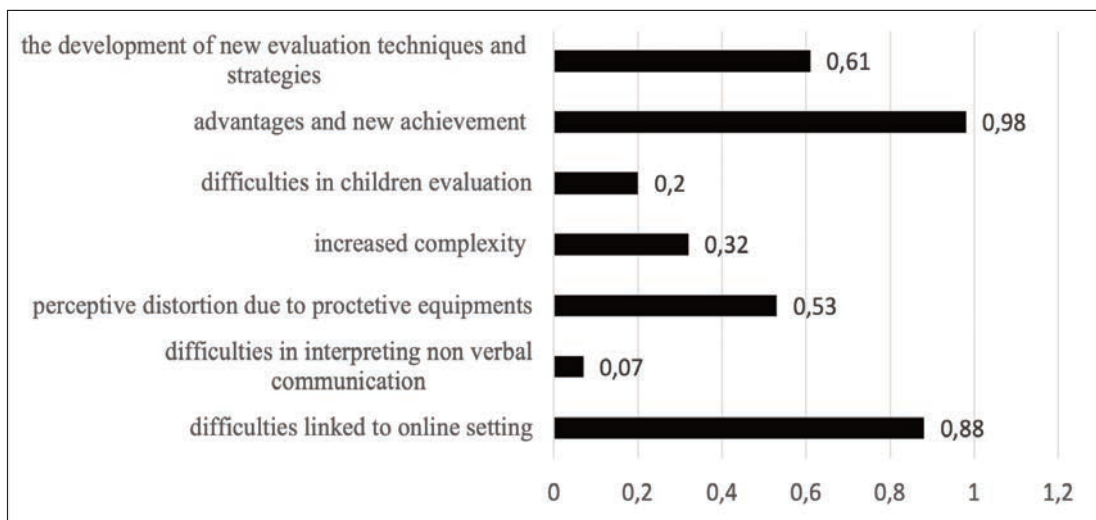
A) DIFFICULTIES LINKED TO THE METHODOLOGICAL ISSUES	1) Difficulties linked to the setting
	2) Difficulties in interpreting nonverbal communication
	3) Difficulties due to perceptive distortion linked to protective equipment
	4) Increase in complexity due to the need to find an agreement with the legal parties, the subjects evaluated and the experts
	5) Difficulties in children online assessment
B) POSITIVE ASPECTS	6) Advantages and new achievement thanks to online assessment
	7) Development of new evaluation techniques and strategies
C) EMOTION	8) Confusion
	9) Persecutority
	10) Refusal and revulsion
	11) Fear
	12) Sense of inadequacy
	13) Anger
	14) Sense of nostalgia and loss
	15) Fatigue and difficulty
	16) Uncertainty
	17) Optimism and confidence
D) LOCUS OF CONTROL d1) INTERNAL LOCUS OF CONTROL d2) EXTERNAL LOCUS OF CONTROL	18) Self-attribution of responsibility of the difficulties
	19) Choices forced by circumstances
	20) References to Guidelines or Authorities
E) BELIEFS FOR THE FUTURE	21) Lasting Covid-19- related change in forensic evaluation practices
	22) Expectation of many similarities between pre- and post-Covid-19 evaluation

Table 2 – Narrative Categories

## Results Expert beliefs about forensic assessment during and after Covid-19

As regards the first macro-category, Difficulties linked to the methodological issues, participants reported above all difficulties linked to the limits imposed by the changes in the evaluation in the online setting (means=0.88; SD=0.56), followed by difficulties due to perceptive distortion caused by the use of protective equipment during face-to-face interviews (means=0.53; SD=0.39), the increase in complexity due to the need to find an agreement with the legal parties, the subjects evaluated

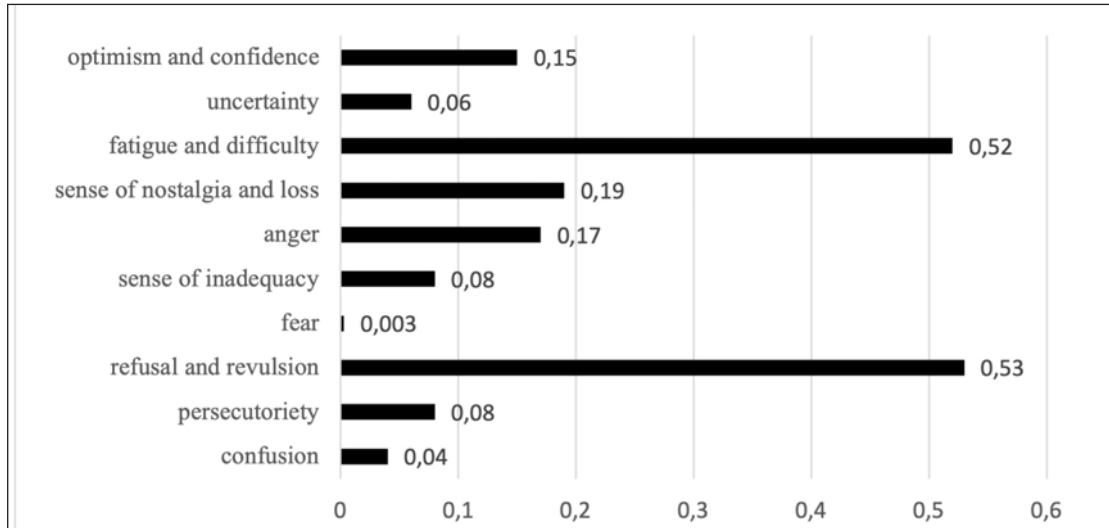
and the experts on several aspects that were not considered in the past (means=0.32; SD=0.45), problems with children online assessment (means=0.20; SD=0.14) and critical issues in interpreting nonverbal communication online, cause the mediation of video, and in face-to-face interviews cause to the presence of PPE (means=0.07; SD=0.12). Regarding the second macro-category, Positive aspects, experts first represented advantages and new achievements thanks to online assessment (means=0.98; SD=0.79) and secondarily, the development of new evaluation techniques and strategies (means=0.61; SD=0.43) (Graphic 1).



Graphic 1 – Difficulties linked to the methodological issues and Positive aspects

As regards Emotion, participants reported predominantly negative emotions. Specifically, they reported above all refusal and revulsion (means=0.53; SD=0.31), fatigue and difficulty (means=0.52; SD=0.66), followed by a sense of nostalgia and loss of aspects not present in the online setting anymore (means=0.19; SD=0.33), anger (means=0.17; SD=0.48), persecutoriness

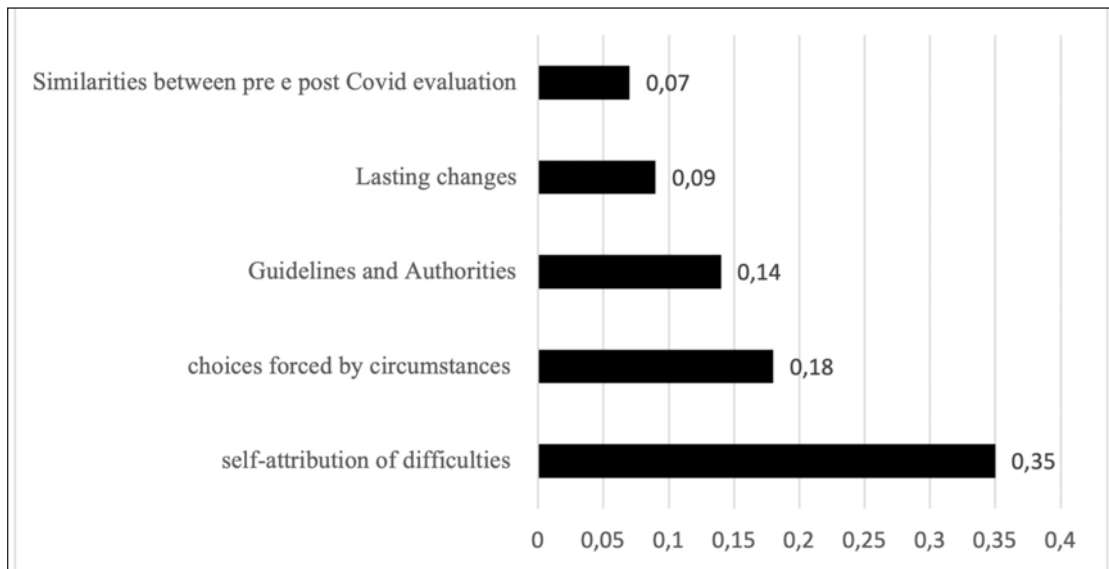
(means=0.08; SD=0.13), sense of inadequacy (means=0.08; SD=0.23), sense of uncertainty (means=0.06; SD=0.12), confusion (means=0.04; SD=0.06) and fear (means=0.003; SD=0.01). The only positive emotion presented is optimism and confidence (means=0.15; SD=0.12) (Graphic 2).



Graphic 2 – Emotion

About the macro-category Locus of control, participants showed an internal locus of control with self-attribution of difficulties encountered in online assessment (means=0.35; SD=0.67), but also an external locus of control speaking about choices forced by circumstances (means=0.18; SD=0.15) and references to Guidelines or Authorities (means=0.14; SD=0.15).

Finally, as regards the Beliefs for the future, experts reported the idea of a lasting Covid-19- related change in forensic evaluation practices (means=0.09; SD=0.12), but at the same time, they expected there to be many similarities between pre- and post-COVID-19 evaluation (means=0.07; SD=0.09). (Graphic 3)



Graphic 3 – Locus of control and Beliefs for the future



### *Correlational analysis*

A Pearson correlation analysis was carried out to assess the association between the registries variables of the sample and the narrative categories. Age positively correlates with optimism and confidence ( $r=.571, p<.05$ ). Length of speaking negatively correlates with a Sense of inadequacy ( $r= -.582, p<.05$ ), fatigue and difficulty ( $r= -.685, p<.01$ ), and Self-attribution of responsibility ( $r= -.649, p<.05$ ).

As regards the Difficulties linked to the methodological issues, difficulties linked to the online setting positively correlate with Difficulties due to perceptive distortion caused by the use of protective equipment during the face-to-face meetings ( $r=.818, p<.01$ ), sense of inadequacy ( $r=. 606, p<.05$ ), anger ( $r=. 732, p<.01$ ), sense of nostalgia and loss ( $r=. 653, p<.05$ ), fatigue and difficulty ( $r=. 697, p<.01$ ).

Difficulties in interpreting nonverbal communication positively correlate with difficulties due to perceptive distortion linked to protective equipment during face-to-face meetings ( $r=.777, p<.01$ ) and several negative emotions, as the sense of inadequacy ( $r=. 654, p<.05$ ), anger ( $r=.640, p<.05$ ), sense of nostalgia and loss ( $r=.607, p<.05$ ), fatigue and difficulty ( $r=. 638, p<.05$ ). Conversely, it correlates negatively with references to guideline and authority ( $r=- .653, p<.05$ ).

Difficulties due to perceptive distortion linked to protective equipment during face-to-face sessions also positively correlate with confusion ( $r=.626, p<.05$ ), anger ( $r=.872, p<.01$ ), and fatigue/difficulty ( $r=.807, p<.01$ ).

The increase in complexity positively correlates with an external locus of control, with both references to choices forced by circumstances ( $r=.598, p<.05$ ) and with the need for guidelines or authorities ( $r=.604, p<.05$ ). On the contrary, the positive aspects referred to the development of new evaluation techniques and strategies negatively correlates with confusion ( $r=-.633, p<.05$ ) and fatigue/difficulty.

About Emotion, confusion positively correlates with fatigue and difficulty ( $r=.566, p<.05$ ); persecutory correlates positively with fear ( $r=.707, p<.01$ ) while it negatively correlates with external locus of control as choices forced by circumstances ( $r=-.571, p<.05$ ). Fear also positively correlates with need to refer to guidelines and authority ( $r=.579, p<.05$ ) and to beliefs that in the future there to be many similarities between pre- and post-COVID-19 evaluation ( $r=.724, p<.01$ ).

Sense of inadequacy positively correlates with a sense of nostalgia and loss ( $r=.960, p<.01$ ), fatigue and difficulty ( $r=.709, p<.01$ ), sense of uncertainty ( $r=.797, p<.01$ ) and self-attribution of responsibility of the difficulties ( $r=.936, p<.01$ ). Positive correlation between anger and fatigue ( $r=.740, p<.01$ ), between sense of uncertainty and sense of nostalgia and loss ( $r=.724, p<.01$ ) were also found ( $r=.792, p<.01$ ).

Finally, as regards the locus of control, self-attribution of responsibility positively correlates with a sense of

nostalgia and loss ( $r=.911, p<.01$ ), fatigue and difficulty ( $r=.710, p<.01$ ), and sense of uncertainty ( $r=.765, p<.01$ ).

### **Discussion**

The data support international findings (Drogin, 2000) on fears and critical issues related to videoconferencing (VC) in forensic evaluations. However, the experts were adaptable in coping with changes in evaluation caused by the spread of the COVID-19 pandemic in both online and face-to-face sessions with the aid of PPE.

The experts who participated in our study perceived limitations imposed by the setting as critical issues. These limitations include difficulties with assessment tools, privacy protection, and the technological medium itself. Additionally, the experts noted increased complexity and elements to find an agreement with their interlocutors.

These findings are consistent with those of Batastini et al. (2020), who conducted a survey on videoconferencing among forensic evaluators before the pandemic. The study found that approximately one-third (34,8%) of the 155 participants used videoconferencing for various psycho-forensic assessments but expressed concerns about the ability to administer some measures properly (85,3%) and the risk of technical difficulties (81,4%).

Qualitative themes of concern about videoconferencing methods fell into several categories. Some of them are like the results of our research: restricted assessment (61,3%), security and privacy (48,4%), technology concerns (21%), relational aspects (17,7%), control over the environment or evaluation (12,9%), ethical concerns (8,1%).

Notable issues that also emerged among our participants were the difficulties associated with using PPEs in face-to-face sessions and assessing non-verbal communication, both in remote sessions through video and, as mentioned above, in face-to-face sessions through PPEs. Specifically, the elements most frequently mentioned by our experts were the distortion of the physical perception of the subjects to be evaluated, perceived as a limitation of the “clinical gaze”, which makes it possible to understand valuable aspects of functioning through the analysis of how the person moves in space, how they occupy it, the gestures with which they accompany speech, which is limited by the presence of PPEs, but also by the position in front of the PC.

Lis et al. (1995) emphasize the significance of non-verbal communication. While words facilitate conscious communication, non-verbal cues also play a crucial role in soliciting non-selective attention at a preconscious level. Some of our participants noted this bidirectional process. Non-verbal behavior influences the initial impression that an expert or subject forms of an individual behavior, including facial expressions, tone of voice, and gestures. The subject typically controls the verbal component more, while the non-verbal component is linked to more

affective and instinctive aspects, making it more immediate. These are aspects that experts may have overlooked in videoconference or face-to-face interviews where IPRs were necessary.

Some participants also expressed a lack of physical contact, such as a handshake, which can convey empathy and help establish a diagnostic alliance (Chuk, 2004).

These elements confirm what was already noted by Dale and Smith (2021), who pointed out that a concern with the use of videoconferencing for assessment was the difficulty of empathizing with the people being assessed and correctly understanding their non-verbal communication, a critical aspect also highlighted by Kennedy et al. (2023).

Daffern et al. (2021) noted the same difficulty as in our study regarding the limited visual perspective and possible perceptual bias associated with VC. On the other hand, the potential zoom fatigue and distraction mentioned by Kennedy et al. (2023) were not found.

The topic of assessment of children via videoconferencing generated conflicting positions among our participants.

Many participants and authors expressed skepticism about the possibility of conducting remote assessments with children, citing concerns about the reliability of interaction between a parent/guardian and one or more children (Batastini et al., 2023). However, some participants in our focus groups found the digital tool particularly useful for adolescents and in situations where a child refused to meet a parent. They noted that adolescents accustomed to using the tool were more open and willing to talk. It is important to note that this evaluation is subjective and should be marked. In the second case, however, the online tool mediated the interaction, which bridged a greater distance than direct contact. The mediation by VC made it possible to circumvent refusal and lower the assessed subjects' defenses. They agreed to meet the parent even after very long periods of interruption of visits. Another topic that aroused interest among our participants was the assessment of children by videoconferencing. However, conflicting positions were taken on this matter.

Participants in our study identified other positive aspects of videoconferencing evaluations, such as the opportunity to try out new strategies and learn new techniques, to reduce time and costs, and to facilitate situations where subjects were geographically distant or to facilitate contact with other practitioners, confirming the findings of previous research (Adjorlolo & Chan, 2015).

Although there was no lack of verbalization of positive emotions such as optimism and confidence in our group, the most frequently expressed emotions were negative, such as rejection, fatigue, difficulty, nostalgia and loss, anger, feelings of inadequacy, confusion, and uncertainty.

However, it is interesting that correlational analyses showed that emotions of optimism and confidence were

expressed more frequently by older experts. This finding seems to contradict findings in the literature suggesting that younger people are more likely to use videoconferencing and online assessment tools (Kirschstein et al., 2023).

Batastini et al. (2020) have already pointed out that clinicians had more moderate opinions about the validity of forensic mental health assessments (FMHA) conducted via VC, because of problems related to the assessment administration and the possible development of ethical or legal problems. The authors thought it was logical that mental health professionals, who are primarily trained to provide services in face-to-face settings – a training emphasizing relationship building – would have concerns about interpersonal connection or loss of relevant information during an online assessment. However, as in our study, there was a positive age effect: more experienced subjects tended to be more optimistic about the ethics and legality of VC in FMHA. We could explain that older evaluators have greater confidence in their ability to evaluate adequately regardless of the medium than younger ones.

Concerning locus of control, a tendency to resort to self-attribution of difficulties in evaluation emerged in our study, confirming the findings of other studies that linked perplexity in the use of VC to distrust in one's specific training (Adjorlolo & Chan, 2015; Mulay et al., 2021). However, our data also show numerous references to an external locus of control, such as the experience of making forced choices and the need for guidelines and guidance from the authorities. Previous studies had already emphasized the latter aspect, which indicated the need for good practice guidance both as professional and methodological support and to gain more credibility from judges (Luxton & Lexcen, 2018).

In a forward-looking way, some participants expressed beliefs for the future related to the permanence of videoconferencing assessment tools, primarily to facilitate time, cost and contact with other practitioners, facilitated by remote. Still, others felt that, in some respects, there were no major differences between videoconference and face-to-face evaluations, confirming findings from previous studies (Lexcen et al., 2006).

Regarding the results of the correlational analyses, we would like to discuss a few aspects that have provided interesting insights. Some of these aspects were already evident in the descriptive analyses.

As previous studies have indicated (Batastini et al., 2020, 2023; Dale & Smith, 2021; Daffern et al., 2021), the more difficult it is to assess verbal communication and the more distortion it is due to the use of IPR in-person interviews during the pandemic, the more negative emotions are expressed. These emotions include a sense of inadequacy, anger, nostalgia, loss, fatigue, and difficulty.

A sense of persecution also emerged, indicating that the assessment may have been too intrusive and entered too directly into the homes and intimacy of the subjects. This feeling correlated with experiences of fear, which led

to the need to use authoritative sources to legitimize one's techniques. Similarly, the perception of increased assessment complexity links to a greater need for clear indications from authorities and guidelines to reinforce a sense of security. In contrast, self-attributed difficulties correlate positively with a sense of nostalgia and loss regarding the past and a sense of uncertainty and fatigue.

Positive adaptation experiences and acquiring new techniques and strategies functioned as protective factors against developing negative emotions, particularly confusion and fatigue.

## Conclusions

Our data highlight a cautious attitude on the part of the experts who had to use VC in forensic evaluations. Although areas of limitation and criticality were highlighted, positive insights of optimism and confidence were not lacking.

The study has revealed challenging reflections and insights, but it has limitations.

Firstly, it collected experts' impressions and representations during the COVID-19 pandemic but did not empirically examine whether FMHA conducted via video conferencing is comparable to the traditional in-person approach.

Nevertheless, it is one of the few studies to have examined this issue. As suggested by Batastini et al. 2020, research on the actual reliability and validity of FMHA between VC and face-to-face still needs to be improved. Therefore, further research is urgently needed to support VC as a viable option for this purpose and to develop best practices to reduce barriers and identify the types of candidates and psycho-legal issues for which VC may be most appropriate. For example, Dale and Smith (2021) suggest that, if properly conducted, child assessments (RCCEs) are a viable alternative that can help resolve child custody disputes, as they allow parent-child dynamics to be observed in their natural context, increasing the ecological validity of the observation (Comer et al., 2017).

Furthermore, the limited sample size does not allow for the generalization of the findings.

However, the fact that we worked with a focus group formula that discussed on a few topics, rather than a questionnaire that was predetermined from the start, as other authors have done, also allowed us to capture an emotional dimension and more specific topics from the experts. This study will form the basis of a questionnaire that is currently in progress, which, being more articulate and detailed, will allow us to capture the attitudes of a large sample of experts in the actuality of overcoming the pandemic.

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## Eyewitness Memory: Factors affecting the formation of false memories

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### Abstract

Research has largely demonstrated the malleable nature of memory and the possibility of recalling events – or part of them – never experienced. These memory errors are well-known as false memories and have been largely investigated by researchers due to strong implications for the legal context. Studies on false memories formation have demonstrated a series of circumstances and factors that can lead to this phenomenon. False memories might occur because of internal processes as well as external influences, leading to spontaneous and suggestion-induced false memories, respectively. In addition, some individual differences – like cognitive resources and personality traits – can inform on individuals' likelihood of reporting false memories. Still, emotions experienced during the event as well as the emotional content of the experience itself can affect false memories formation. The present work aims to provide an overview of the literature on false memories in the legal context, addressing how scientific evidence can be useful for forensic psychologists, specifically those working in the Italian system.

**Keywords:** False memories, Individual Differences, Emotions, Forensic Practice.

### Credit author statement

Fabiana Battista and Antonietta Curci conceived the article. FB wrote the manuscript. Antonietta Curci and Ivan Mangiulli critically revised the manuscript. All authors contributed to the article and approved the submitted version.

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## Eyewitness Memory: Factors affecting the formation of false memories

The reliability of eyewitness memory is an important subject in the legal system due to the fact that eyewitnesses' recollection, namely one's testimony, constitutes one of the main proofs for law enforcements to reconstruct the crime. As a matter of fact, testimonies are a crucial source of information for legal and forensic professionals, such as judges, when making determinations of guilt or innocence for a suspect (Nash et al., 2016). Nevertheless, due to the constructive and reconstructive nature of memory (Curci, 2022), the accuracy and reliability of a witness's account can be uncertain. Indeed, it is so far consolidated the idea that memory does not work as a video camera and, thus, during the recollection of an event, people may remember details of it that are partially incorrect or even details that never actually occurred (Arnold & Lindsay, 2002; Frenda et al., 2011; Howe et al., 2017; Loftus & Pickrell, 1995; Nash et al., 2015; Nash & Wade, 2008; Roediger & McDermott, 1995). Consequently, it is common for a person to provide a testimony that includes distorted or entirely fictional information as well as the omission of relevant details about the event (Leding, 2012). These errors are known as memory distortions, more specifically commission errors when people recall false or distorted information, and omission errors, when they are unable to remember some information (e.g., Schacter, 2012). Among commission errors, it is possible to identify the widely known false memories.

False memories present a significant challenge for forensic experts and judges who must rely on individuals' memory-based statements. The importance of this concern is underscored by research that demonstrates how false memories in witnesses' accounts are a leading factor contributing to wrongful convictions (e.g., Saks & Koehler, 2005; Smeets et al., 2004; Wells & Quinlivan, 2009). An example of the deleterious consequences of false memories in court is evidence from public organizations of different countries (e.g., USA, Italy, Belgium) working on re-evaluating cases of people erroneously accused and convicted for a crime, like for instance the Innocence Projects (e.g., USA: [www.innocenceproject.org](http://www.innocenceproject.org); Italy: <https://italyinnocenceproject.org/>). The root of these miscarriages of justice lies in the difficulty of establishing the complete and accurate truth of a criminal experience (i.e., the "ground truth"). Hence, understanding factors that make people prone to develop false memories can help in reducing errors made by forensic professionals. The present paper, therefore, will provide an overview<sup>1</sup> of the main results of research on the possible factors (e.g., age, cognitive and personality traits, etc.) affecting individuals' proneness to report false memories. We will first present

the main paradigms adopted to experimentally test false memories. Then, we will focus on some factors (i.e., demographic, cognitive and personality traits, emotions) affecting false memories creation. Finally, we will discuss evidence in light of their possible consideration for Italian forensic psychologists<sup>2</sup>.

### What Do We Know about False Memories?

A significant number of experiments have been conducted to investigate the formation of false memories. These studies have shown that individuals can report two different types of false memories, namely spontaneous false memories and suggestion-induced false memories (Brainerd et al., 2008; Loftus, 2005; Otgaar et al., 2023; Mazzoni et al., 1999). The first type of false memories occurs because of internal mechanisms (e.g., spreading activation), thus without external pressure (Brainerd et al., 1995). By contrast, suggestion-induced false memories originate from external pressure like in the case people listening others' memories of the same event (Otgaar et al., 2018). Experiments, so far, have studied false memories by adopting different paradigms, depending on the type of false memories they intended to reproduce in the lab.

With regard to spontaneous false memories, the most acknowledged and used paradigm is the Deese/Roediger-McDermott (DRM) paradigm (Deese, 1959; Roediger & McDermott, 1998). The procedure of this paradigm can be split into two phases. In the first phase, the encoding, participants are presented with lists of words conceptually associated with each other (e.g., bed, rest, awake, tired, dream, wake, etc). These words are also related to a word called critical lure (i.e., sleep) that is not presented during the encoding phase. In the second phase, participants' memory is tested, hence participants perform either a

1. Note that we do not intend to provide a systematic review of the literature so far published on false memories and factors affecting their formation. Hence, we did not carry out an extensive research on articles platforms (e.g., Scopus, WoS). Instead, we tried to summarize the state of the art by considering relevant articles on the matter.
2. Despite the common distinction between legal (e.g., expert who work on people's ability to testify) and forensic (e.g., expert who work people's capacity to stand a trial) psychologists, typical in some European countries (e.g., the Netherlands, United Kingdom), in our manuscript we use the Italian connotation forensic psychologists to refer to experts doing a psychological evaluation of witness' ability to testify.

recall or recognition task which also includes the critical lure. Typically, several participants remember to have seen the critical lure during the encoding phase, thus resulting in a false memory for the critical lure (e.g., Gallo, 2010). Different variants of the DRM were developed, some of which included pictures and videos. Also by using those variations, a non-trivial number of people reported false memories for the critical event (e.g., Miller & Gazzaniga, 1998; Peters et al., 2013; Otgaar et al., 2014).

Another paradigm used to study spontaneous false memories was developed by Mirandola and collaborators (Mirandola et al., 2014). This paradigm enabled an investigation of spontaneous emotional memories through a within-subject manipulation. It consists of a pool of pictures presenting different life episodes (e.g., dating a person) which may end positively (e.g., the two guys kiss each other), negatively (e.g., the boy is aggressive towards the girl) or neutrally (e.g., the guys meet for exchanging a book). Specifically, participants are shown 9 episodes consisting, in turn, of 16 pictures. However, of those, 12 pictures correspond with material presented during the encoding phase and 3 are shown only during the recognition phase -among which the ending picture of the episode. Hence, participants first watch the 9 episodes and during the retrieval are presented with 3 positive, 3 negative, and 3 neutral ending scenes. The typical finding is that people produce more false memories for negative emotional episodes than for positive and neutral ones.

Concerning suggestion-induced false memories, one of the most famous paradigms is the misinformation paradigm (Loftus, 2005). This paradigm was adopted in pioneer work on eyewitness testimonies and false memories (Loftus et al., 1978). It is composed of three stages: The study phase when participants are provided with some pictures or a video (e.g., video of a bank robbery), a second phase during which participants receive misinformation in the form of suggestive questions (i.e., falsely claiming that the robber had a gun while it actually was a knife) or suggestive narrative. Finally, in a third phase, participants complete a memory test. Many participants claim to remember the misleading information as a part of the original pictures or video, the so-called misinformation effect (Loftus et al., 1978).

Subsequently, other studies have additionally demonstrated that people can develop suggestion-induced false memories even for entire false events (e.g., Loftus & Pickrell, 1995; Scoboria et al., 2017). These studies adopted the so-called implantation method. Researchers contact children's parents to understand whether their children experienced a specific event (i.e., experimental event: being lost in a mall). If not, researchers interview the children asking whether they experienced a pool of events one of which was the experimental event. Hence, researchers suggest the children that they have experienced the experimental event, and they know this information because their parents told them. Usually, studies have found that around 30% of participants report to have

experienced the never experienced event during their childhood (e.g., Scoboria et al., 2017). This finding was largely replicated in several studies adopting also different types of events (e.g., not plausible events such as UFO abduction) or types of stimuli (e.g., pictures) or different samples (e.g., adults).

Another mechanism leading to suggestion-induced false memories production is the memory conformity effect (e.g., Gabbert et al., 2003; Wright et al., 2000). Scholars have proven that discussing with other people of an experience can also alter memories for such an experience. The paradigm adopted to show this evidence has three variants. In the first one, pairs of participants are engaged in studying some pictures and in a subsequent phase are asked to recognize which elements were present in the pictures by alternating their responses. In the second variant, groups of participants are involved in the stimuli presentation and a consequent discussion. However, among these participants, some are confederates of the researcher and suggest false information about the stimuli. Finally, in the third variant, each participant receives information told by other participants, such as being told that a high number of participants believe there is a specific – and false – detail in the original stimulus. Irrespective of the variant used to investigate the effect, all studies adopting the memory conformity paradigm display that a relevant number of people integrate into their memory the suggestive information heard or discussed by other participants, thus forming suggestive false memories for the original stimulus (Gabbert et al., 2006; Bodner et al., 2009).

Other experimental paradigms have also shown that either hearing rumours about an experienced event, or being said that their own memory was false, or imagining having experienced an event can lead to the formation of false memories (e.g., Principe et al., 2006). These paradigms are respectively called rumour mongering (Principe et al., 2006), false feedback (Bernstein & Loftus, 2009), and imagination inflation (Garry et al., 1996) paradigms.

## Mechanisms Underpinning False Memory Formation

Different theories have been proposed to explain the formation of spontaneous and suggestion-based false memories. The Fuzzy Trace Theory (FTT; Brainerd et al., 2008) is one of the principal theories supporting spontaneous false memory production. FTT stipulates that two memory traces are stored during the experience of an event. Gist traces correspond to the essential meaning or semantics of an experience (e.g., remembering to have seen a robbery), while verbatim traces reflect item-specific details of an event (e.g., remembering the colour of robber's shirt). According to FTT, verbatim traces fade faster over time than gist traces. This means that when people have to remember a past experience and verbatim traces are no longer available, they rely on gist traces of

such an experience meaning that people generally recall the general meaning and information of the experience. The retrieval of gist traces foments the formation of spontaneous false memories.

Alternatively, according to the Associative Activation Theory (AAT; Howe et al., 2009), the formation of false memories depends on spreading activation. That is, experiencing an event (e.g., going to the market) activates a network of related nodes (i.e., related concepts and memories). When people activate a node (i.e., because they experience an event), they also activate other nodes that are related to the event but not necessarily experienced (e.g., going to the market and meeting a friend) causing the formation of false memories (e.g., meeting the friend).

Finally, the Source Monitoring Framework (SMF; Johnson et al., 1993) postulates that, during retrieval, people evaluate various sources of information by judging the memory characteristics (e.g., perceptual, contextual, affective) of these sources. Moreover, the framework holds that memories for an experienced event contain more perceptual, contextual, and affective characteristics than memories for non-experienced events (i.e., suggested or imagined). However, when a mental representation shares similar memory characteristics with memories for an experienced event, people have more difficulty to distinguish between the true and false sources of information. This difficulty makes them more likely to report source monitoring errors, which correspond to false memories.

## Factors Affecting the Formation of False Memories

### *Demographic Factors*

Several studies have taken into consideration whether individuals' age can determine the proneness to false memories. These studies have highlighted that people, in general, might report false memories regardless of their age although age differences have been shown in children and adults both for spontaneous and suggestive false memories. As a matter of fact, overall, it has been demonstrated that children are more likely than adults to develop suggestive false memories, while it seems that a contrary direction exists for spontaneous ones (for a review, see Rosendaul et al., 2023). To illustrate, studies on the misinformation effect have found that children are more susceptible than adults to accept misleading information both when verbal stimuli (e.g., Sutherland & Hayne, 2001) and actions (e.g., Otgaar et al., 2010) were administered. In addition, other studies underlined that this effect also occurs for children of different ages, such that younger children (4 years old) generally report more suggestion-based false memories than older children (9 years old) (e.g., Otgaar et al., 2010). By contrast, research on spontaneous false memories has suggested a developmental reversal effect. That is, by using the DRM paradigm, scholars have demonstrated that spontaneous

false memories are more frequent in adults than in children (Brainerd et al., 2008; Otgaar et al., 2016). The Associative-Activation Theory (AAT; Howe et al., 2009) explains this effect: Spontaneous false memories increase with age because adults have more knowledge available than children. In other words, the AAT postulates that once we retrieve information (e.g., an experience), spontaneous false memories may occur because of an automatic activation of related-information concepts, even when these concepts were not experienced. However, this spreading of activation depends on the maturity of the person's brain and knowledge base. In other words, children are less inclined to make automatic associations which lead to spontaneous false memories.

Another line of research has focused on the possible differences between women and men. Overall, most of these experiments, conducted by adopting DRM word lists eliciting gender stereotypes, have shown no specific differences due to participants' gender (Bauste & Ferraro, 2004; DeMayo & Diliberto, 2003). An example is the study by DeMayo and Diliberto (2003). The authors found a tendency to form more false memories for stereotypical female activities than for male ones, but without significant differences between women and men. Only a few studies have found significant differences between women and men. To illustrate, Sha'bani and colleagues (2019) investigated false memories in women and men by using DRM word lists differing in their emotional content (i.e., negative vs neutral) and gender stereotypes (i.e., female-stereotypes vs male-stereotypes) and found that there was a congruent-gender effect in false memories formation as well as an interaction of the gender stereotypes by the emotional content, such that women reported false memories especially for negative gender-congruent words. Surprisingly, to the best of our knowledge, research on suggestion-induced false memories seems to have not taken into account possible differences between women and men.

### *Cognitive Factors*

Several studies have shown that individual differences in terms of cognitive resources can influence people's tendency to report false memories (e.g., Battista et al., 2020b; Battista et al., 2021a; Gerrie & Garry, 2007; Leding, 2012; Peters et al., 2007). To illustrate, scholars have identified that individuals' ability of Working Memory (WM) (i.e., the system implicated in the active maintenance and manipulation of information, Baddeley & Hitch, 1974; Engle & Kane, 2000) predicts individuals' false memories formation. More specifically, people with a high availability of WM resources are less likely to develop false memories (e.g., Bixter & Daniel, 2013; Peters et al., 2007; Watson et al., 2005), and this finding has been found for both spontaneous and suggestive false memories (e.g., Bixter & Daniel, 2013; Jaschinski & Wentura, 2002; Peters et al., 2007; Watson et al., 2005; Zhu et al., 2010). For instance, Peters and



colleagues (2007) adopted the DRM paradigm and tested individuals' WM resources by using the Digit Span task. Based on the results on this task, they split the sample into people with high vs low WM resources, and analysed data on spontaneous false memories by observing that low WM people were more inclined to form spontaneous false memories than those with high WM. The same pattern of results was found by Zhu and collaborators (2010a) in a study investigating how cognitive differences impact the formation of suggestive false memories. In particular, the authors adopted the misinformation paradigm and a pool of different cognitive tasks to assess people's WM resources. In line with studies on spontaneous false memories, the authors detected a negative and strong correlation between individuals' availability of WM resources and false memories scores, suggesting that the higher the WM resources available the lower the proneness to report false memories. More recently, Battista and colleagues (2020) tried to disentangle the specific components of WM involved in this negative relationship by adopting a more ecological stimulus (i.e., video). They tested specifically the individuals' availability of the three components of Updating, Shifting, and Inhibition and found evidence that all these WM components are involved in the formation of false memories thus supporting the influence of cognitive factors on memory illusions.

Recently, researchers have highlighted that another cognitive factor that can lead to false memories is lying (for a review see Battista & Otgaar, 2022). Lying is considered a cognitive process because the act of lying is more cognitively demanding than simply telling the truth as it requires to suppress the truth and tell an alternative account of the original event (e.g., Vrji, 2008). Studies suggest that when an individual intentionally falsifies their account of an experienced event, this deceitful act can affect their initial recollection of the event even when they eventually reveal the truth (for a review see Otgaar et al., 2018). This influence results in reporting memory errors for the lied event (Battista et al., 2020a; Battista et al., 2021b,c; Battista et al., 2024; Buecken et al., 2022; Buecken et al., 2023; Dianiska & Meissner, 2023; Mangiulli et al., 2018; Mangiulli et al., 2019; Riesthuis, 2022; Li & Liu, 2022). Additionally, an increasing number of studies have demonstrated that the memory errors caused by lying depend on the type of lies chosen. That is, less demanding strategies (i.e., false denial) might result in omitting experienced details of the event while more demanding strategies (i.e., feigning amnesia and fabrication) might lead to false memories<sup>3</sup>. Furthermore, Mangiulli and collaborators (2019) asked participants to simulate a memory for a crime and then they tested their

memory by asking participants to give up their role of simulators. They found that simulators reported more false memories for the event than those who did not feign amnesia. Similarly, Riesthuis and colleagues (2022) tested whether fabricating a false alibi would make people report false memories concerning the fabricated event. Also in this study, researchers found a higher tendency of those who lied to report false memories than those who did not lie.

#### *Personality Factors*

The formation of false memories has been also associated with personality traits. Beyond research work investigating the link between false memories and personality disorders (e.g., schizophrenia, dissociative disorder) (e.g., Brebion et al., 2000; Bremner et al., 2000; Clancy et al., 2000; Sajjadi et al., 2023; Shilling et al., 2003), a few studies have shown that individual personality dispositions – non clinically relevant – such as extroversion, psychopathy, alexithymia, openness – relate with false memories susceptibility (e.g., Battista et al., 2021d; Battista et al., 2023; Mirandola et al., 2023; Frost et al., 2006).

For instance, in 2000, Porter and colleagues tested whether extroversion traits can be informative of false memories creation and found that people with low extroversion traits were indeed more likely to report false memories, specifically for their childhood. Subsequently, this evidence was confirmed by Frost and collaborators (2006) who tested the link between false memories and the four domains of introversion-extroversion, sensation-intuition, thinking-feeling, and judging-perceiving. They found that traits of extroversion are associated with false memories, although the strongest relationship was found for both the traits of thinking and feeling (i.e., feeling traits: Making decisions based on their own and others' emotions; thinking traits: Making decisions based on logic, principles, and reasons). This study, however, was criticized because of the low validity and reliability questionnaire used to measure personality domains (i.e., the Myers-Briggs Type Indicator; MBTI). Thus, other studies (e.g., Sanford & Fisk, 2009; Sigurosson, 2003) further explored the relationship between personality traits and false memories by using the NEO Five-Factor Inventory (NEO-FFI), a measure of personality characteristics based on the big five approach to personality (i.e., neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness). By adopting this questionnaire, Sigurosson (2003) found that people high on conscientiousness and high on openness were more vulnerable than other people high on other personality traits to report false memories. Sanford and Fisk (2009) found that people high in extroversion reported a higher number of false memories than those with low extraversion, and, in turn, people high in introversion were less likely to report false memories than people with low introversion.

3. False denials consist in denying the occurrence of the experienced event, feigning amnesia in reporting to not remember such an event, and fabrication is providing a completely false account of it (Otgaar & Baker, 2018)

Recent studies have also tried to understand whether traits of psychopathy would make people more or less susceptible to false memories. To illustrate, Mirandola and colleagues (2023) adopted an emotional (negative vs positive vs neutral) false memory paradigm, tested participants' psychopathic traits with the Psychopathic Personality Inventory-Revised (PPI-R), and found that psychopathic traits were involved in the formation of false memories. Specifically, they displayed that, when participants had high traits for PPI-R fearless dominance, they also reported fewer false memories for negative events. These results were in line with a prior study by Thjissen et al. (2013) aiming to verify the link between the precursor of psychopathy, i.e., callous-unemotional traits, in children and false memories for negative vs neutral information. These authors indeed showed that children having high callous-unemotional traits were less prone to report false memories for negative information than those with such a low trait. Another recent study focused the attention on the link between alexithymia and false memories (Battista et al., 2021). In this study, the authors adopted an emotional video, and assessed alexithymia through the Toronto Alexithymia Scale-20 (TAS-20): They discovered that individuals with a high level of alexithymia reported more false memories and forgetting for the original event than those with low alexithymia.

All the above-mentioned studies support for a link between personality traits and spontaneous false memories. However, there are also studies showing that personality traits can influence the proneness to suggestion-induced false memories (e.g., Liebman et al., 2002; Zhu et al., 2010). For instance, Liebman et al. (2002) found that false memories induced through the misinformation paradigm were positively associated with three subscales of the NEO Personality Inventory, specifically the openness dimension, and modesty and altruism of the agreeableness dimension. Similarly, Zhu and collaborators (2010) tested whether the personality traits of harm avoidance, self-directedness, novelty seeking, persistence, negative coping, reward dependence, and cooperativeness were associated with the incorporation of misleading information in the misinformation paradigm. The authors demonstrated that people with low traits of harm avoidance, novelty seeking, and negative coping were more likely to form suggestive false memories, while people high in cooperativeness, reward dependence, and self-directedness traits were less likely to form false memories due to misinformation.

### *Emotions*

Emotions can affect false memories creation in a twofold way. On the one hand, people's mood when experiencing an event can influence false memories. On the other hand, the valence of the event itself is another relevant factor determining false memories formation.

Regarding mood effects on false memories, Storbeck

and Clore (2005) used the DRM paradigm and tested the assumption that a positive mood (i.e., being happy) leads to more false memories than a negative mood (i.e., being sad) or a neutral one. Nevertheless, scholars have also underlined that the effect of mood on false memories formation depends on the type of emotional states taken into consideration (Cordon & Verrier, 2007; Corson, 2006; Semmler & Brewer, 2002). In other words, even when moods have the same valence at encoding and retrieval (i.e., mood congruency: e.g., sadness and anger: negative valence), they influence false memories in a different way because of a secondary component of emotion, namely the arousal (Semmler & Brewer, 2002). Indeed, Corson (2006) created different situations of positive and negative valence in terms of high and low arousal and found that a high level of arousal made participants -both in the negative and positive moods- report fewer false memories than those in a low level of arousal. In a subsequent study, Cordon and Verrier (2007) further tested how moods valence and arousal explain false memories. In a similar vein, they found that high arousal irrespective of the valence (i.e., negative vs positive vs neutral) led to fewer false memories than low arousal.

Additional interesting findings come from research unveiling possible differences in false memories based on the valence of the event. Emotions make events experienced in a more detailed and vivid manner than common neutral events and boost memory accuracy such that people better remember emotional events as compared to neutral ones (e.g., Kensinger, 2008; Laney et al., 2004; Levine & Edelman 2010; for a review, see Kensinger & Schacter, 2008). This memory enhancement for emotional - especially negative and highly arousing - information leads to reduced false memories and this has been observed in studies using different stimuli and procedure (e.g., Mirandola et al., 2014; 2017; Otgaar et al., 2012). For instance, Mirandola and colleagues (2014, 2017), by adopting a specific paradigm using emotional pictures, found that emotional events were generally associated with fewer spontaneous false memories than neutral events in young adults, both in the case of negative and positive events.

However, other studies have pointed out that the valence of an event can boost rather than reduce false memories formation (e.g., Otgaar et al., 2019; Otgaar et al., 2019b; for a review, see Bookbinder & Brainerd, 2016). For example, Brueckner & Moritz (2009) by presenting emotional -as opposed to non-emotional - contents found more false memories for negative than for neutral material in adults (but see also Gallo et al., 2009). This pattern of findings is also supported by studies investigating how valence affect suggestive false memories (e.g., Hess et al., 2012; Monds et al., 2016; Porter et al., 2003; Zhang et al., 2021). Porter and colleagues (2003) asked participants to watch a positive, or neutral, or negative event; then, half of participants were exposed to misleading questions while the second half were in the control condition. The authors found that, in general,

people recalled the misleading information as part of the original event, and this was particularly frequent in those who watched the negative event. Indeed, people in the negative condition reported more suggestion-induced false memories than those in the positive and neutral conditions. Similarly, van Damme et al. (2014) replicated this pattern, by showing participants different pictures (i.e., positive vs negative vs neutral) and then providing misinformation to half of the sample. Findings demonstrated that false memories due to misinformation were higher for negative events than for positive and neutral (van Damme et al., 2014).

However, also for suggestion-induced false memories, there are a few studies showing that the valence of the event decreases false memories production (e.g., English & Nielson, 2010; Brown & Schaefer, 2010; Doss et al., 2020; Kesinger et al., 2016; Schmidt et al., 2013). For instance, Schimdt et al. (2013) tested participants memories for negative and neutral events by adopting the misinformation paradigm and found that people were less prone to report suggestive false memories for negative events than for neutral ones. Doss and colleagues (2020) extended this result by taking into consideration also positive pictures and demonstrated that people report fewer false memories for negative memories as compared to both positive and neutral pictures. In addition, Kensinger et al. (2016), in two experiments using a social conformity paradigm and pictures, found that people are likely to report fewer false memories for negative and positive pictures than neutral ones. In this study, participants were presented with positive, negative, or neutral events and, after a delay of 48 hours, engaged in a discussion with other people where wrong information was introduced by a confederate (another researcher participating along with actual participants). Those who watched the emotional events (i.e., both positive and negative) reported fewer false memories than those in the neutral condition as a consequence of the discussion.

## The Implications for Italian Forensic Psychologists

In contrast to what occurs in other European countries (e.g., the Netherlands, Belgium) where forensic psychologists are oftentimes asked to evaluate the reliability of statements, the Italian jurisdiction does not allow psychology experts to express their opinion concerning the accuracy of a statement. Indeed, forensic psychologists called to work in the courtroom can only provide an evaluation of the person's (children, people with mental disabilities, etc.) ability to provide a testimony when required by the judge. Importantly, this evaluation needs to be done based on the scientific literature, in line with the Daubert standard and as underlined in the Cozzini ruling (Cass. Pen., Sez. IV, n. 43786/2010): "*Experts should be called upon not only to express their personal, albeit qualified, judgment but also to outline the scenario of studies and provide elements that allow*

*the judge to understand whether, considering the different scientific representations of the problem, it is possible to arrive at a 'metatheory' capable of reliably supporting the reconstruction. The judge is ultimately called upon to give an account of this complex investigation in the reasoning, explicating the available scientific information and providing a rational explanation, in a complete and understandable manner for all, of the assessment carried out.*"

The article 196 of the Italian Penal Code, while underlying that each person can provide a testimony, leaves the judge the possibility to require an assessment of the person's physical and mental eligibility to testifying on certain occasions. For instance, this might occur when the person has a mental disability or for elderly people. This psychological evaluation implies a) the verification of the person's ability to understand questions and answer accordingly, along with b) sufficient memory regarding the facts to be testified about, and c) a full consciousness to report them truthfully and completely (Cass. Pen., Sez. III - 14/03/2023, n. 24365).

Another case in which Italian forensic psychologists might be required to evaluate the person's eligibility to testify is when the witnesses are children, as their natural immaturity raises doubts on the mental abilities needed to testify. For these special cases, the Italian community of researchers and forensic professionals has set up some *ad hoc* experts' Guidelines called "Carta di Noto"<sup>4</sup>, aiming to clarify which type of assessment can be operated: "*The ability to testify on which the expert is called to express an opinion includes generic and specific skills. The former concern cognitive functions such as memory, attention, comprehension, linguistic expression skills, the ability to identify the source of information, the ability to discriminate between reality and fantasy, the plausible from the implausible, etc., as well as the level of suggestibility and psycho-affective maturity. Specific skills concern the minor's ability to organize and report the memory in relation to the experiential complexity of what is supposed to have happened and the possible presence of suggestive influences, internal or external (resulting from interaction with adults or peers) that may have interfered with the account.*" (Carta di Noto 4, dated October 14, 2017, see also Cass. Pen., III Sez. n. 37147/2007)<sup>5</sup>. These Guidelines provide a methodological pathway to be followed by experts in order to avoid the production of witnesses' false memories, and, although specifically intended to children's assessment, contain important hints also applicable to adult witnesses (e.g., on the general functioning of autobiographical memory, the adoption of evidence-based approaches and procedures, etc.). To illustrate, following the recommendations of Carta di Noto, and in accordance

4. The "Carta di Noto" serves as a comprehensive document offering guidelines to professionals regarding the assessment of children's testimonial capacity, particularly in cases where they are alleged victims of sexual abuse.

5. Note that this is a literal translation from Italian to English.

with the literature review provided in the previous pages, Italian experts are advised to make use of scientific findings pertaining to the role of individual factors (e.g., demographic information, cognitive and personality traits) on the witness' ability to generally recall information (i.e., generic ability to testify). On the other hand, the evaluation of external factors (i.e., social pressure, discussions with other people, lying) and their impact upon the individual's memory functioning are informative on the abilities of the witness to report peculiar information concerning the events under investigation (i.e., specific ability to testify).

In addition, apart from situations in which forensic psychologists are directly called by the judge to help them in their final evaluation (i.e., *peritus*), they can engage in various collaborative activities with lawyers both before and outside of legal proceedings (i.e., trial consultation; Scardigno, Curci & Mininni, 2017). These activities may include crime reconstruction, assistance for legal defence investigation, and preparing for cross-examination. Trial consultation represents a valuable opportunity for the involved parties, such as the defence and prosecution, to acquire pertinent information for effective lawsuit management. In these circumstances, for instance, psychologists might offer their expertise in determining which witnesses to propose during the trial proceedings and how to interview them (Caso & Palena, 2018), by relying on findings on individual differences in the formation of false memories.

Finally, as suggested by Conway (2012) and Curci and colleagues (2020), forensic psychologists with a solid scientific preparation, have the potential to provide valuable guidelines and criteria, derived from the examined scientific evidence, for practitioners working in the Courtroom. Indeed, experts' advice might be determinant to facilitate the task of judges and jurors of determining the credibility of witnesses (Bianco & Curci, 2016), and would also contribute to reduce miscarriage of justice, oftentimes still based on naïf criteria instead of scientific evidence.

## Conclusions

The current work aimed to present the main findings concerning individuals' proneness to report false memories by focusing on the main factors influencing this proneness. In particular, we highlighted the different influence of age, gender, individuals' cognitive and personality traits and emotions (i.e., mood and emotional valence) on false memories. We did stress that different factors can affect false memories formation (i.e., age, cognitive and personality traits, moods, emotional valence of the event), even though, in some cases, studies do not always present the same pattern of results (e.g., the emotional valence of the event). Therefore, research on false memories is still necessary. In addition, these findings should carefully be considered by forensic psychologists

while working in the courtroom by taking firm that an evidence-based evaluation of each case is always recommended for justice purposes.

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## A tale of two worlds: life and death in prison. A comparison between Italy, and England and Wales

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### Abstract

Suicide is a public health concern around the world. Undoubtedly suicide is not a discrete event, and certainly it is not a pathology, and this is the only certainty that sustains the otherwise complicated spectrum of suicide. Suicide is essentially a psychological pain that becomes intolerable. The causes of suicide are not fully known but suicide behaviour is the complex outcome of a long-consuming suffering process.

The aim of this paper is to direct attention to suicide in the prison environment by looking at the suicide trends in Italy, and England and Wales, countries that differ in many ways for their responses to the problem but that they share the same responsibility and duty: humanising and making prison conditions liveable. The interest is to look at vulnerability and suicidality risk of inmates and to see whether prison conditions increase the risk of suicide or could, in some situations, even accelerate and encourage suicide. The practice of assessment of dynamic (also precipitating and acute) risk factors, and of the specific needs of the prison population, should become part of a preventive practice, dedicated not only to tackle suicide but more importantly improve the health conditions of people in prison.

**Keywords:** Suicide, prison, precipitating factors, risk assessment, prevention.

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## A tale of two worlds: life and death in prison. A comparison between Italy, and England and Wales

### Introduction

Suicide is a public health concern around the world (Favril, 2021): it is ranked as the 15<sup>th</sup> leading contributor to years of life lost (Taksler et al., 2017; Vos et al., 2020), and in 2019 it was the fourth leading cause of death among 15–29-year-olds globally (WHO, 2023). According to the WHO (2023), every year about 703.000 people take their own lives, and many more attempt suicides. The causes of suicide are not fully known but suicide behaviour is likely to be the complex outcome of a long-consuming suffering process. Psychological, relational, social and contextual factors, along with psychopathological conditions, have a critical role in influencing the person who intentionally decides to take their own life.

Suicide rates in prisons in developed countries are 3–8 times higher than in the community (Fazel et al., 2011). Specifically, epidemiological and clinical data show that incarcerated offenders are at an increased risk of contemplating, attempting, or dying by suicide compared to adults in the general population (Favril, 2021), and also when compared with people of similar age and sex who are living in the community (Zhong et al., 2021), representing a significant burden of morbidity and mortality in prisons worldwide.

The aim of this paper is to address the complex issue of suicide in prison by looking at the suicide trends in Italy, and England and Wales, countries that differ in many ways for their responses to the problem but share the same responsibility and duty: humanising and making prison conditions liveable. The interest is to look at the conditions that increase vulnerability risk in inmates and might even accelerate and encourage it. This paper starts with a brief description of the psychology of suicide and of its definition so as to analyse then the situation of suicide in prison.

### The psychology of suicide

Suicide is essentially psychological pain, and according to Shneidman (1993, p. 145) suicide is caused by *psychache* (two syllables – sik-ak).

«*Psychache* refers to the hurt, anguish, soreness, aching, psychological pain in the psyche, the mind. It is intrinsically psychological – the pain of the excessively felt shame, or guilt, or humiliation, or loneliness, or fear, or angst, or dread of growing old, or of dying badly, or whatever. When it occurs, its reality is introspectively undeniable» (Shneidman 1993, p. 145).

Suicide always involves “an individual’s tortured and tunneled logic in a state of inner-felt, intolerable emotion” (Leenaars, 2010, p. 10). This means that the individual suicide thresholds for enduring psychological pain vary (Shneidman, 1993).

Hilman (1964/2020) draws attention to the importance of recognising the suicide threat as “a confusion of inner and outer” (p. 63). Indeed, each of us suffers when we confuse psychic reality with concrete events (especially when they are traumatic, ambiguous and negative), because by doing so, the person symbolises life and distorts reality. Therefore, the opposite also influences our well-being: “We suffer when we are able to experience psychic reality only by acting out fantasies and ideas” (Hilman, 1964/2020, p. 63).

According to Shneidman (1993), suicide is not an adaptive act, but it is adjustive in the sense that it serves to reduce the tension of the pain related to the frustrated needs. Hence, while the *common purpose* of suicide is to seek a solution, the *common cognitive state* is ambivalence and the *common perceptual state* is constriction (Leenaars, 1999, p. 225; Leenaars, 2010, p. 9).

### Definition of suicide manifestations

Undoubtedly suicide is not a discrete event, and certainly it is neither pathology nor a disease per se, and this is the only certainty that sustains the otherwise complicated spectrum of suicide. Despite the extensive scientific literature, to define suicide is complex because it is still poorly understood, and the comprehension of suicide requires an integration of different scientific perspectives.

While extensive nomenclatures for suicide-related terminology have been proposed over time (Brenner et al., 2011), there is not a specific and widely adopted definition. Some authors (Turecki et al., 2016, 2019) have proposed a simplified classification that includes broad terms: suicide, suicide attempt, suicidal behaviour, suicidal ideation, and self-harm (see Table 1).

Suicide is characterised as a self-injurious behaviour that has a fatal outcome and is associated with at least some intention to die, which is the consequence of the act (Favril, 2021; Zara & Freilone, 2023).

Suicidal ideation is sustained by passive (only with the desire to die but without a plan) or active (with a plan) thoughts of suicide that are not accompanied by preparatory behaviour.

Term	Definition
Suicide	Intentionally ending one's own life.
Suicide attempt	Non-fatal self-harming behaviour or self-injurious non-fatal behaviour with presumed or actual intent to die.
Suicidal behaviour	Self-harming behaviour that can lead to ending one's own life, whether fatal (suicide) or not (suicide attempt). This term excludes suicidal ideation.
Suicidal ideation	Suicidal ideation is used interchangeably with suicidal thoughts and implies any thought (or wish) of ending one's own life, with (active) or without (passive) a clear plan for suicide.
Non suicidal self-injury	Self-injurious behaviour without any intent to die.
Self-harm	Self-injurious or non-fatal self-harming behaviour with or without intention to die. This term does not distinguish between a suicide attempt and non-suicidal self-injury (i.e. self-harming behaviours without any intent to die).
Suicide risk	It is a composite concept that includes both an individual risk to contemplate (suicidal ideation or thoughts) and attempt or die (suicidal behaviour) by suicide. The interplay between <i>predisposing</i> (i.e. diathesis and distal) and <i>precipitating</i> (e.g., proximal, triggering or stress) factors, along with some developmental factors and life events (e.g., social and environmental factors, and acute risk factors), contribute to suicide risk.

Source: Adapted from Favril, 2021; Turecki et al., 2019  
 Table 1 - Terms and definitions of the suicidal spectrum

Table 1 also includes a description of suicide risk (Favril, 2021) that is a composite concept that refers to an individual risk to contemplate (suicidal ideation or thoughts), attempt or die (suicidal behaviour) by suicide. The interplay between *predisposing* (i.e. diathesis and distal) and *precipitating* (e.g., proximal, triggering or stress) factors, along with some developmental factors and life events (e.g., social, environmental and acute factors), contribute to suicide risk.

### Risk factors for suicide

Factors that have been associated with suicide over time can be grouped into the following categories: personality and individual differences, cognitive factors, social factors, and negative life events (O'Connor & Nock, 2014). These categories become particularly relevant when a person is involved in a criminal career and ends up in prison, where the sense of control over one's own life is completely dependent on the rhythm imposed by the system, and by the distance between the inside and the outside world (Crewe, 2021).

Among personality and individual characteristics,

different traits have been associated with suicidal behaviour. For instance, both hopelessness (pessimism for the future) and perfectionism (belief that other people hold unrealistically high expectations of an individual) were found to be consistently associated with suicidal ideation and behaviour (Beevers & Miller, 2004; Brezo et al., 2006). Similarly, impulsivity, defined as novelty-seeking behaviour, or as short attention span, is considered a risk factor for suicide or self-harm, especially in young people (McGirr et al., 2008) and in individuals with personality disorders (Boisseau et al., 2013). Yet the combined effects of high neuroticism (people who are more sensitive to distress) and low extroversion (individuals who are socially isolated) can be a strong predictor of suicide (Fang et al., 2012). From a psychopathological perspective, the most widely studied risk factor for suicidal behaviour is the presence of a psychiatric disorder. Findings from post-mortem studies suggest that more than 90% of people who die by suicide have a psychiatric disorder before their death (Cavanagh et al., 2003). However, most people with a psychiatric disorder never experience suicidal thoughts or make suicide attempts (Bostwick & Pankratz, 2000).

Cognitive factors can also contribute to suicidal behaviour. Particularly cognitive rigidity, impaired decision making, rumination, and reduced coping strategies were found to be associated with suicidal thoughts and attempts (Miranda et al., 2012). Furthermore, the lack of social relationships and the subjective perception of a hindered belongingness have been proved to predispose individuals to the development of suicidal thoughts and behaviour (Hatcher & Stubbersfield, 2013). Similarly, personal perceptions that one is a burden to others has been found to be an independent predictor of suicide ideation in different populations (Carter et al., 2022).

Among social factors, family history of suicide increases suicide risk, suggesting at least a partial effect of intergenerational transmission (Qin et al., 2002). Lack of social support and social isolation have similarly been identified as key factors in suicidal behaviour (Haw & Hawton, 2011). Negative life events, especially childhood adversities, traumatic experiences during adulthood, physical illness, and other interpersonal stressors (including family problems, legal difficulties, and loss of income) can increase the risk of suicidal behaviour (Bruffaerts et al., 2010). Evidence shows that the risk of suicidal behaviour is significantly high in people who are socially disadvantaged (e.g., low income and education, unemployment) (Hawton et al., 2009, 2012; O'Connor & Nock, 2014).

Although the suicidal ideation takes place within the individual's head, most suicidal tensions are between two realities (the person and the outside world) (Shneidman, 1985): the precipitating factors that likely mediate between the individual psychology and the person's adjusting mechanisms to a life in prison add up to a multitude of factors that make an individual's life

unbearable. In other words, death by suicide itself is an extremely dyadic event (Leenaars, 1999, pp. 183-184).

Determining an individual risk of suicide is particularly challenging *per se*, so there is a need to address the state of emergency that many prisons in Western countries are facing, including Italy, and England and Wales.

## Research evidence on suicide in prison

According to Favril's (2021) systematic review, the available evidence suggests that prison-specific stressors (*the deprivation of the environment*) may exacerbate suicide risk in an already vulnerable population (*the importation factor*) that has complex health and social care needs. As suicide risk is determined by a complex web of factors, the focus should always be on the interaction between the individual (importation) and their prison environment (deprivation).

By updating a previous systematic review (Fazel et al., 2017), Zhong and colleagues (2021) explored the impact of criminological, clinical and institutional factors upon suicide. Seventy-seven eligible studies were identified (of which 43 were new studies not identified in the 2017 review) from 27 countries<sup>1</sup> that included 35,351 suicide cases in prison. The variable of "not being a citizen of the country of incarceration" was inversely linked to suicide risk, and there was no clear association with age. Moreover, no clear association was found between suicide and having no formal education beyond age 16. Only two studies (Opitz-Welke et al., 2016; Rivlin et al., 2012) examined separately the risk of suicide in male and female inmates, and showed similar associations between some non-modifiable factors across sexes. The strongest clinical factors associated with suicide were suicidal ideation during the current period in prison, a history of attempted suicide, having a history of self-harm, and current psychiatric diagnosis (e.g., depression diagnosis), and alcohol misuse.

Findings from a previous meta-analysis of Fazel et al. (2016) are in line with these results, suggesting that the risk of suicide in recently discharged forensic psychiatric patients was particularly high, with 6 studies showing a crude death rate (CDR) of 325 per 100,000 person-years (95% CI 235-415). It seems clear that offenders with a history of mental illness have a higher likelihood of suicide than controls without mental illness (Fazel & Seewald, 2012). Berman and Canning (2021) examined proximal risk for suicide in correctional facilities: being a newly admitted prisoner is one of the strongest risk factors for suicidal behaviour in prison (Zhong et al., 2021), along with current suicidal ideation, a history of suicide attempts, and a diagnosis of a current mental disorder.

For example, Berman (2018) found that the majority of patients who died by suicide experienced current anxiety/agitation, sleep disturbance, and social isolation and withdrawal within days of death, despite denying current suicidal ideation (SI) at the last interview. Researchers (Galynker et al., 2017), in proposing diagnostic criteria for a suicide crisis syndrome (SCS), identified persistent and desperate feelings of "frantic hopelessness", entrapment (an urgency to escape an unbearable life situation when such escape is perceived and felt as impossible), affective disturbance, and hyperarousal, all to be possible signs of near-term risk. The variable of *overarousal* (e.g., agitation, irritability, insomnia, or nightmares) seems to be in line with what is defined as "acute suicidal affective disturbance" (ASAD) (Rogers et al., 2019). These observed symptoms and behaviours, especially in combination with concurrent and acute factors specific to the correctional setting, such as transfers, impending court appearances, disciplinary actions, recent "bad news" arriving indirectly to the inmate (e.g., death of a family member, *fait accompli* of divorce from partner, etc.) might well describe the specific factors that affect the suicide risk among inmates.

The impact of the constraints of incarceration on perceived pathways leading to hope appeared to reduce the potential of hope as a protective factor when external controlling factors were taken into account (Pratt & Foster, 2020).

In Zhong et al. (2021) meta-analysis, institutional factors associated with an increased risk of suicide included occupation of a single cell and having no social visits. Regarding these factors there was substantial heterogeneity between studies. Poor physical health was not significantly associated with suicide, although this could be due to the small sample available to assess this factor. Criminological factors included remand status, serving a life sentence, and being convicted of a violent offence. Specifically, an index sexual offence and homicide are associated with increased risk. Conversely, conviction for a drug offence showed an inverse association with suicide. Being sentenced was associated with a reduced suicide risk when compared with detainee or remand status, which is characterised by uncertainty about their future and ambiguity about their present. It is often the "being in between" condition that provokes psychological uneasiness in a person.

### *The long-term impact of imprisonment upon mental health*

The detrimental impact that a criminal career has upon the quality of life (Shepherd et al., 2009) is more evident when offenders are attempting to follow a pathway towards criminal desistance (e.g., detaching themselves from a life of crime) and re-entry into society) after prison. Two systematic reviews and meta-analyses are worth mentioning.

According to Skinner and Farrington (2020), what is

1 Austria, Australia, Belgium, Canada, Denmark, England and Wales, France, Germany, Iceland, Italy, [the] Netherlands, New Zealand, Norway, Scotland, Spain, Switzerland, USA, and from 10 countries in South America

less known is the risk of suicide for community (non-institutional) offenders without psychiatric histories. Their work is the first to systematically and meta-analytically analyse the risk of suicide in offenders who were not, or who were no longer incarcerated, and who did not have a recorded history of psychiatric disturbance. Skinner's and Farrington's (2020) meta-analysis shows that, compared with the general population, community offenders usually have a significantly elevated likelihood of suicide at any age. This finding was confirmed for ex-prisoner samples who, in comparison with the general population, have high odds of suicide as expected, but their risk for suicide was significantly less than offenders who have not been incarcerated, when compared with the general population. As offender populations are drawn from socio-economically deprived backgrounds, with reduced access to health care and health seeking behaviour when living in the community, community offenders and people released from prison may be at heightened risk of death by suicide.

Zlodre and Fazel (2012) systematically reviewed studies reporting on mortality following release from prison. They identified 18 cohorts with information on more than 400,000 released prisoners resulting in 26,163 deaths of which 8% of these deaths were attributed to suicide. Offenders living in the community represent a vulnerable group that needs targeted intervention to reduce suicide rates across the lifespan. The antisocial lifestyle that offenders lead outside a secure environment poses a significant health risk and the prevention of this criminal lifestyle should be seen as a future public health challenge (West & Farrington, 1977). Certainly, these findings do not intend to suggest that offenders' length of stay in

prison should be prolonged so as to offer a more secure environment for those at high risk of suicide, but they should be taken as a warning. It is the joint responsibility of prison, probation, health and social services to work more collaboratively in the provision of services for this high-risk group (Skinner & Farrington, 2020).

The importance of recognition and treatment of mental health problems among prisoners is underscored by research, and the strong associations reported should be considered in health-care service development and prison policy. Mental health services do not only need to be universally available to people in prison, but also adequately resourced and linked to effective interventions to address the higher prevalence of mental health diagnoses among prisoners in comparison with community-residing people.

### Italy and its suicide rates in prison

Suicide in Italian prisons in the last 30 years exhibited a zig-zag trend, as shown in Figure 1, and what is evident is that there has not been a significant decrease in the number of inmates who succeed in their suicidal intent and behaviour. The «list of shame», attributable to the Italian penitentiary system, is made up of 1739 inmates who died by suicide since 1992.

In 2022, 85 suicides (of whom 80 were males and 5 women; 57.6% Italian *versus* 42.4% foreigners; among all 20 were homeless people) were counted during the year: 8 in January, with 5 in the first 14 days<sup>2</sup>. In 2023, 68 were the cases of suicides counted in Italian prisons. Unfortunately, by the end of January 2024 deaths by suicide in prison totalled 13 (one of them died by self-starving to death). In addition, there were several cases of self-harm, attempted suicide and assaults on staff and

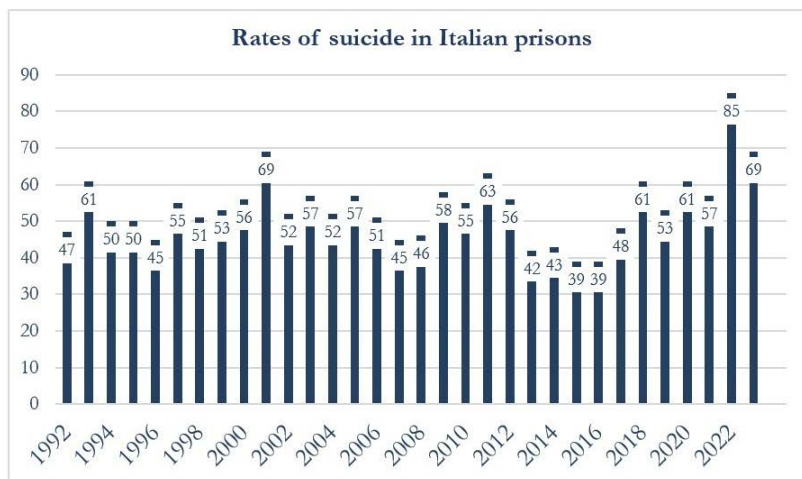


Figure 1 – Historical trend of deaths by suicide in Italian prisons

Source: Adapted from the Report of the National Guarantor of Persons Deprived of Liberty (2023) and Ristretti Orizzonti<sup>3</sup>

2 Garante Nazionale dei diritti delle persone private della libertà (2023). *Per un'analisi dei suicidi negli Istituti penitenziari [An analysis of suicide in prison]*. Studio a cura dell'Unità Privazione della libertà in ambito penale [The study was carried out by the Unity of Privation of Liberty in the penal context]: Emanuele Cappelli, Giovanni Suriano, Davide Lucia, Tiziana Fortuna, and with the collaboration of Nadia Cer-

sosimo. Rome. The updated report is available at: [https://www.garante-nazionaleprivatiliberta.it/gnpl/pages/it/homepage/dettaglio\\_contenuto/?contentId=CNG14581&modelId=10019](https://www.garante-nazionaleprivatiliberta.it/gnpl/pages/it/homepage/dettaglio_contenuto/?contentId=CNG14581&modelId=10019)

3 For further information see: <http://www.ristretti.it/areestudio/diaggio/ricerca/>

other inmates.

In line with the research findings mentioned above (Favril, 2021; Zhong et al., 2021), the legal position of those inmates who took their own lives offers important food for thought. In 2022, of the 85 persons who died by suicide in Italy, 39 were definitively convicted and 5 were in a “mixed position” which means that they were already convicted for previous crimes while still awaiting judgement for new crimes committed. The others were 7 inmates who made an appeal (appellants) and 2 inmates who had started an application against whom a criminal sentence of second instance was passed and were, then, awaiting trial at the Higher Court. This means that most of them ( $n = 44$ ) were in a definitive position in prison: 38 had residual sentences of up to 3 years, while 5 of them had completed their time within 2023. Only a small proportion of them ( $n = 4$ ) had a residual conviction of more than 3 years, and only 1 had a residual conviction of more than 10 years. It is also relevant to mention that approximately 60% of them ( $n = 50$ ) committed suicide in the first six months of detention.

Another aspect to consider is in which prison wards (high security *versus* medium security) suicide is more likely to occur. For instance, the 85 cases of deaths by suicide in Italian prisons in 2022 (see Report of The National Guarantor of Persons Deprived of Liberty) occurred in medium security wards ( $n = 72$  suicides; 84.7%). This aspect deserves attention because it seems to frame prison suicides within a unifying situation in which intolerable life conditions constitute the «normality» behind the prison regime.

#### *Conditions of vulnerability in Italian prison*

The conditions of vulnerability that were behind all these deaths by suicide cannot be ignored. Vulnerability is associated with the disrespect of certain rights (Adorno, 2016): the right to life, to dignity, to privacy, to family life, to health care, to education, and so on (see *The United Nations Declaration on Human Rights - UNDHR*, 2009). Although people enter prison with a range of preexisting vulnerabilities, as Heaslip and colleagues (2023) suggest, “the prison environment may make these intolerable or create new ones (environmental and human connectiveness dimensions of vulnerability)” (p. 123). If the environment of the prison is this, then it occurs to us that a prison that suffers is a prison that makes people suffer (Buffa, 2011, 2013).

Notwithstanding vulnerability is a broad concept and that detention is a condition of vulnerability *per se*, with «vulnerability» is meant that condition in which the person’s wellbeing is at an heightened risk because of uncertainty, discrimination, loss of human connection, isolation, environmental instability, poor health, limited health care facilities, stigmatisation, fear of harm, conflicts. If these vulnerabilities are not addressed, instead of acting as a facilitator of rehabilitation (Chen & Shapiro, 2007; Heaslip et al., 2023), prison may in fact lead to an

increase in antisocial attitudes and violent behaviour, not only towards others but also towards oneself (i.e. self-harm and suicide) (Zara & Freilone, 2023), but also of an enhanced sense of insecurity and distrust (Chisari, 2023).

Another condition of vulnerability is overcrowding which, paradoxically, exacerbates the sense of loss and isolation that the person feels when lacking privacy and an intimate space with oneself. In Italy the prison system suffers from an overcrowding of 127.54%, made up of 60,328 inmates, 13,000 more than the 47,300 places available.

The critical point in the density of the inmate population is exacerbated by the way in which the new medium-security detention regulations are implemented, whereby if people are not engaged in social, education, recreational, and treatment activities they remain locked in their cells. The risk of violation of rights and dignity of the people in prison is high and the need for urgent measures is paramount, for which the European Court of Human Rights has indicated the strong presumption of inhuman treatment, in violation of Article 3 of the Convention.

It is relevant to mention that findings on the link between suicide risk and prison overcrowding are inconsistent due to several influencing factors, including effects on staff-prisoner interactions (Zhong et al., 2021) and protective effects from double occupancy of single cells (van Ginneken et al., 2017). Countries with low incarceration rates are likely to have a higher proportion of people in prison for serious violent offences, with a potentially elevated suicide risk, compared with countries with high incarceration rates (which include prisoners convicted of non-violent offences, with lower risk for suicide) (Fazel et al., 2017).

According to Gianfrotta (2023), inmates appear to commit suicide in prisons not because they cannot cope with the narrowness of the spaces or the limitations that the detention regime entails on their social life, but for how unstable, unhealthy and psychological insecure life in prison is, especially for the most vulnerable ones. If this were the case, there would have been far more suicides among high-security inmates than the 2 that occurred last year in Italy.

Certainly, more studies are necessary not only to understand how to make prison conditions an «opportunity for life» but especially how to concretely implement conditions that promote an improvement in human wellbeing, and for adequate individualised treatment (Romano et al., 2023).

#### **England and Wales and their suicide rates in prison**

The prison population in England and Wales averages around 85,000 individuals incarcerated at any one time. England and Wales have the highest incarceration rate in Western Europe, with rates per capita averaging 159 per 100,000 of the population (Sturge, 2023). This is a

notable difference when compared with Italian incineration rates of 102 per capita (just under 60,000 prison population at the end of 2023).

The suicide rate of male prisoners in England and Wales was found to be 5 times higher than that of the general population between 1973 and 2003 (Fazel et al., 2005). The Ministry of Justice and National Offender Management Service<sup>4</sup> shares statistics on prisoners experience publicly. The most recent statistics<sup>5</sup> published on the 25<sup>th</sup> of January 2024 show that 93 “self-inflicted” deaths were recorded in 2023, and the majority of these were a result of hanging. This suicide method has been identified as common in the mid to late 2000s as well (Humber et al., 2013).

There are however some difficulties in establishing trends over time because of terminology used and how deaths are categorised. Statistics for prison suicide in England and Wales included drug related deaths before 2008; it was not possible to ascertain whether deaths defined as “self-inflicted” were suicide or accidental drug overdose. From 2008, statistics distinguished between drug-related and suicide, therefore, Figure 2 includes statistics from 2008 to current (unfortunately until only 2019), to represent rates of deaths in prison confirmed as suicide<sup>6</sup>.

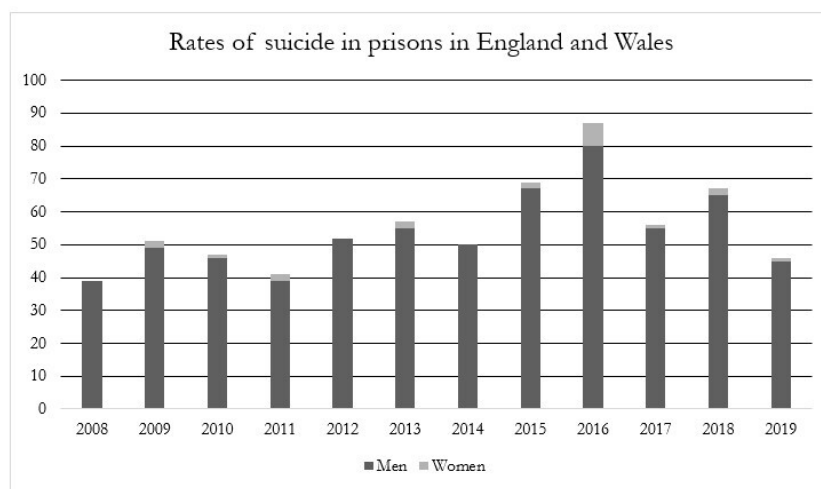


Figure 2 – Historical trend of deaths by suicide in England’s and Wales’ prisons  
Source: Drug-related deaths and suicide in prison custody. *Office for National Statistics*. (ons.gov.uk)

Inmates seemed to be at especially high risk when they are on remand or when they have just entered a new custody situation<sup>7</sup>. This is in line with what happens in Italy, and with Coid et al.’s (2002) previous research. Self-harm in custody was also commonplace, and in the year preceding September of 2023, over 12 000 prisoners, for a total exceeding 65 000 events, were reported to have self-harmed.

#### *Research evidence on mental health conditions in British prisons*

Members of The Prison Research Centre at the Institute of Criminology at University of Cambridge have carried out a multiple decade long research programme

into prisons, the prison experience (including some early and ground-breaking work on suicide), and prison conditions in the UK (Liebling, 1992; Liebling & Arnold, 2004; Liebling et al., 2019).

40 years ago, Coid (1984) conducted a review on papers to establish estimates of mental health problems in prisons. Out of the 11 studies that met the inclusion criteria for his review, four or five of these were carried out in the UK. The UK studies included spanned a period of 40 years (from 1950 to 1980), and the sample sizes ranged from 72 to 1800 prisoners. The findings varied depending on the study in question, but intellectual disabilities were estimated as high in the earlier studies and except for personality disorders (which had a high prevalence), most mental health problems showed a prevalence of less than 15 % across studies (see also Coid, 1984, Table 1, p. 80 for more detail on the included studies and their results).

4 See <https://www.gov.uk/government/collections/safety-in-custody-statistics>

5 See <https://www.gov.uk/government/statistics/safety-in-custody-quarterly-update-to-september-2023/safety-in-custody-statistics-england-and-wales-deaths-in-prison-custody-to-december-2023-assaults-and-self-harm-to-september-2023#fn:3>

6 See <https://www.gov.uk/government/collections/safety-in-custody-statistics>

7 See Drug-related deaths and suicide in prison custody - Office for National Statistics (ons.gov.uk)

In 2002, Coid and colleagues (2002) reported their findings from a comprehensive prison survey with a sample of over 3 000 prisoners (with response rates of over 75 % for both stages of the survey) in England and Wales. Mental health problems were common. For example, the prevalence of psychotic symptoms ranged 7-14 %, for “depressive episode” (Coid et al., 2002, p. 247) it ranged from 8 % to 21 %.

What these studies reported is that mental health problems are common amongst prisoners in England and Wales and have been for quite some time. Several prisoners do also report suicidal ideation within the prison context (Coid et al., 2002; Tyler et al., 2019).

Relatedly, and not discussed above, is the high prevalence of personality disorders (Coid, 1984; Coid et al., 2002; 2009; Tyler et al., 2019). In the recent study by Tyler et al. (2019), more than half of the inmates were found to have a personality disorder. There also appears to be comorbidity between personality disorders in prisoners and in secure hospitals in England (Coid, 2003). Of specific relevance to the current context is that borderline personality disorder (BPD) is quite common (e.g., Coid et al., 2002; 2009; Tyler et al., 2019). One of the criteria for this disorder is suicidal ideation and self-harm (American Psychiatric Association, 2013), and it has been found to increase the likelihood of self-harming behaviour in prisons (Knight et al., 2017).

#### *Understanding prison self-harm and suicide in adult prisoners in England and Wales*

Humber et al. (2013) carried out a unique case-control study on 220, predominantly male, suicides that had taken place in prisons in England and Wales. Each of these suicides were carefully matched for comparison purposes. The authors took great care to ensure that the matching took potential confounding variables into consideration and were able to access comprehensive information on both potential importation and deprivation factors. The results of the initial analyses showed that a wide range of factors related to both past mental health problems and the prison context were related to suicide. Some of the notable significant factors were past violent behaviour and offending, being on remand, being allocated in a single cell, and past and present mental health problems (Humber et al., 2013). Of interest is the finding of past violent behaviour because an identified challenge when trying to understand suicide in prison is the issue of *dual harm* (Slade et al., 2020, p. 182), which is the coexistence of a history of violence and self-harming behaviour within the same person. The strongest independent predictor however in Humber et al. (2013) was previously having engaged in self-harming behaviour.

The presence of self-harm in prisons in the UK has received some academic interest in past decades (Maden et al., 2000), but more recently Hawton et al. (2014) conducted a comprehensive study on self-harm in prisons in England and Wales. As shown by the more recent

“Safety in Custody” statistics, self-harm was a common occurrence amongst prisoners in the mid-to late 2000s (Hawton, 2014). Hawton et al. (2014) investigated gender specific relationships between self-harm and suicide. For males, there were a set of factors that were associated with increasing risk for suicide amongst prisoners who self-harmed. The highest significant adjusted odds ratio for age was found for the age bracket of 40-49 years old. More severe self-harm was also significantly associated with suicide. For females, the factors that increased the likelihood for suicide amongst those who self-harmed were slightly different. A life sentence increased the likelihood with a significant adjusted odds ratio of over 10. A higher prevalence rate of past self-harm was also established as a risk factor.

#### *Management of self-harm and suicide ideation in prisons in England and Wales*

In 2005, the case management process for the identification, care, and support of prisoners in England and Wales who identify as at risk of self-harming and suicidal behaviour was updated from the Assessment, Care in Custody, and Teamwork (ACCT) process (Pike & George, 2019). This strategy, implemented by the National Offender Management Service, aims to reduce distress and improve the quality of life for prisoners (Walker et al., 2015) and therefore reduce rates of self-harm and suicide. ACCT management was developed to include risk and needs assessment, care plans and action points, and multi-disciplinary case reviews (Howard & Pope, 2019). Upon risk being identified by anyone working within the prison setting, an ACCT document is opened in the form of a bright orange folder which includes numerous sections to address relevant needs and reduce the vulnerability level. This folder remains active for as long as the individual is deemed to still demonstrate risk of self-harm or suicide and follows the prisoner through the prison. All staff have access to prisoner ACCT folders and are expected to update them accordingly.

In practice, those supported by the ACCT care plan encounter higher levels of observation, and additional support services such as healthcare attention, or intervention in the form of individual or group support, and heightened levels of observation. Although ACCT is considered a step in the right direction for reducing self-harm and suicide in prisons, it has yet to be demonstrated as effective in reducing suicide and self-harm rates in English and Welsh prisons. Additionally, male prisoners interviewed by Howard and Pope (2019) did not always find the ACCT process useful, with some individuals being concerned over the lack of confidentiality, issues with “over-observation” being intrusive and feeling like additional punishment, and reports of inconsistencies and confusion in the way the system was used. Recommendations for improvement are still in progress, and a new version of the plan is due for rollout in the near future.

## Assessing the risk and the interplay between the needs of inmates and the prison environment

For Shneidman (1985, 1993), everything (research and training activities, suicide definition, operationalisation of suicide, measurements) is propaedeutic to the clinical enterprise of prevention. The proof of the suicidological pudding is in the “ventions” as in prevention, intervention, and postvention. In other words, all clinical and scientific efforts should be more evidence-based and effective (Leenaars, 2010, pp. 12–13).

The alarm of suicide in prison, as described in

countries like Italy, and England and Wales, deserves serious institutional attention, scientific knowledge, professional intervention, and social support so as to reduce the gap between the two worlds: prison and society.

Many myths and misconceptions afflict the topic of suicide, the perception of risk level, the factors behind it, and the possibility of making preventive intervention effective.

Table 2 describes some of them and confronts them with scientific evidence.

Myths and Misconceptions	Facts based on scientific evidence
0# Suicide is pathology and suicidal people are mentally disturbed	0# Suicide is not a disease and is not pathology. Death by suicide is never about one single thing. Suicidal people are not mentally ill. Mental illness could be a risk factor. (see McKeon, 2009).
1# People who make suicidal statements or threaten to kill themselves usually do not do it.	1# Suicide is mostly achieved by people who have previously made either direct or indirect statements about their intentions. In prison, inmates more likely exhibit indirect warnings of their intentions given the climate of distrust. When needs and risk of inmates are not correctly identified or reported the risk for suicide attempts and behaviour is high. (see Berman & Canning, 2021; Folk et al., 2018; Hayes, 2011; Crosby et al., 2011).
2# Suicides usually occur suddenly and impulsively.	2# Most suicidal inmates, like most suicidal people in the general population, have a documented medical condition and a history of prior suicide attempts; in most cases they have an identified suicide thought-out plan. However, the more the context is deprived (as prisons are), the stronger the need to plan the suicide carefully and in detail. Some studies show that those inmates who died by suicide were less impulsive than those who attempted but did not die by suicide. The act itself can emerge impulsively, but the trail of suicidal thoughts is an underlying pattern in search of a trigger. (see Daniel & Fleming, 2005; Folk et al., 2018).
3# Failures in attempting to commit suicide will discourage other attempts.	3# Suicidal inmates who fail in the suicidal plan are at a higher risk for trying again to take their own lives. Intervention is paramount to dismantle their suicidal ideations and plans. (see Zara & Freilone, 2023).
4# Suicide in prison cannot be ever prevented.	4# Suicide is preventable even in prison, but is unpredictable in prison like in any other context. Awareness of the mental health professionals can make a difference, in so far as it can promote ability to intervene which could prevent the suicidal attempt from becoming a death by suicide. (see Boren et al., 2018; Folk et al., 2018).
5# Most suicidal people want to die.	5# Suicidal behaviour is an attempt to escape psychological pain, not necessarily to die <i>per se</i> . Psychological pain is not a pathology. It can become pathological when it is «orphaned» of understanding and meaning. (see Shneidman, 1985, 1993).
6# Risk assessment is probabilistic: it is a one-off procedure and is not informative in suicide cases.	6# Risk assessment is a scientific practice which consists in a temporal monitoring of the risk. The need for an ongoing suicide risk assessment throughout the period of incarceration would be crucial to promote intervention. For suicide risk, the assessment of risk factors and of their aggravation requires continuous observation of the case. This is essential also for building up professional awareness of the suicide risk that each inmate poses to themselves. Research shows that professional awareness acts as a part of the concept of external or institutional responsivity. External responsivity is essential in the correctional system, and it requires that mental health professionals recognise and actively document suicide-related historical, diagnostic, and treatment factors, and update the assessment by also looking at concurrent and proximal risk factors. These latter factors may not be reported or not present at the time of intake into the correctional system but might significantly emerge later on, during the conviction time. (see Folk et al., 2018; Zara & Freilone, 2023).

Table 2 – Dismantling myths and misconceptions about suicide in prison



While suicide in prison can be unpredictable this does not mean that it is not preventable (see point 4# of Table 2). For instance, in 2022 in Italy, 80% ( $n = 68$ ) of those inmates who died by suicide had experienced critical events while in detention, and of them 33% ( $n = 28$ ) had previously made at least one suicide attempt (and in 7 cases even more than one attempt) (see point 3# of Table 2).

These data suggest that an enhanced condition of vulnerability featured in their life while in prison, as shown in England's and Wales' prisons (see points 1#, 2# and 5# of Table 2). Thus, assessing the risk is paramount but it cannot be limited to the one moment at-intake of the person into prison (see point 6# of Table 2). It requires an ongoing process of observation and evaluation of the individual needs and conditions, and how they change while in prison. This requires professional sensitivity and attention to respond individually to those critical situations that can always emerge. Critical events could be indeed an expression of the cumulation of risk (historical and concurrent risk) (see later for details), with the acute risk (i.e. an unpredictable event) that can act as a trigger for suicidal behaviour.

Studies that compared the risk factors behind attempted suicides (i.e. cases of survivals) and successful suicides (i.e. cases of deaths) are quite informative as to how psychological pain could be either exacerbated in a system that focuses mainly on control or that can be addressed if professional attention is given both in time and in a responsive way (see Table 2 for details). Psychological pain is not a pathology. It can become pathological when it is «orphaned» of understanding and meaning (see points 0#, 1# and 5 # of Table 2).

In a recent analysis of a large multi-site sample, Boren and colleagues (2018) examined factors that differentiate between inmates who attempted ( $n = 735$ ) and died by ( $n = 190$ ) suicide. Findings show that compared to those who attempted suicide, those who died by suicide tended to be older, male, more educated, and married or separated/divorced, in pre-trial (*versus* post-sentence), arrested for a violent crime, incarcerated in jail (*versus* long-term prison), housed in an inpatient mental health unit or protective custody (*versus* general population), living in a single cell, not on suicide precautions, and not previously under close observation. Those who died by suicide were also more likely to act during overnight hours and die by hanging/self-strangulation. No differences were observed for race (White *versus* Black), length of time incarcerated, and month and day of the week when the suicidal incident occurred.

In another study carried out by Folks and colleagues (2018), a large sample of 925 inmates, divided between those who attempted suicide and survived ( $n = 735$ ; 79.5%) and those who died by suicide ( $n = 190$ ; 20.5%), between 2007 and 2015, were examined. Results show some counterintuitive findings that deserve further consideration. Inmates were disproportionately more likely to attempt than die by suicide if they were known

to have a documented history of substance use problems, impulsivity, suicide/self-injurious behaviour, trauma, and lack of participation in psychological treatment (historical factors). Moreover, inmates were disproportionately more likely to attempt than die by suicide if they were noted by staff to have exhibited agitation, hopelessness, psychological turmoil, alienation, depressive symptoms, psychotic symptoms, an identified suicide plan, or a sudden change in mental status (concurrent factors). Individuals who died by suicide had significantly fewer documented concurrent risk factors than those who attempted suicide. This might also depend on the fact that behaviour of an inmates speaks louder than their words, as Berman and Canning (2021) suggest by quoting Hayes (2011) and Crosby et al. (2011).

It is then crucial for professionals in correctional settings to be able to understand what those inmate behaviours and symptomatic expressions are, which serve to signal heightened near-term or acute risk for suicidal death that can be stopped before the escalation into suicide.

Relying on a one-time assessment of risk at the time of intake seems to offer only a partial picture of the persons' needs and risk. It is more likely that dynamic risk factors (contextual, proximal, concurrent, acute risk factors) are not present at the time of incarceration or are not reported. It is also likely that the risk level changes in time. This is why an initial screen is a necessary but not a sufficient condition to ensure a management of risk (see Table 2).

In the study by Folk and colleagues (2018) what emerges as particularly relevant is the awareness of the correctional mental health staff about the inmates' suicide risk. When correctional mental health staff were aware of inmates' current and historical psychological state and social context, deaths by suicide were less likely to occur. This might be because professional awareness leads mental health staff to further intervene, for example through assessing risk and monitoring on the mental health caseload or facilitating psychological support or prescribing psychotropic medication. Mental health intervention, in turn, seems to be a protective measure against deaths by suicide.

Although mental health staff's awareness does not prevent suicide attempts per se, it appears that those most at risk of dying by suicide are individuals for whom mental health staff do not know about crucial risk-relevant information (e.g., suicide plan). Hence, assessing suicide risk requires not only professional sensitivity and attention, but also promptness in being able to intervene when specific needs are affecting the wellbeing of the inmates.

For instance, Daigle (2004) used the Minnesota Multiphasic Personality Inventory (MMPI) to examine personality differences among U.S. male federal inmates who died by suicide ( $n = 47$ ), who attempted but did not die ( $n = 43$ ), and non-suicidal controls ( $n = 123$ ). Inmates who attempted suicide were higher on MMPI scales

assessing paranoia schizophrenia, psychasthenia (i.e., anxiety, phobias, obsessions, compulsions), and social introversion compared to those who died by suicide (and non-suicidal inmates). No differences were found on the MMPI hypochondriasis, depression, hysteria, psychopathic deviance, masculinity–femininity, and hypomania scales. Those inmates who exhibited more “pathological” symptoms became a priority for mental health intervention, and one may argue that they eventually had non-fatal self-destructive behaviours (namely, suicide attempts, self-mutilation, and parasuicidal acts) especially because of the prompt professional attentions they attracted and received.

### Assessing suicidality and practice implications

In Italy, as in England and Wales, it has become an urgent priority to accurately assess suicidal risk, given the problematic conditions that characterise their correctional system as described before. The rest of this article will briefly describe some of the screening tools and instruments that are now available to assess suicide risk in prison.

Clinical risk assessment of suicidality refers to basic questions on how to guide treatment decisions and organise the results, starting from assessing the risk and needs at intake. Actuarial risk assessment looks at historical data and static variables while often overlooking current and acute factors. Suicidality is not static, and its dynamic nature requires not only a sensitive professional competence but the institutional interest to address it.

The screening of suicidal inmates at intake is a delicate procedure (Daigle et al., 2006), and one of the most important measures for preventing suicide. While screening suicidal risk at intake cannot be considered a one-off and conclusive procedure, it is the necessary condition to understand who the people coming into prison are: it should then be followed by an ongoing observation and monitoring of the person, of their needs and changes in their level of risk and vulnerability. Despite the recognition of its role, many studies have shown that inmates who died by suicide were not screened at intake (Gould et al., 2018; Hayes, 1989).

The increasing levels of suicide, attempted suicide and self-harm behaviour in prison would certainly benefit

from instruments that can identify, with high margins of accuracy, individuals who may be at risk of self-harm and/or suicidal behaviour (Perry & Horton 2020).

The relevance of past suicidal history was recognised in a study by Pelizza et al. (2023), conducted in Parma Penitentiary Institute, in which there was found a 12% prevalence of both past suicide attempts and other prior self-harm behaviours, and that 3% of the men had suicidal ideation at the time of first assessment. These figures are higher than those reported in newly admitted inmates at the New York State prison (3.7% prevalence rate of prior suicide attempts) (Way et al., 2008; Pelizza et al., 2023).

The progressive incarceration rate increase in Italy, and England and Wales, and the related higher rates of inmates with mental disorders (especially depression) suggest two points that here can only be mentioned though not fully discussed. First, incarceration should become a measure of punishment only when any other alternative measures are not functional and applicable to the offender. Second, the high prevalence of mental health problems of offenders in prison indicate that these offenders should not be sent to prison in the first place, and that their mental problems should be addressed specifically and primarily before anything else.

Table 3 summarises some of the instruments and scales that can be used within the correctional systems, despite only few of them having been used in the United Kingdom and Italy. The table is an update of the systematic review of Gould and colleagues (2018): it does not intend to be an exhaustive summary, nor a complete description of the screening instruments available. The sense of the table is to pinpoint the attention on how suicidality is assessed as a dimension that touches upon different aspects of the person's life, of which their current situation must become primarily relevant.

For instance, START (Short-Term Assessment of Risk and Treatability) (Webster et al., 2004; Zara & Freilone, 2023) looks at the risk of *dual harm* (violence and self-harm) and assesses short-term risk (see Table 3 for its description). Hence, even though it was not conceived to assess suicide risk *per se*, it requires to make an assessment under conditions of uncertainty, often of emergency, and requires constant monitoring and reassessment (see 6# point of Table 2): it must be completed regularly and whenever an appreciable change in risk(s) is expected.

Authors	Instruments to assess suicidality	Country	Structure of the instruments	Specificity in assessing suicide risk in prison
Arboleda-Florez & Holley (1988)	Suicide Checklist	Canada	20 items that include: ■ Symptoms of depressions (11 items) ■ Past History (9 items)	√
Blaauw et al. (2001) Dahle et al. (2005)	Dutch Suicide Screening Tool Dutch Suicide Screening Tool (optimized)	Netherlands Berlin	8 items. Examples of specific items: ■ Previous suicide ■ Suicidal utterances	√
Cull & Gill (1998) Naud & Daigle (2010)	Suicide Probability Scale (SPS)	Canada	36 items organised in 4 subscales: ■ Hopelessness ■ Suicide Ideation ■ Negative Self-Evaluation ■ Hostility	√
Daigle et al. (2006) Frottier et al. (2009)	Suicide Risk Assessment Scale (SRAS) Viennese for Suicidality in Correctional Institutions (VISCI)	Canada Austria	9 items organised in parameters and named with alphabetic letters from A to Q. Examples of specific items: ■ A (custodial status) ■ Q (attempted suicide) ■ R (suicide threat) ■ V (suicide ideation)	√
Mills & Kroner (2005)	Depression, Hopelessness and Suicide Screening Form (DHS)	Canada	39 items: ■ Depression: 17 items ■ Hopelessness: 10 items ■ Critical risk checklist for suicide: 12 items	X More empirical work is needed on DHS in prison.
Nicholls et al. (2005) Ciappi (2011)	Jail Screening Assessment Tool (JSAT)	Canada Italy	sections are explored: ■ Demographic information ■ Legal situation ■ Violence issues ■ Social background ■ Substance use ■ Mental health treatment ■ Suicide and self-harm issues ■ Mental health status (integrated with the Brief Psychiatric Rating Scale - BPRS-E) (Lukoff et al., 1986)	√
Perry & Olason (2009) Perry & Horton (2020)	Self-harm concerns about offenders in prison environment tool (SCOPE) SCOPE-2	United Kingdom	Originally structured in 28 items and then revised into 19 items organised in two scales: ■ O = Optimism ■ P = Protective self-worth	√
Webster et al. (2004) Zara & Freilone (2023)	Short-Term Assessment of Risk and Treatability (START)	Canada Italy	20 items organised to facilitate 1-month risk assessment decision-making in seven domains: ■ Risk of externalised violence towards others ■ Risk of self-harm ■ Risk of suicide ■ Risk of unauthorised removal (absenteeism) ■ Risk of substance abuse ■ Risk of self-neglect or self-abandonment ■ Risk of victimisation	X More empirical work is needed on START in prison.

Wichmann et al. (2000)	Suicide Potential Scale (or Suicide Risk Assessment Scale)	Canada	9 items focused on the needs of the offender: <ul style="list-style-type: none"> <li>■ Being suicidal (opinion of the referring agency)</li> <li>■ Previous suicide attempt</li> <li>■ Undergone recent psychological/psychiatric intervention</li> <li>■ Recent loss of a relative/spouse</li> <li>■ Experiencing major problems (i.e. legal)</li> <li>■ Under influence of alcohol/drugs</li> <li>■ Signs of depression</li> <li>■ Suicidal ideation</li> <li>■ Suicide plan</li> </ul>	√
Zapf (2006) Szadejko & Ciappi (2011)	Suicide Assessment Manual for Inmates (SAMI)	Canada Italy	20 literature-supported risk factors. Examples of specific items: <ul style="list-style-type: none"> <li>■ Feeling of desperation and excessive sense of guilt</li> <li>■ Depressive symptoms</li> <li>■ Stress and coping</li> <li>■ Suicide attempts</li> <li>■ Suicide attempts within institutions</li> <li>■ Experiences of suicide in the family</li> <li>■ Suicide ideation</li> <li>■ Suicide intent</li> <li>■ Suicide plan</li> </ul>	√ More research is necessary because SAMI development yielded poor factor structure including failure of several items to load.

Table 3 – Instruments to assess suicidality  
 Source: Adapted from Gould et al., 2018, p. 350

According to what has emerged from scientific research and clinical evidence, a progressive (stepwise or stepped care) approach, in which open-ended questions are followed by close-ended questions, may help the suicidal inmate to disclose (1) precipitant factors and triggers to suicidality; (2) current psychiatric symptoms; (3) level of hopelessness; (4) specific suicide-related details (e.g., nature and intensity of ideation). The scope is to help professionals build a climate of trust and connection with inmates who are experiencing suicidality, create peer-supporting opportunities, and implement differentiated and integrated crisis responses (for further information see the Collaborative Assessment and Management of Suicide - CAMS; Jobs, 2012).

A research group at the University of Oxford<sup>8</sup> is working on the development of a new structured risk assessment approach for people in prison who are at risk of self-harm and suicide. The RAPSS (*Risk Assessment for Prisoners at risk of Self-harm and Suicide*) approach, once validated, will be integrated into current practice in England and Wales, whereby people in custody who self-harm or express suicidal ideation and thoughts are placed on a suicide risk management plan called ACCT (Assessment, Care in Custody, and Teamwork; see above for details).

Developing an integrated approach that helps professionals understand modifiable risk factors and make informed decisions about when to open, close or reopen an ACCT, is also of paramount importance. If a risk assessment model can accurately assess and stratify (into

well-defined risk levels) a person's risk of future self-harm, limited resources could be primarily directed to those most likely to need them. It can also enable the identification of needs that could be the focus of follow-up interventions.

### Limitations

This work is not without limitations. For example, the analysis of suicide risk in prisons did not differentiate by gender or age, although a differentiated assessment is important when considering the needs of women or young adults in prisons. The concept of imminent or proximate risk is crucial for identifying reliable predictors of short-term suicide risk in prisons, and there is a need for further research on this topic, as well as research to test the accuracy and reliability of screening procedures.

Given the complexity of the issue, it would have been presumptuous on our part to analyse every aspect of suicidality risk in prisons in Italy, and in England and Wales.

Further research is certainly needed and is a necessary next step.

### Conclusion

Suicide behind bars reminds us of the case when «mors omnia solvit» (death dissolves everything) is not true! Any

death by suicide leaves a trail of responsibility, regret, suffering and cumulative risk. While the fatal self-harming act cannot be predicted, suicide can be prevented, and suicidal risk can be assessed. More quality evidence-based interventions, based on quality scientific research, are required on how to tackle conditions of vulnerability in prison; to ameliorate the quality of life during imprisonment; to reduce suicidal thoughts and behaviours among people in contact with the criminal justice system; to recognise that mental health problems require specific and differential interventions; to promote a climate of more trust and security within prison; to train mental health professionals and penitentiary professionals to be prepared to work in a team to address suicidality in prison.

There is, certainly, a difference between people who are already suffering from mental problems and having suicidal thoughts prior to enter prison, and those who suffer from mental problems while in prison. It is a very fine line, but the system should not neglect to take into consideration this difference, and to put into motion any form of mental and psychological health care of inmates, and of prevention to stop inmates from harming themselves.

The practice of assessment of dynamic (also precipitating and acute) risk factors, and of the specific needs of the prison population, should become part of a preventive practice, dedicated not only to tackle suicide but more importantly improve the health conditions of people in prison.

## Conflict of interest

The authors declare that they have no conflict of interest.

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## Endnotes

<sup>7</sup> See <https://www.gov.uk/government/statistics/safety-in-custody-quarterly-update-to-september-2023/safety-in-custody-statistics-england-and-wales-deaths-in-prison-custody-to-december-2023-assaults-and-self-harm-to-september-2023#fn:3>

<sup>8</sup> For more details on RAPSS (*Risk Assessment for Prisoners at risk of Self-harm and Suicide*) see <https://www.psych.ox.ac.uk/research/forensic-psychiatry/rapss>



## Dark personality and emotional abuse in intimate relationships: the role of gender, jealousy and attitude for violence

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### Abstract

The Dark Personality (DP) refers to a combination of three specific traits—narcissism, Machiavellianism, psychopathy—characterized by a focus on self-centered goals, lack of empathy, manipulative behavior, and a tendency for abusive conduct in interpersonal relationships. Recently, sadism has been added to these traits and seems to play a key role in the development of abusive behaviors. DP has been linked to various forms of intimate partner violence (IPV), but the relationship between DP, jealousy, violence tolerance and emotional abuse in the general population is still poorly studied.

**Objectives.** The aim is to investigate the role of DP, jealousy and attitude toward IPV on the development of emotional abuse in intimate relationships, highlighting gender differences, if any. **Methods.** 491 participants (52% female; age 18-62) recruited from social networks, completed an online survey. Participants were provided with socio-demographic information and self-report measures assessing DP, attitudes toward IPV, perpetrated emotional abuse, and jealousy.

**Results.** Correlational analyses revealed positive associations between DP and emotional abuse, jealousy, and attitude toward IPV. Gender differences in the study variables suggested that men showed higher levels of DP and tolerance for violence, while women scored higher in the jealousy, denigration, and restrictive engulfment scales. Regression Analysis showed that female gender, age, DP, and jealousy accounted for 29% of the variance of the perpetrated emotional abuse.

**Conclusion.** Our findings emphasize the need for prevention and intervention programs tailored to individual characteristics such as DP, jealousy and the individual's operational functioning, addressing IPV concerns in both women and men.

**Keywords:** dark personality, emotional abuse, jealousy, attitude toward intimate partner violence, gender differences.

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## Dark personality and emotional abuse in intimate relationships: the role of gender, jealousy and attitude for violence

### Introduction

In the last twenty years, the idea of a specific “bad” personality has gained more and more attention from scholars and clinicians, as it seems to be related to negative and immoral conduct in different aspects of human life (i.e., leadership, corruption, interpersonal violence) (Mackey et al., 2021; Plouffe et al., 2022; Szabó et al., 2021). Paulhus and Williams (2002) introduced the term “Dark Triad Personality” to denote the combination of socially offensive personality traits, such as Narcissism, Psychopathy, and Machiavellianism.

In its clinical form, narcissistic personality disorder in the DSM-5-TR (American Psychiatric Association, 2022) is “defined as comprising a pervasive pattern of grandiosity (in fantasy or behavior), a constant need for admiration, and a lack of empathy, beginning by early adulthood and present in a variety of contexts”. However, regarding psychopathy in the DSM-5-TR it’s only possible to make a diagnosis of “antisocial personality disorder”. Psychopathy is a personality construct found within PDM – 2. It describes a psychopathic subject as charismatic and charming with a lack of empathy and morality (Lingiardi & McWilliams, 2018). The psychopath, unlike the antisocial, does not experience an open conflict with social rules (De Fazio et al., 2016); many people with this personality style can pursue their own goals, receiving approval and even admiration (Lingiardi & McWilliams, 2018).

Lastly, Machiavellianism refers to a personality characterized by the ability to tactically manipulate circumstances or individuals to achieve personal goals and realize one’s desires (Lyons, 2019). It has been confirmed that Machiavellianism consists of two traits, which are: a cynical view of humanity and a tendency to use immoral tactics or means to achieve one’s goals (Monaghan et al., 2019).

These personality types commonly share a notable trait of “low agreeableness” (McHoskey et al., 1998). Indeed, these traits have mutual components, such as reduced empathy, insensitivity, or the tendency to exploit and manipulate others (Lyons, 2019). When these traits are present together in non-pathological or “subclinical” form, although they are unpleasant traits that give the subject a degree of consistency of behavior, they may converge into a personality type that Paulhus (2014) called “Dark Personality” (DP) (Paulhus, 2014; Paulhus & Williams, 2002). Moreover, the triad is studied as if it was a continuum, without a clear separation or boundary between what is non-pathological and pathological (Lyons, 2019). Although these personality traits are

considered socially offensive, they could also have an adaptive function, in social and biological terms. All dimensions of the dark triad are associated with a fast life history strategy (LHS-F; Gluck et al., 2020) characterized by diminished self-control, a short-term mating disposition, selfishness, and often with high social status and personal success (Chiorri et al., 2019; Jonason et al., 2010). Moreover, literature highlighted that males get higher scores than females in all aspects of the Dark Triad (Jonason & Webster, 2010), and that is consistent with the traditional conceptualization of male gender roles; therefore, one could note a possible relationship between the Dark Triad and hegemonic masculinity, understood as the dominant social position of men over women (Gluck et al., 2020). Furthermore, one possible reason for men adopting a faster life strategy may be their reduced commitment to their offspring (Jonason et al., 2010).

In recent years, the idea of adding sadistic personality traits to the Dark Triad Personality constellation has gained increasing acceptance (e.g., Chabrol et al., 2009; Johnson et al., 2019). The sadistic personality (Plouffe et al., 2017) not only shares low empathy with the Dark Triad (Pajevic et al., 2018; Paulhus, 2014) but adds a unique element: the intrinsic pleasure in hurting others (Nell, 2006), whether through direct actions (direct sadism) or observing harm inflicted on others (vicarious sadism; Paulhus & Jones, 2015).

Due to these specific features, the DP has been studied in association with Intimate Partner Violence and abusive relationships. Intimate Partner Violence (IPV) represents a significant worldwide public health issue (World Health Organization, WHO, 2021). It’s estimated that about 27% of women between the ages of 15 and 49 have experienced physical and/or sexual or psychological violence from an intimate partner at least once in their lifetime (WHO, 2021). The findings also suggest that IPV doesn’t only affect women and it’s now recognized that IPV, in different ways, also frequently occurs bidirectionally, as partners in the relationship engage in reciprocal violence toward one another (Tetreault et al., 2021). As is known in the literature, some of the predictors of IPV include alcohol use/abuse, anger problems, low self-control, and personality traits (Jennings et al., 2017).

One particular form of IPV is emotional abuse, defined as dominance, control, isolation, and the use of intimate knowledge for denigration against the partner (Engel, 2002). However, literature findings about differences in emotional abuse perpetration are controversial. Some authors suggest that emotional abuse isn’t only suffered by women, but females actively

perpetrate this type of violence against their partner in the same measure as males. Psychological violence seems to be the most frequent form of bidirectional violence (Machado et al., 2023). Other studies suggested that men are at more risk than women of being victims of emotional abuse in romantic relationships (Karakurt & Silver, 2013), others, instead, suggest the opposite (Vidourek, 2017).

Jealousy has also been shown to be a significant contributor to the perpetration of dating violence, emotional abuse, and IPV among men and women (Brem et al., 2018; LaMotte et al., 2018). Specifically, White (1981) distinguished jealousy's three different components: emotional jealousy, which is the feeling of distress when exposed to situations that evoke jealousy; cognitive jealousy refers to the thoughts that arise in jealous situations, such as rational or irrational thoughts and concerns regarding partner infidelity; and finally, behavioral jealousy represents the process by which an individual engages in investigative behaviors such as monitoring partner check their partners' communications to unearth possible signs of infidelity (Pfeiffer & Wong, 1989). Research further suggests that jealousy might exhibit distinct patterns between men and women, with men's jealousy mostly involving control and possessiveness (Adams & Williams, 2014). Moreover, jealousy has been demonstrated to have a significant role in the development of emotional and psychological abuse in romantic relationships (Mahoney et al., 2022; Ponti et al., 2020).

In light of what has been described so far, violent and abusive conduct within romantic relationships seems to be a widespread phenomenon. Although it is realistic to think that the majority of abuses are perpetrated by men against women, there are studies in the literature in which the hidden phenomenon of physical and psychological violence of women against their partners (male or female) emerges (Fincham et al., 2008a).

In order to understand how the norms reflected in attitudes and behaviors frame the perpetration of deviant conduct and to propose effective prevention and intervention programs, it is necessary to analyze the attitude and tolerance to physical and verbal violence within relationships. According to Fincham and colleagues (2008), for example, a positive attitude toward abusive behaviors in specific situations (e.g. during a fight or in response to infidelity), could be a predictor of physical, sexual, and emotional violence, both perpetrated and experienced, in men and women. However, cases of violence perpetrated by women and bi-directional violence remain hidden, often due to stereotypes and myths about the phenomenon. Males-on-females violence scenarios are also more likely to have police intervention recommended, are rated as more likely to be reported to the police, and are the most likely to receive a recommendation that the victim call the police. In contrast, women's violence toward men is judged less harshly and less likely to be illegal, so it is less reported and, as a consequence, less studied (Hine et al., 2022).

The present research aims to understand the role of DP, jealousy, and tolerance for interpersonal violence in the perpetration of emotional abuse in the general population in Italy. To our knowledge, in fact, the influence of these variables has been studied separately in the literature and more frequently in samples of convicted perpetrators or conflictual couples. Our goals are to assess the influence of the described variables on the development of emotional abusive behaviors and to highlight the differences between males and females, if any, in order to contribute to the implementation and improvement of ad hoc prevention programs and assessment procedures.

## Methods

### *Participants and Procedures*

The study sample was composed of 491 participants (238 men, 253 women) with a total average age of 32.95 years ( $SD = 9.75$ ), aged between 18–62. Participants filled out a survey on the online platform QUALTRICS and they were recruited through the main social media, in the general population.

Inclusion criteria were being at least 18 years old, understanding the Italian language, and not having a diagnosis of a personality disorder.

Participants filled out a sociodemographic questionnaire and a series of self-reports to assess Dark Triad traits, the presence of sub-clinical traits of sadism, jealousy, attitude to violence, and psychological abuse in the couple in the Italian population. The research protocol was approved by the Institutional Review Board of Psychology of the Department of Psychological, Health and Territorial Sciences of the University "G. d'Annunzio" of Chieti-Pescara (n. 21004). Participants gave their consent for the study by responding to a specific item on the online platform. Each person involved was informed about the aims of the project and privacy policy; they didn't receive any financial compensation for their participation in the study. The entire protocol was anonymous.

### *Sociodemographic questionnaire*

Participants filled out a sociodemographic questionnaire that inquired about their: nationality, educational background (measured in the number of years of study, e.g., 8 years equivalent to a middle school diploma, 13 to a high-school diploma, 16 to a bachelor's degree, 18 to a master's degree, etc.), employment status (categorized as a student, unemployed, or employed etc.), religion (professing or not a faith) and relationship status. The relevant data is documented in Table 1.

		N	%
<b>Qualification</b>			
	Secondary school diploma	14	2.8
	High school diploma	158	32.2
	Bachelor's Degree	98	20.0
	Master's Degree	149	30.3
	Postgraduate Degree	72	14.7
<b>Employment</b>			
	Student	105	21.4
	Freelancer	97	19.8
	Employed	222	45.2
	Unemployed	34	6.9
	Occasional worker	29	5.9
	Retired	4	0.8
<b>Relationship status</b>			
	Single	149	30.4
	In a stable relationship	153	31.2
	In an open relationship	10	2.0
	Cohabiting or married	167	34.0
	Divorced or separated	12	2.4

Table 1 – Sample characteristics

#### Dark Triad traits

The *Dark Triad Dirty Dozen* (DD; Jonason & Webster, 2010) is a self-report questionnaire with 12 items, 4 items for a trait (Machiavellianism, psychopathy, narcissism) uses a 7-point Likert scale, which 1, indicates “strongly disagree”, to 7, which indicates “strongly agree”. An example of an item to assess narcissism is “I tend to want others to admire me”; for psychopathy “I tend to lack remorse” and Machiavellianism “I have used deceit or lied to get my way.”

The Italian version, validated by Chiorri and colleagues (Chiorri et al., 2019) was used in this study. Like the original version, the Italian adaptation comprised 4 items for the trait, 12 in total, with a high degree of internal consistency. The Cronbach's alpha was for narcissism  $\alpha=.80$ , for psychopathy  $\alpha=.67$  and for Machiavellianism  $\alpha=.84$ ; total scale  $\alpha=.85$ .

#### Sadistic Personality

In this study, the *Assessment of Sadistic Personality* (ASP; Plouffe et al., 2017, Kowalski, 2019) was used to screen sub-clinical sadism in our sample. It is a self-report questionnaire, comprising 9 items designed to measure this sub-clinical trait; respondents provide their answers on a Likert scale, ranging from 1 for “strongly disagree” to 5 for “strongly agree”. In our study, Cronbach's alpha was  $\alpha=.71$ .

#### Attitude and tolerance of IPV

The *Intimate Partner Violence Attitude Scale* (IPVAS-R; Fincham et al., 2008) involves three factors: psychological abuse, with items like “As long as my partner doesn't hurt me, ‘threats’ are excused”, control of the partner, such as “It is okay for me to tell my partner not to talk to someone of the opposite sex” and the use of physical violence, with items like “It would not be appropriate to every kick, bite, or hit a partner with one's fist”. Participants responded to all 17 items using a 5-point Likert scale, which spanned from expressing strong disagreement to strong agreement. The Cronbach's alpha from the present study ranged from .67 to .75.

#### Jealousy

To assess jealousy, we used The *Multidimensional Jealousy Scale* (MJS, Pfeiffer & Wong, 1989, Tani & Ponti, 2016), a self-report questionnaire with 24 items rated on a 7-point scale, designed to provide an evaluation of jealousy's three components: cognitive, emotional, and behavioral. The internal consistency measures for the present research ranged from  $\alpha=.60$  to  $\alpha=.90$ .

#### Emotional abuse

The *Multidimensional Measure of Emotional Abuse* (MMEA; Bonechi & Tani, 2011; Murphy & Hoover, 1999) was used to assess four subtypes of psychological abuse: Restrictive Engulfment, Denigration, Hostile Withdrawal, and Dominance/Intimidation.

The tool comprised 28 items, participants were asked to indicate, on a 7-point scale, how often they or their partner (or ex-partners), in the past few months have been involved in abusive behaviors. Only the “perpetrator” version was used in this study and Cronbach's alpha was  $\alpha=.86$ .

#### Statistical Analysis

All statistical analyses were computed using IBM SPSS Statistics version 26.0 (IBM SPSS Statistics, New York, NY, USA). First, the mean and standard deviation were calculated for each variable. Then, the *T-test* and *Cohen's d* were used to analyze the differences between males and females in the sample and the effect size in the study variables. Pearson's correlation analysis was calculated to examine the relationship between the study variables. Next, stepwise multiple linear regression analyses were conducted to assess the influence of Dark Personality, jealousy, and violence tolerance on emotional abuse behavior. The perpetrated abuse was inserted as a dependent variable. In the first step, age and gender were entered as independent variables, followed by the Dirty Dozen and Assessment of Sadistic Personality in the second step, and lastly, the Multidimensional Jealousy

Scale and The Multidimensional Measure of Emotional Abuse, in the third step.

## Results

A t-test was used to assess the differences in the study variables between female and male participants. Results reported in Table 2 show that males score higher in all the traits of Dark Triad personality ( $t=5.67$ ,  $p<0.001$ ), e.g. Machiavellianism ( $t=5.46$ ,  $p<0.001$ ), psychopathy ( $t=6.11$ ,  $p<0.001$ ), and narcissism ( $t=2.16$ ,  $p<0.001$ ). In

addition, males have more sub-clinical traits of sadism than females ( $t=7.70$ ,  $p<0.001$ ) and in the IPVAS-R total score ( $t= 4.52$ ,  $p<0.001$ ).

Unexpectedly, the emotional abuse behavior perpetrated as restrictive engulfment and denigration is carried out more by women ( $t= -3.84$ ,  $p<0.001$  and  $t= -2.49$ ,  $p<0.05$ , respectively). And women are more jealous than men ( $t= -3.42$ ,  $p<0.001$ ), especially in the emotional ( $t= -3.89$ ,  $p <0.001$ ) and behavioral component ( $t= -3.16$ ,  $p <0.01$ ); instead, the difference in cognitive component wasn't significant.

Variables	Males		Females		t	p	d
	M	Ds	M	Ds			
<b>DD Total score</b>	36.35	12.82	30.10	11.53	5.67	<0.001	.51
DD Machiavellianism	11.54	5.67	8.91	4.95	5.46	<0.001	.49
DD Psychopathy	11.08	4.80	8.55	4.31	6.11	<0.001	.55
DD Narcissism	13.73	5.77	12.63	5.56	2.16	<0.05	.19
<b>ASP Total score</b>	16.85	5.65	13.35	4.33	7.70	<0.001	.69
<b>IPVAS Total score</b>	34.23	5.29	31.91	6.02	4.51	<0.001	.41
IPVAS-R Abuse	14.54	3.57	12.86	3.51	5.24	<0.001	.47
IPVAS-R Violence	8.33	1.32	8.49	1.52	-1.24	ns	.11
IPVAS-R Control	11.36	3.29	10.56	3.77	2.49	<0.05	.22
<b>MMEA perpetrated</b>	17.79	16.17	20.11	18.94	-1.45	ns	.13
Restrictive Engulfment	2.85	4.70	4.78	6.25	-3.84	<0.001	.35
Denigration	1.41	2.63	2.26	4.63	-2.49	<0.05	.22
Hostile Withdrawal	10.26	9.49	9.28	8.92	1.17	ns	.10
Dominance/Intimidation	3.27	4.27	3.78	4.54	-1.27	ns	.11
<b>MJS Total score</b>	67.10	16.66	72.84	20.16	-3.42	<0.001	.31
MJS Cognitive	16.57	9.22	17.35	10.85	-0.85	ns	.07
MJS Emotional	37.92	8.76	40.97	8.54	-3.89	<0.001	.35
MJS Behavioral	12.60	5.97	14.52	7.31	-3.16	<0.01	.29

Note: DD: The Dark Triad Dirty Dozen; ASP: Assessment of Sadistic Personality; IPVAS: Intimate Partner Violence Attitude Scale; MMEA: Multidimensional Measure of Emotional Abuse; MJS: Multidimensional Jealousy Scale  
 Table 2 – Difference between males and females in the study variables

A Pearson correlation analysis was carried out to assess the association between the study variables. The findings of this analysis are presented in Table 3. The Assessment of Sadistic Personality positively correlates with the Dirty Dozen total score ( $r=.589$ ,  $p<.01$ ), and all three subscales: Machiavellianism ( $r=.565$ ,  $p<.01$ ), psychopathy ( $r=.444$ ,  $p<.01$ ), and narcissism ( $r=.391$ ,  $p<.01$ ). Moreover, Dirty Dozen total score positively correlates with IPVAS total score ( $r=.285$ ,  $p<.01$ ), and two subscales: psychological abuse ( $r=.359$ ,  $p<.01$ ) and control of partner ( $r=.094$ ,

$p<.05$ ), instead the correlation with physical violence isn't significant. Furthermore, DD positively correlates with the MJS total score ( $r=.256$ ,  $p<.01$ ), and the IPVAS-R positively correlates with the MJS total score ( $r=.308$ ,  $p<.01$ ). Lastly, the MMEA perpetrated positively correlates with Dirty Dozen ( $r=.289$ ,  $p<.01$ ), with ASP total score ( $r=.275$ ,  $p<.01$ ), and the MJS total score ( $r=.471$ ,  $p<.01$ ) and cognitive, emotional, and behavioral jealousy ( $r=.386$ ,  $p<.01$ ;  $r=.173$ ,  $p<.01$ ;  $r=.506$ ,  $p<.01$  respectively).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Age	-	-.184**	-.136**	-.144**	-.156**	-.109*	.063	.049	.133**	.000	.027	-.097*	.075	.019	.126**	-.118**	-.129**	-.081	-.029
2 DD Total score		-	.845**	.726**	.795**	.589**	.285**	.359**	.008	.094*	.289**	.215**	.187**	.260**	.179**	.256**	.204**	.144**	.219**
3 DD Machiavellianism			-	.474**	.512**	.565**	.238**	.305**	.017	.069	.237**	.149**	.100*	.258**	.134**	.158**	.151**	.074	.116*
4 DD Psychopathy				-	.317**	.444**	.224**	.245**	.009	.111*	.198**	.129**	.188**	.151**	.151**	.153**	.135**	.058	.147**
5 DD Narcissism					-	.391**	.215**	.296**	-.006	.049	.245**	.225**	.160**	.200**	.140**	.287**	.195**	.197**	.250**
6 ASP Total score						-	.356**	.454**	.056	.093*	.275**	.159**	.189**	.272**	.168**	.191**	.188**	.062	.168**
7 IPVAS-R Total score							-	.734**	.315**	.749**	.276**	.310**	.198**	.188**	.145**	.308**	.237**	.147**	.311**
8 IPVAS-R Abuse								-	.004	.171**	.291**	.255**	.226**	.238**	.150**	.250**	.246**	.063	.244**
9 IPVAS-R Violence									-	.106*	.146**	.144**	.136**	.079	.119**	.022	.023	-.055	.097*
10 IPVAS-R Control										-	.093*	.186**	.037	.032	.036	.237**	.124**	.196**	.217**
11 MMEA perpetrated											-	.710**	.683**	.837**	.761**	.471**	.386**	.173**	.506**
12 Restrictive Engulfment												-	.487**	.356**	.404**	.602**	.480**	.265**	.611**
13 Denigration													-	.344**	.530**	.340**	.259**	.145**	.370**
14 Hostile Withdrawal														-	.515**	.252**	.220**	.068	.282**
15 Dominance/ Intimidation															-	.297**	.248**	.090*	.338**
16 MJS Total score																-	.792**	.671**	.721**
17 MJS Cognitive																	-	.201**	.442**
18 MJS Emotional																		-	.263**
19 MJS Behavioral																			-

\*p<0.05; \*\*p<0.01

Note: DD: The Dark Triad Dirty Dozen; ASP: Assessment of Sadistic Personality; IPVAS: Intimate Partner Violence Attitude Scale; MMEA: Multidimensional Measure of Emotional Abuse; MJS: Multidimensional Jealousy Scale

Table 3 – Pearson correlations between the study variables

A stepwise linear hierarchical regression was performed to understand the influence of the study variables on emotional abuse levels, using age, gender, dark triad traits, sadism, jealousy, and attitude and tolerance for IPV as independent variables. Table 4 shows the results of a regression analysis in which the dependent variable is the event of perpetrated abuse. The model explains 30% of

the total variance. Especially, after the third step age ( $\beta = .110, p<.01$ ), gender ( $\beta = .108, p<.05$ ), the presence of Dark Triad traits ( $\beta = .130, p<.01$ ), the presence of sub-clinical traits of sadism ( $\beta = .143, p<.001$ ), jealousy and IPVAS-R ( $\beta = .381, p<.001$  and  $\beta = .089, p<.05$  respectively) were all significant predictors of the perpetration of abuse.

Variables	B	SE B	$\beta$	R	R <sup>2</sup>	$\Delta R^2$
<b>1 Step</b>						
Age	0.207	0.075	0.110**	0.072	0.190	0.005
Gender	3.802	1.510	0.108*			
<b>2 Step</b>						
DD Total score	0.182	0.069	0.130**	0.376	0.141	0.136
ASP	0.447	0.167	0.143**			
<b>3 Step</b>						
MJS Total score	0.359	0.041	0.381***	0.538	<b>0.290</b>	0.148
IPVAS-R Total score	0.261	0.133	0.089*			

\*p<.05, \*\*p<.01; \*\*\*p<.001

Note: DD: The Dark Triad Dirty Dozen; ASP: Assessment of Sadistic Personality; IPVAS: Intimate Partner Violence Attitude Scale; MMEA: Multidimensional Measure of Emotional Abuse; MJS: Multidimensional Jealousy Scale. The table reports Beta after the third step.

Table 4 – Stepwise Linear Hierarchical Regression with perpetrated abuse as dependent variable

## Discussion

The present study aims to analyze the role of DP, jealousy, tolerance of violence in the onset of emotional abuse behaviors in Italian men and women.

In line with the findings in the literature, differences analysis between the male and the female samples (Chiorri et al., 2019; Plouffe et al., 2017) showed that males score higher in all DP traits, namely Machiavellianism, narcissism, psychopathy, and sadism (Table 2). Males scores higher also in the IPVAS-R total score and in the abuse and control subscale, suggesting that males more than female show a general attitude to accept episodes of emotional abuse and partner control in intimate relations. No differences have been recorder in the physical violence scale between the two genders. Even if means and standard deviations of IPAVS-R widely vary among different populations, these results are in line with previous findings in different countries, where on average, males score higher than females in both the total score and in at least two of the three subscales of the instrument (Alzoubi & Ali, 2021; Evcili & Daglar, 2021; Fincham et al., 2008; Toplu Demirra et al., 2017).

Contrary to the most common finding in the literature on the subject, in our sample females obtain higher scores on the jealousy scale, in both emotional and behavioral jealousy, suggesting that females, more than males, engage in control and mate retention behaviors.

This finding could have several explanations. First of all, intra- and inter-individual variability in the reporting of jealousy appears to be related to personal experience and values, as previous experiences of partner infidelity (Buss, 2013) and quality of the investment in the relationship (Bendixen et al., 2015). Second, it is possible that, as suggested by Hine and colleagues (2022), certain attitudes and behaviors, when enacted by females, may seem more acceptable and less negative, therefore there is a “normalization” of certain conducts that can be expressed without any fear of being judged.

Data on differences in the perpetrated emotional abuse also show that females seem to enact, to a greater extent than males, abusive behaviors within romantic relationships. Females are more likely to denigrate and control (restrictive engulfment) the partner as shown in Table 2. These results are in line with some previous findings in the literature, according to which emotional abuse, in particular humiliation, isolation from friends and family, and possessiveness, are more common in women than in men (Leisring, 2013). The predominant view in the IPV field has been that women's application of violence happens only in terms of self-defense, but to promote efficient prevention and intervention programs as suggested by our results, there should be a shifting in the paradigm toward the idea that also females can be perpetrators.

Hierarchical linear regression reported in Table 3, also supports these findings. Higher levels of DP, jealousy, and tolerance for violence are significant predictors of

emotional abuse when associated with the female gender. In particular, jealousy and dark personality traits seem to have a significant role in the development of emotional abusive behaviors in intimate relationships. This relationship may be explained by the role the strong relationship between DP and control, since Machiavellianism, narcissism, psychopathy, and sadism are related to jealousy and mate retention behaviors, in particular, narcissism seems to play a key role in the development of abusive behaviors (Ponti et al., 2020). Moreover, it is well-known in the literature that DP traits are risk factors for interpersonal violence and domestic violence in men (Plouffe et al., 2022). But the fact that in our sample the female gender seems to be associated to the development of emotional abusive conduct more than the male gender, could be explained by the presence of dark personality traits. As the DP traits share common elements of power and control over the partner (Adams & Williams, 2014) it could be hypothesized that in case of ego-threatening situations, such as fear of abandonment or infidelity, women may enact the same violent patterns of dominance as men, but in the form of emotional abuse.

### *Implications*

Our findings have significant implications in both clinical and forensic psychology. First, the analysis of subclinical DP traits is crucial in psychological assessment, proving to be risk factors in the onset of abusive conduct within romantic relationships. Understanding the influence of these traits on violent and abusive behaviors is also useful in the context of designing interventions, with a focus on long-term prevention starting from adolescence. Indeed, the study of DP could be useful in understanding teen dating violence, a growing phenomenon that needs attention from researchers and clinicians (Biancofiore et al., 2020). However, the most significant finding from our research is the confirmation that DP, in association with high levels of jealousy and, to a small extent, with the tolerance of violence, significantly influences the development of emotional abuse behavior, particularly in females. This finding calls for an assessment of personality traits, jealousy and attitudes toward the partner, within the study of violent dynamics in romantic relations, emphasizing the need to consider these aspects both in men and women.

The analysis of violence within relationships should focus on personality characteristics, as dark personality, the individual's operational process and the relational context where the violence take place, in order to overcome the bias that only men can be perpetrator. In fact, the endemic spread of different forms of abuse, from the most identifiable, such as physical abuse, to the more subtle, such as psychological abuse, is due both to personal factors, such as personality and jealousy, but also to contextual and social factors, such as tolerance to violence. It is important to emphasize, that psychological abuse is often poorly recognized, but never even reported by the

victims themselves, especially by males. As conveyed in the literature, men who are willing to report or seek help following their partner's abuse within relationships are still few, and this is probably due to stereotypes and social stigma (Walker et al., 2020). Finally, although we have not directly analyzed the role of sexual orientation, it is safe to assume that abusive dynamics may also exist within same-sex relationships between females. The paucity of studies on the subject may be due to the lack of reporting by the victims, who, for fear of secondary victimization, social judgment and in order not to undermine the stereotype of the 'lesbian utopia' (i.e. a world without male aggression and violence), keep silent about the violence they have suffered in the relation (Harden et al., 2022).

#### *Limitations and future directions*

The findings of this research should be viewed in the context of its limitations. Initially, the results ought to be interpreted considering the constraints inherent in a cross-sectional design, future studies should approach the topic with a longitudinal approach. Second, we use self-report questionnaires to assess personal and psychological variables, a multi-informant method could have led to more accurate results. Especially, for example, with regard to the abusive behaviors reported by the participants. In describing their experiences, participants may have modulated some situations, for social desirability, therefore future studies should assess emotional abuse with other informants (convictions or the opinion of their partners, for example) in order to have more objective data. Then, our research focus on the differences between male and female participants, but we did not include a specific analysis on sexual orientation which may reveal important information on same-sex relationship dynamics.

#### **Conclusion**

In conclusion, this study contributes to the understanding of Dark Personality traits and their impact on abusive behaviors within intimate relations. Our research, in particular, underscores the influential role of dark personality traits and jealousy, in shaping abusive behaviors, both in males and, especially, in females. These findings emphasize the importance of recognizing and addressing gender-specific manifestations of DP traits within the context of abusive behaviors, as a specific part of a general assessment of intimate partner violence. Understanding the nuanced interplay between these psychological factors can inform targeted interventions and preventive measures. As we move forward, it becomes crucial to develop tailored strategies that address the unique dynamics associated with dark personality traits, jealousy, and violence tolerance, fostering healthier and more equitable relationships for both men and women.

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## The Attitude Toward Prisoners scale: a revised short version standardized on Italians (ATP-IS)

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### Abstract

**Objective:** The Attitudes Toward Prisoners Scale (ATP) of Melvin et al. (1985) has been translated and used in different countries to assess the degree of positive and negative attitudes toward different types of prisoners and to investigate the impact of training and enhanced contact in modulating these attitudes, as well as the degree of negative attitudes reported by people and groups at a different extent of contact with. Even though the first validations of this scale in the USA, Spain, and Netherlands reported a unidimensional factorial structure, a four-factor structure emerged by more recent validations in Chinese and Romanian. We conducted two studies for translating and validating the ATP scale in Italian.

**Methods:** In study 1 we tested whether a unidimensional or multidimensional structure was supported by our data, while in study 2 we validated a new Italian shortened version of ATP, the ATP-IS. Furthermore, by using this new scale we explored the effects of gender, age, type of work, and previous experience of contact on attitudes toward prisoners.

**Results:** A unidimensional structure emerged for both the extended translated ATP Italian scale and the shorter ATP-IS. We observed that only previous contact had a role in increasing positive attitudes.

**Conclusions:** The ATP-IS is a valid test and reliable scale for assessing attitudes toward prisoners. These attitudes seem to be mainly influenced by a direct, event short, contact with prisoners.

**Keywords:** ATP (Attitude Toward Prisoners), ATP-IS (Attitude Toward Prisoners – Italian short version), prisoners, prejudice.

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## The Attitude Toward Prisoners scale: a revised-short version standardized on Italians (ATP-iS)

### Introduction

The Attitudes Toward Prisoners (ATP) scale has been developed and validated by Melvin and colleagues (1985) to measure attitudes and beliefs toward prisoners in the United States population. The scale, which still represents, after more than 40 years, one of the few attempts to measure attitudes toward this specific population (see Ashworth et al., 2018 for a review), has been translated and used in several countries, contributing to several studies in social psychology concerning prisoners. In particular, the scale has been used to investigate attitudes toward different types of prisoners (prisoners who self-harm: Ireland & Quinn, 2007; sexual offenders: Craig et al., 2005; mentally ill offenders: Church II et al., 2006; serious offenders: Boag & Wilson, 2014), the impact of training and enhanced contact in modulating the attitude toward prisoners (Boag & Wilson, 2014; Sabadosh, 2018), and the degree of negative attitudes reported by people and groups at a different extent of contact with prisoners (Chui & Cheng 2012; Kjelsberg et al., 2007; Ortet-Fabregat et al., 1993; Park, 2009).

All these studies contributed to increase the knowledge about the public's attitudes toward prisoners and their impacts on prisoners in experiencing detention and the subsequent reintegration into society. This specific field is very relevant from both the social and institutional point of view: the investigation of the social impact of different initiatives and programs addressed to increase contact with prisoners, for example, can be informative for policymakers and practitioners and could contribute to establishing new protocols and to improve not just the experience of prisoners, reducing the risk of recidivism. Indeed, the reduction of negative attitudes toward prisoners can have a long-term relevant impact, as several studies and reports (most of them in the UK) showed that experiencing a high level of prejudice enhances the probability of reoffending after the end of the sentence (Bell, 2010; Cleary et al., 2012). Kjelsberg et al., (2007), observed different attitudes toward prisoners in prison inmates, prison officers and employees, and students, and highlighted the possible negative implications of negative attitudes recorded on officers and students. On the other side, positive attitudes toward prisoners reported by prison inmates and people who work with them at a different extent of contact emerged as relevant in promoting an efficient rehabilitation process and positive outcomes after the end of detention.

Furthermore, the measurement of attitudes toward prisoners can provide us with several insights into the public's opinion on a hot topic related to prisoners, such

as, for example, the efficacy of rehabilitation and the chance of reintegrating prisoners into society. In this regard, above the study by Kjelsberg and colleagues (2007) that showed how degrees of negative attitudes toward prisoners could be moderated by type of employment or studies, Boag and Wilson (2014) claimed that attitudes toward offenders can be moderated by changes in the empathy levels toward them, still after one-day full-contact experience in prison. A study conducted on social perception regarding the indult measure in the cities of Brescia and Florence shows that citizens harbor a strong sense of dissatisfaction towards the indult measure and are deeply disillusioned with the rehabilitative function of penitentiary institutions, believing, in most cases, that the released prisoner will likely reoffend (Romano et al., 2008). Furthermore, for treatment purposes, it is important for the prisoner to have contact with the outside world: firstly, to mitigate the negative effects of imprisonment (Dolcini, 1981; Baratta, 1994; Pietralunga et al., 2007), and then to lessen the penalty on the family members, who undoubtedly bear the negative consequences of the crime (Corso, 1981 cited in Pietralunga et al., 2007).

All these aspects are very relevant in supporting institutions to improve politics related to imprisonment and, in particular, to provide more chances of rehabilitation during the holding period. Moreover, increased permeability of the prison institution towards free society would allow a change in "mentality" in seeing the detention facility as a separate reality from oneself and destined to remain closed (Pietralunga et al., 2007).

In this light, an instrument for measuring attitudes toward prisoners is a relevant source of information.

Watching literature, it emerges clearly how the ATP scale has been considered a valuable instrument to measure explicit attitudes in several studies concerning prisoners and prejudice toward them. Above the USA, the 36-item scale, very simple and short to administer, has been validated in Catalan (Ortet-Fabregat et al., 1993), English (Ireland, Quinn, 2007), Norwegian (Kjelsberg et al., 2007), Romanian (Nastas & Urzică, 2020) and Chinese (Chui & Cheng, 2019), but has not been translated and standardized in Italian. This fact represents a lost chance for Italian social researchers and the present study aims at filling this gap by providing a translated and shortened validated version of the ATP available for Italian colleagues.

### Psychometric properties of the ATP scale

The ATP is a scale composed of 36 items, 17 direct (positive statements) and 19 reversed (negative

statements), that evaluates the degree of individual accordance with some affirmations concerning prisoners based on a 5-point Likert scale (from “Strongly disagree” to “Strongly agree”).

From the first validation (Melvin et al., 1985) emerged that the ATP’s 36 items contribute all together to a unique latent construct that explained the 23% percentage of the variance. Although initially administered to 50 psychology students and 43 residents in 1977, and only then extended to other samples, as reported by Ashworth et al., (2017) the scale maintains relative robustness across years and studies. The first validation reported satisfactory psychometric properties: test-retest reliability of the scale was 0.8 and split-half reliability resulted high in all the samples involved ( $r \geq 0.8$ ). A following translation and validation of the ATP scale in Catalan by Ortet-Fabregat and colleagues (1993) confirmed the unique-factor structure (about 38% of variance explained), as well as the high degree of test-retest reliability ( $r = 0.92$ ) and internal consistency ( $\alpha > 0.9$  in all samples included). The validation of the Norwegian ATP included in the Kjelsberg et al., (2007) work, again confirmed a unidimensional structure (25.3% of variance explained) and a high degree of internal consistency ( $\alpha > 0.88$  in all samples included).

Despite these results, more recent translations both in Romanian (Nastas & Urzică, 2020) and Chinese (Chui & Cheng, 2019) revealed a four-factor structure very different from the unidimensional model proposed by Melvin et al. (1985). In particular, after the removal of 9 items based on items’ loadings, the Chinese version resulted in a four-factor structure that accounted for 49.52% of the total variance. The same happened in the studies on Romanian, where, after the removal of some items due to their loadings, the authors obtained a four factors solution with 26 items which accounted for 40.37% of the variance and showed a high degree of internal reliability ( $\alpha = 0.9$ ). In this last study it’s worth noticing that the analytic strategy used was different compared those of previous studies: here the authors assumed a possible between-items correlation due to the unique-factor structure emerged by Melvin et al. (1985) and thus applied an oblimin, instead of a varimax, rotation in the exploratory factor analysis (EFA). After this passage, they went for a confirmatory factor analysis (CFA) and for a network analysis.

Anyway, despite a similar factorial structure in terms of the number of latent factors and of variance explained, the four factors isolated by Chui and Cheng (2019), i.e., (1) Perceived Bad Character, (2) Prisoners as Normal, (3) Negative Perception of Interaction and (4) Empathy, were very dissimilar to those identified by Nastas and Urzică (2020). In the Romanian study, the four factors isolated were (1) positive, (2) parole, (3) ambivalent, and (4) negative attitudes. Part of the items included in the “Empathy” factor in Chinese were included in the “positive attitudes” isolated by the Romanian translation (items 7-8-15-26-28), and the 3 items concerning the “Negative perception of Interaction” of the Chinese

version were included in the “negative attitude” factor emerged in Nastas and Urzică (2020). Regardless of these few similarities, the four-factor structures presented in these works are not very consistent and both isolated some factors with very few items included: indeed, only 2 items (14-16) are present in the “Negative Perception of Interaction” factor of Chui and Cheng (2019) and just 3 items belong to the “parole attitudes” factor in Nastas and Urzică (2020). Moreover, items removed in the Romanian and Chinese versions are not the same. Indeed, even though authors reported having removed items from the original versions based on loadings, communalities of some remaining items had very low loadings in Nastas and Urzică (2020), and this information was not available for the structure of Chui and Cheng (2019).

These differences can, of course, be because the two studies are based on two very different populations in terms of cultural background. Beyond these observations, it is anyway relevant that these two studies, more recent and very far from the others in terms of time, report a factorial structure very different from the unidimensional one of Melvin et al., (1985), and showed the need to remove some items that are not adequate to the target population of the different countries and that, probably, are not even actual in the current days.

## Aim of the present study

Approaching the translation and the adaptation of the ATP scale to the Italian population, and in line with the results of these most recent studies, we aimed to translate and evaluate the goodness of fit of each item of the original questionnaire for measuring the construct of “attitudes toward prisoners”, and analyzing whether we could extract, based on our data, a unidimensional or multidimensional factorial structure.

To this aim, we conducted two separate studies, the first for testing our translated version of the ATP on the Italian population, and the second one for validating a new version, shortened, and revised based on the first study.

## Study 1. Materials and Methods – Participants

132 participants aged between 19 and 39 years (age on average = 25.75,  $sd = 5.22$ ) were included in our sample. Of those 69 were female and 63 were male, and a major part of them (52.9%) reported as level of education the high school, 20% reported to have a bachelor’s degree, 14.9% a master’s degree, 4% a Ph.D., and only the 5.2% reported an educational level under the compulsory school.

24 out of 132 had some contact with prisoners (ex. some of them participated in school projects that included a meeting with prisoners or did occasional work in prison), but none of them had a continuative contact with prisoners.

## The ATP's Italian translation

For obtaining an Italian version of the ATP scale, we applied a back-translation method: after having literally translated each item from English to Italian, we've asked to an English mother-tongue whose second language is the Italian to translate the scale back in English and then, we evaluated the consistency between this last translation and the original version.

After this first passage, to understand whether the language used, in terms of lexicon, was appropriate and updated to the current days, we have asked 5 judges to evaluate each item. For each item judges were asked to give a rate from 0-4 on the following aspects (based on Chiorri et al., 2011):

- clarity;
- centrality;
- not offensiveness;
- language in line with the linguistic skills of the participants;
- the item makes requests to which the participant is easily able to provide an answer;
- the item asks one thing at a time;
- the item refers to specific behaviors, avoiding generalizations;
- the item avoids references to frequency, especially if generic;
- no questions refer to multiple dimensions;
- the item minimizes the possibility that the subject understands the purpose of the item;
- the item avoids double negatives;
- the item avoids suggestive questions.

Average ratings of judges were considered for each item (see supplementary materials). In particular, the items that achieved a total rating score lower than 24 (50% of the maximum) were considered "very weak" and those that obtained a rating between 24 and 30 were considered weak. Based on this procedure items 1-2-3-4-6-9-10-12-14-17-25 were reformulated. As a last step, the scale was

administered to participants through an online survey for testing its structure and each item's goodness of fitting.

## Analysis

As a first step, the data collected on 134 participants with our Italian ATP version were entered in a principal component analysis. This first passage allowed us to evaluate the number of principal components to be isolated by exploring the scree-plot and the contribution of each item to the factorial structure. According to Nastas and Urzică (2020) we considered the possible items' correlations and we, thus, applied an oblique rotation (oblimin). Items with a communality lower than 0.1 were removed. After this exploratory step, we remained with 29 items, we run a second PCA to ensure that the overall structure was not affected by these removals and run two different confirmatory factor analyses (CFA) to identify whether our data better fit with a unidimensional (similar to the one reported in Melvin et al. 1985) or a multidimensional (in line with ecc. Chui & Cheng (2018), and to Nastas and Urzică, 2020) structure. As a final step, we also removed the items whose communality at the PCA was lower than .3 to obtain the shortened version of the Italian ATP (ATP-Is). The ATP-Is version was then tested on a different and wider sample of participants (see Study 2).

Data were analyzed in the R Statistical Environment (R core team, 2020), using the "lavaan", "Hmisc", and "psych" packages.

## Results. Principal component analysis

The PCA isolated more than 10 components with an eigenvalue > 1, however, when looking at the scree-plot (see Figure 1), 4 components could be isolated according to the inflection point. the first has the highest eigenvalue (= 3.2) and explains alone the 30% of variance.

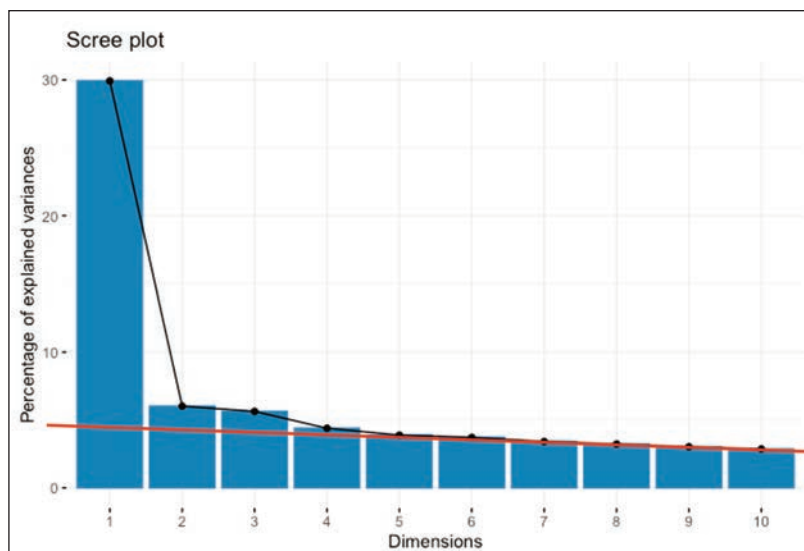


Figure 1 – Scree-plot extracted by the PCA.

As described in the materials and methods section, the items with communalities lower than .1 were removed before running the CFA (namely, items number 2-4-8-10-17-30-36). The Bartlett test ( $X^2_{(630)} = 2089.37$ ,  $p$ -value < .001) and overall MSA (0.89) suggested, anyway, very good sampling adequacy to run CFA.

After the removal of these items with a low contribution to the structure, a novel PCA isolated one factor (eigenvalue = 9.96) that explained alone the 34% of the variance. A four-factor structure could be isolated

too based on the inflection point in the scree-plot (very similar to the one presented in Figure 1), achieving the 50% of variance explained; this means that adding 3 further factors improved the explained variance of only 16%. Table 1 displays both the unidimensional and multidimensional structure underlying the unidimensional and multidimensional PCA. To better evaluate this aspect, we went for a formal comparison of two different CFAs.

Items (translated in Italian)	Unidimensional Structure			Multidimensional structure					
	F1	h <sup>2</sup>	u <sup>2</sup>	F1	F2	F3	F4	h <sup>2</sup>	u <sup>2</sup>
1. I detenuti sono diversi dalla maggioranza delle persone	0.57	0.32	0.68	<b>0.55</b>	0.31	0.42	0.22	0.36	0.64
3. I detenuti non cambiano mai	0.65	0.42	0.58	<b>0.62</b>	0.18	0.54	0.36	0.51	0.49
5. I detenuti hanno sentimenti come tutti noi	0.51	0.26	0.74	0.27	0.33	0.29	<b>0.68</b>	0.50	0.50
6. Non è saggio fidarsi troppo di un detenuto	0.54	0.29	0.71	<b>0.71</b>	0.14	0.34	0.16	0.51	0.49
7. Penso che proverei simpatia per molti detenuti	0.58	0.24	0.66	0.31	0.18	<b>0.76</b>	0.27	0.58	0.42
9. Dai a un detenuto un dito e lui prenderà tutto il braccio	0.63	0.39	0.61	<b>0.77</b>	0.37	0.22	0.31	0.66	0.34
11. I detenuti hanno bisogno di affetto ed elogi come chiunque altro	0.57	0.33	0.67	0.39	0.29	0.31	<b>0.72</b>	0.57	0.43
12. Non bisognerebbe aspettarsi troppo da un detenuto	0.65	0.43	0.57	<b>0.72</b>	0.26	0.43	0.29	0.56	0.44
13. Cercare di riabilitare i detenuti è una perdita di tempo e di risorse economiche	0.64	0.41	0.59	0.53	0.30	0.43	<b>0.55</b>	0.49	0.51
14. Non puoi mai sapere se un detenuto ti sta dicendo la verità	0.49	0.24	0.76	<b>0.61</b>	0.20	0.19	0.30	0.41	0.59
15. I detenuti non sono peggiori o migliori delle altre persone	0.46	0.21	0.79	0.25	<b>0.51</b>	0.40	0.07	0.34	0.66
16. Non bisogna mai abbassare la guardia con i detenuti	0.57	0.33	0.67	<b>0.51</b>	0.50	0.30	0.28	0.41	0.59
18. Se porti rispetto a un detenuto, lui farà altrettanto	0.53	0.28	0.72	0.48	-0.02	0.44	<b>0.52</b>	0.53	0.47
19. I detenuti pensano solo a loro stessi	0.44	0.19	0.81	<b>0.43</b>	<b>0.44</b>	0.20	0.13	0.30	0.70
20. Ci sono alcuni detenuti di cui penso che mi fiderei	0.61	0.37	0.63	<b>0.49</b>	0.27	0.49	0.41	0.40	0.60
21. I detenuti sono capaci di recepire le argomentazioni altrui	0.47	0.22	0.78	0.21	0.38	0.26	<b>0.62</b>	0.44	0.56
22. Molti detenuti sono troppo pigri per guadagnarsi da vivere in modo onesto	0.52	0.27	0.73	<b>0.56</b>	0.23	0.50	-0.06	0.48	0.52
23. Non avrei nessun problema ad avere un ex-detenuto come vicino di casa	0.68	0.47	0.53	0.47	0.45	<b>0.66</b>	0.22	0.53	0.47
24. I detenuti sono semplicemente corrotti dentro	0.54	0.29	0.71	0.20	<b>0.76</b>	0.33	0.34	0.60	0.40
25. I detenuti cercano sempre di approfittarsi degli altri	0.71	0.50	0.50	0.64	<b>0.67</b>	0.38	0.23	0.67	0.33
26. I valori della maggior parte dei detenuti sono quelli della maggior parte di noi	0.58	0.34	0.66	0.21	0.45	<b>0.67</b>	0.27	0.52	0.48
27. Non vorrei mai che uno dei miei figli uscisse con un ex-detenuto	0.64	0.41	0.59	0.58	0.31	<b>0.67</b>	0.00	0.64	0.36
28. La maggioranza dei detenuti sa amare	0.69	0.48	0.52	0.34	0.43	0.61	<b>0.61</b>	0.60	0.40
29. I detenuti semplicemente sono del tutto immorali	0.53	0.28	0.72	0.27	<b>0.68</b>	0.28	0.33	0.50	0.50
31. In generale i detenuti sono fondamentalmente cattive persone	0.56	0.31	0.69	0.20	<b>0.58</b>	0.40	0.48	0.48	0.52
32. La maggioranza dei detenuti può essere riabilitata	0.60	0.36	0.64	0.26	0.30	<b>0.75</b>	0.28	0.58	0.42
33. Alcuni detenuti possono essere anche persone molto carine	0.66	0.43	0.57	0.27	0.39	<b>0.72</b>	0.44	0.60	0.40
34. Mi piacerebbe frequentare alcuni detenuti	0.72	0.51	0.49	0.62	0.29	<b>0.66</b>	0.27	0.59	0.41
35. I detenuti hanno rispetto solo della forza brutta	0.53	0.29	0.71	0.30	<b>0.71</b>	0.33	0.18	0.52	0.48

Table 1 – Factor loadings, communalities (h<sup>2</sup>) and uniqueness (u<sup>2</sup>) of the Items belonging to each factor are in bold type for the multidimensional structure

*Confirmatory Factor Analysis*

Two different CFAs were run to test both the unidimensional and the multidimensional 4-factors structure. Comparative Fit Index (CFI) and Tucker Lewis Fit Index (TLI) were higher in the unidimensional model, conversely the Akaike and Bayesian Information Criterion (AIC and BIC) were lower (see Table 2).

Consequently, we calculated a unique total score for each participant. Based on the nonparametric analysis, no correlations between the age of participants and the ATP-I score were found ( $\rho = -0.12$ ,  $p\text{-value} = 0.15$ ), as well as no gender differences in attitudes ( $W = 2325$ ,  $p\text{-value} = 0.49$ ). Item-consistency was very satisfying (Cronbach's  $\alpha = 0.9$ ).

	Unidimensional Structure	Multidimensional Structure
RMSEA	0.081	0.095
CFI	0.782	0.668
TLI	0.764	0.664
AIC	9141.35	9619.82
BIC	9302.79	9787.02

Table 2 – Fit Indices of the two CFA models

Moreover, by looking once again at communalities emerged from the unidimensional PCA (See values in grey for  $h^2$  in Table 1), we excluded some further items that had a low contribution to the structure compared to others, or that were distributed, in terms of loadings, on more than one factor in the multidimensional structure. Items 7-14-15-16-18-19-21-22-24-35 were, thus, removed to obtain a shortened version of the ATP scale, translated in Italian (ATP-Is). This new instrument has been validated in the study 2.

the appendix). Our 19-items scale, called ATP-Is, is thus composed of 10 positive statements and 9 negatives (items 3-6-9-10-12-14-17-18-19 are reversed). As in the original version, the degree of accordance to each item has been rated by participants on a 5-point Likert scale.

As in the first study, the scale was administered to participants through an online survey.

**Study 2. Materials and Methods – Participants**

**Analysis**

In the second study there were 319 participants, but we had to exclude 12 of them because of weird or missing answers in the demographic form. One participant was further excluded because he/she gave the same answer to all the items. The final sample included 306 respondents aged between 19 and 60 years ( $F=173$ ,  $M=133$ , mean age = 33.7,  $sd = 10.11$ ). 44% of the whole sample reported high-school as educational level, while 26% had a master's degree and 18% a bachelor's degree. 238 out of 306 ( $F=123$ ,  $M = 115$ ) were workers, while the remaining 68 ( $F = 50$ ;  $M = 18$ ) were students. Participants' type of jobs or academic course were rated based on the degree of social interaction they requires and are classified in Table 3.

As a first step we performed a PCA on this new sample to explore whether a unidimensional or a multidimensional structure fit better the data. After this passage, as in study 1, we compared two different CFA based on fit indices. Split-half correlation and Cronbach's alpha for internal consistency were provided as performance indices of the scale.

Once definitely determined the best fitting structure we calculated the total scores for each participant and we performed group comparisons through non-parametric models for assessing the effect of genders, type of job in the subgroup of workers, and, finally, the difference in scores of those who had some contact with prisoners and those who did not. Internal consistency of the scale was also tested in the subgroup of workers and students.

Moreover 54 participants out of 306 had some contacts with prisoners or the prison context (ex. gr. A visit to prison for a volunteering or university project, work in prison, or other activities... see supplementary materials).

**Results. Factorial structure and performance indices of the ATP-Is**

**The ATP-Is scale**

Results were consistent to those of study 1. Overall MSA was of 0.93, MSA for each item was greater than 0.8 and the Bartlett sphericity test was significant ( $X^2_{(171)} = 2502.2$ ,  $p < .001$ ), confirming the adequacy of data for a factorial analysis. Even though from the PCA tree factors showed an eigenvalue higher than 1, a single factor explained alone 41% of the variance (eigenvalue = 7.82) determining a strong inflection point in the scree plot (see Figure 2).

The scale is a shortened version of ATP scale (Melvin et al., 1985) translated in Italian in our study 1. Based on low communalities and MSA for each value, 17 items were removed, obtaining this new version of the scale (see



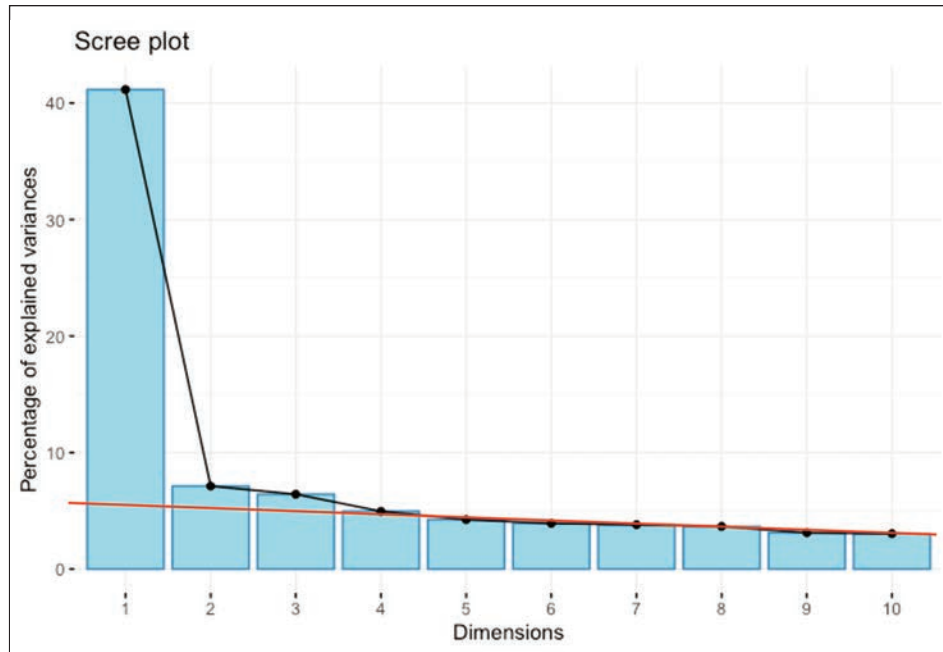


Figure 2 – Scree-plot extracted by the PCA run on the 19 items of ATP-Is.

When considering a 3-factor structure, variance explained increased of 14% reaching 55% (see supplementary materials for loading of the unidimensional and multidimensional structure on 19 items), anyway after running a unidimensional and a

multidimensional CFA, comparative indices revealed that a unidimensional structure fits better the data (see Table 3), thus, the sum of the whole items' scores has been calculated for each participant to perform group comparisons and further analyses.

	Unidimensional Structure	Multidimensional Structure (3 factors)
RMSEA	0.09	0.118
CFI	0.843	0.729
TLI	0.823	0.695
AIC	14072.35	14346.61
BIC	14213.85	14488.11

Table 3 – Fit Indices of the two CFA models.

The whole scale showed a good split-half correlation when total scores calculated from the odd items were correlated to those of right items ( $r_{(304)} = 0.87$ ,  $p$ -value  $< .001$ ). Overall internal consistency (Cronbach's  $\alpha = 0.91$ ) was highly satisfactory.

### Group-comparisons

Groups considered were female (N =173) and male (N= 133) participants in the whole sample, and students and workers subgroups (descriptive statistics for the ATP-Is total score, together with internal consistency in each group are reported in table 4).

	N	Average	sd	Range	Cronbach's $\alpha$
Overall	306	41.87	11.7	20-80	0.91
Students	68	43.5	11.2	21-72	0.92
Workers	287	41.4	11.8	20-80	0.91

Table 4 – Descriptive statistics of the total score reported by each group included, and internal consistency of the scale's items, stratified per groups

No gender difference emerged in the whole sample' attitudes toward prisoners ( $W = 12462$ ,  $p$ -value = 0.21); a linear regression on the variable normalized through a logarithmic<sub>10</sub> transformation revealed no age-effect on ATP-Is total score ( $F_{(1, 305)} = 0.39$ ,  $p$ -value = 0.52).

A subgroup of workers ( $N = 146$ ) whose jobs were classified as “educational and sanitary” ( $N = 52$ ;  $F = 37$ ;  $M = 15$ ; age on average = 35.54,  $sd = 9.22$ ) and “technical and administrative” ( $N = 93$ ;  $F = 38$ ;  $M = 55$  age on average = 38.29,  $sd = 9.43$ ) were compared to understand whether educational and helping professions reported significantly lower degree of prejudice toward prisoners. No job-type effect emerged from this comparison ( $W = 2069.5$ ,  $p$ -value = 0.15). The total group of workers ( $N=287$ ) was further compared with the one of students ( $N = 68$ ), but no significant difference in the ATP-Is' score emerged ( $W = 9106$ ,  $p$ -value = 0.11).

Finally, we performed a comparison between a subgroup of participants that did not report any previous contact with prisoners and those who did. The idea of selecting this sub-sample of participant ( $N = 107$ ;  $F=49$ ;  $M = 48$ ; age on average = 34.55,  $sd = 8.81$ ) comes to the fact that in our overall sample, only 54 out 306 (17%) participants declared to have the experience of a contact with prisoners. To solve this issue, we selected a subsample of participants ( $N= 53$ ) with no previous contact, perfectly matched for age ( $W=1421.5$ ,  $p$ -value = 0.95), gender ( $X^2_{(1)}=0.01$ ,  $p$ -value=0.91) and levels of education ( $X^2_{(4)}=2.54$ ,  $p$ -value = 0.63) to the group of people with previous contact with prisoners. Interestingly, the non-parametric comparison between these groups showed that participants with a previous experience of contact with prisoners had significantly lower levels of negative attitudes toward prisoners (ATP-Is average total score = 38.39,  $sd = 12.47$ ;  $W = 1814.5$ ,  $p$ -value = 0.016) than other participants (ATP-Is average total score = 43.43,  $sd = 11.63$ ; see Figure 3).

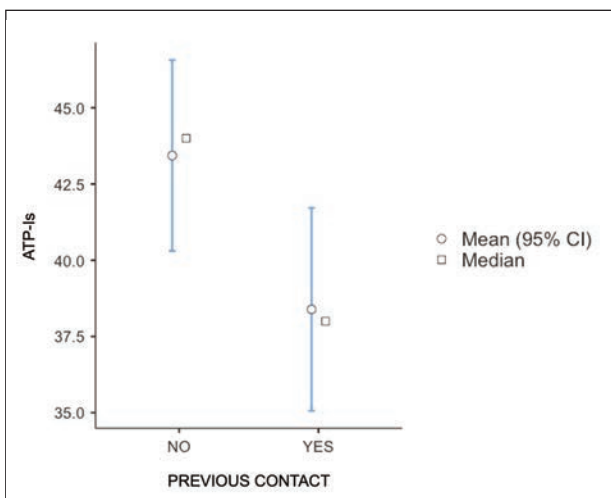


Figure 3 – Means scores to the ATP-Is scale in participants who declared having had (YES) or not (NO) previous contact with prisoners

## General Discussion

In study one we have translated and adapted the ATP Scale by Melvin (1985) In Italian. By looking at the factors isolated by the PCA, our results were very consistent with those presented by Melvin and colleagues (1985), and those replicated in the Catalan translation of Ortet-Fabregat and Perez (1993), as well in the Norwegian one by Kjelsberg et al. (2007). As in these studies, we observed that one factor alone explained most of the variance (30% in study 1 and 41.16% in study 2). Indeed, although both Melvin et al. (1985), Ortet-Fabregat and Perez (1993), and Kjelsberg et al. (2007) reported a level of variance explained by one factor under the 50%, the predominance of this unique factor on the others with an eigenvalue major than one, is a relevant result that cannot be ignored to interpret the structure. Nevertheless, when we inspected the scree-plot emerged by the PCA in our *study 1*, we noticed that, as for the Chinese translation by Chui and Cheng (2019) and the Romanian one by Nastas and Urzică (2020), a four-factor structure could be also extracted based on the inflection point (see Figure 1 and 3). The first bar representing the first factor had, in any case, a very high eigenvalue and drew another very strong inflection point in the plot. This fact, together with the high degree of variance explained by the unidimensional structure and the low increment in the percentage of variance explained when considering a multidimensional one (16% more), made us consider preferable, from this first step of analysis, the unidimensional solution supporting Melvin et al. (1985).

Anyway above considering the goodness of each item translated in Italian after so many years from its first formulation, the aim of *study 1*, was to compare two possible structures to determine based on data, and not only on our considerations, whether a multidimensional or unidimensional better fitted the data. To this aim, we compared two different CFAs through fit indices, after having excluded 11 items with a low contribution to the general structure. The comparison between the two CFAs supported our first idea of isolating only one factor, a position that contrasts with more recent studies on ATP. Anyway, these contrasting findings, it can be explained by considering some aspects. Both Chui and Cheng (2019) and Nastas and Urzică (2020) reported that a first factor explaining a wide part of the variance could be isolated based on their PCAs, but they went for a multidimensional structure. The choice to isolate four factors was, thus, supported in these studies by the intention of increasing the variance explained. In particular, as already mentioned in the introduction, from the point of view of the interpretation the four factors isolated in the two studies were very different and some factors contained very few numbers of items, becoming, thus, less informative than others. Overall, the structure underlying data in our study seems to be very similar to the one reported in these more recent studies (Chui & Cheng, 2019; Nastas & Urzică, 2020), but the choices in

how many factors isolating were different. In line with these considerations, we can also observe that Melvin et al. (1985) and Ortet-Fabregat and Perez (1993) reported to have chosen a unidimensional structure based on the high percentage of variance explained by one factor, but they did not report the Scree Test, so there is no chance to understand whether, also in their cases, a four-factor structure would be also supported by their data.

Anyway, by looking at all these works, above the different decisions taken by the authors, the structure of the data seems to be very consistent across-studies (including ours) and, thus, over 40 years of research. This fact suggests that, overall, the ATP scale has a very good replicability and it's a robust instrument for measuring attitudes toward prisoners, as already emerged by (Ashworth et al., 2017).

By looking more deeply at our translation, only four of the 11 items reformulated after the judges' evaluation, emerged as low informative from the PCA. These items, reformulated to be clearer for the participants, had, as many others, a very low contribution to the factorial structure. Indeed, the evaluation of items performed in the first study revealed that 7 items (2-4-8-10-17-30-36) should be removed. By looking at these items (see supplementary materials), consists of very strong statements such as "Most prisoners are stupid" (Italian: *la maggior parte dei detenuti è stupida*), or statements that can induce very unpopular opinion like "if a person does well in prison, he should let out on parole" (Italian: *se una persona si comporta bene in prigione è giusto che sia rilasciato per buona condotta*), we assume that most of them induced more neutral ratings due to social desirability.

Some further items (7-14-15-16-18-19-21-22-24-35), removed from the scale to obtain the shorter version of ATP, reported statements like "If you give a prisoner your respect, he'll give you the same" (Italian: *Se porti rispetto a un detenuto lui farà altrettanto*), "You never know when a prisoner is telling the truth" (Italian: *Non puoi sapere se un detenuto ti sta dicendo la verità*), "Prisoner will listen to reason" (Italian: *I detenuti sono capaci di recepire le argomentazioni altrui*), etc. To explain the fact that these further 10 items had a lower contribution to the factorial structure we can put forward some hypotheses: the first is that, even though we have carefully translated and reformulated items judged as difficult during the translation process, some of them could be interpreted anyway as complex in their formulation at the linguistic level. A second hypothesis is that some of these items require very strong opinions about prisoners and as already mentioned, induce a high degree of social desirability. One last hypothesis, instead, is that some of these items were considered too specific to be answered by someone who did not have any contact with prisoners and, thus, any knowledge of their real intentions and behavior. Indeed, by observing the 19 items remained in the ATP-Is, what emerges is that more general positive and negative statements about prisoners, like "Prisoners are different from most the people" (Italian: *I detenuti sono*

*diversi dalla maggioranza delle persone*) or "Most prisoners have the capacity for love" (Italian: *La maggioranza dei detenuti sa amare*) fit better our sample and, thus, actual Italian population. This evidence can be interpreted as a function of the different culture or of the different historical period in which our data were collected, by concluding that attitudes and prejudice toward prisoners are actually limited to general assumptions and do not include very specific beliefs about the nature of intentions, morality, and behavior of prisoners.

As emerged from *Study 2*, our revised shortened version of the ATP Scale, the ATP-Is, is a faster and more valuable instrument for assessing attitudes toward prisoners, with very good indices of reliability and validity. In particular, the ATP-Is, showed to provide a robust quantitative index of positive/negative attitudes that can be used to compare attitudes toward prisoners across groups, to test whether attitudes towards prisoners correlate or are predicted by other variables, or to be simply informative of the participant's attitude toward prisoners.

As for the translated 36-item version, a unidimensional structure fits the data better and seems to be of easier interpretations, so we did not isolate any subscale. Contrariwise we calculated for each participant a unique score and we used it to explore the effect of demographic variables such as age and gender. By looking at what emerges from our study 2, no effect of gender, or age seems to moderate attitude toward prisoners (supporting Ireland & Quinn, 2007), and also a type of job concerning the more humanitarian area "educational and sanitary", when compared to more "technical and administrative" jobs, does not promote higher or lower degree of negative attitudes toward prisoners, supporting Kjelsberg et al., (2007). Indeed, even though in Kjelsberg et al., (2007) study, the authors found that participants studying business economics reported more negative attitudes than those studying nursing, they did not find any "work-effect". This last issue, anyway, should be further tested in the light of levels of empathy: if nursing students of Kjelsberg et al., (2007) were motivated to undertake this type of study because of higher levels of empathy, we can make the hypothesis that empathy has a moderating role on attitudes toward prisoners. Further studies considering this variable, as already done by Boag & Wilson, (2014) on professionals who work with offenders, should be included in the research agenda.

In general, results emerged from our studies 1 and 2, can be interpreted by assuming that prisoners are seen as far from the common daily life and Italian people, regardless of their education, gender, type of work, or type of studies, do not show strong positive or negative opinions toward prisoners (average scores= 41.87, SD = 11.7, range: 20-80). The only factor that seems to influence people's attitudes toward prisoners is eventual previous contact with prisoners in their life experience, supporting Allport's Contact theory (Allport, 1954; see Pettigrew & Tropp, 2006 for a review). People who

reported previous contact with prisoners, indeed, showed in our study a significantly lower degree of negative attitudes and, thus, prejudice toward prisoners. This was true both for those who reported a prolonged contact or, at least, an occasional one, although further studies should be run to better study what kind of contact promotes and maintains a positive attitude toward prisoners. How much this process is influenced by emphatic skills, perspective takings, other prejudices, or political and religious beliefs, is something that must be further studied on the Italian population. The use of the ATP-Is will be a valid support for this further research.

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## Use of restorative justice and restorative practices in prison: a systematic literature review

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### Abstract

**Aim:** recent years have seen an increasing use of restorative justice (RJ) and restorative practices (RP) in prison. The aim of the study was to conduct a systematic literature review analysing research studies concerning RJ and PR within adult and/or juvenile prisons. The aim was to investigate whether and which restorative practices are applied, and the results obtained.

**Methods:** the scientific articles included in the study were selected according to the following inclusion criteria: 1) years of publication between 2010 and 2023; 2) adult and/or juvenile prisons; 3) English-language literature; 4) full texts accessible directly or upon request to the author(s). 11 studies were included in this study and a qualitative synthesis was carried out.

**Results:** the most widely used restorative practice in prisons is circle (n = 9), followed by victim-offender mediation (VOM) (n = 4) and restorative conferences (n = 3). The application of RP produced positive results in terms of: promotion of conflict management skills and problem solving strategies; interpersonal relations within the prison and with the community; taking responsibility in terms of awareness of the harm caused to the victim; promotion of social and emotional skills.

**Conclusions:** results highlighted the need to apply restorative justice and its practices in prisons as an alternative and innovative approach to conflict management, in prisoners' treatment pathways and the related difficulties and challenges in their application. However, scientific studies on this topic are limited and therefore further studies on the impact of RJ and RP in prison settings are needed.

**Keywords:** restorative justice; restorative practices; prison; detention; criminal justice.

Conceptualization, Lucrezia Perrella, Ernesto Lodi, Gian Luigi Lepri, and Patrizia Patrizi; methodology, Lucrezia Perrella, Ernesto Lodi, and Patrizia Patrizi; investigation, Lucrezia Perrella, Ernesto Lodi, Gian Luigi Lepri, and Patrizia Patrizi; data curation, Lucrezia Perrella, Ernesto Lodi; writing—original draft preparation, Lucrezia Perrella, Ernesto Lodi, and Patrizia Patrizi; writing—review and editing, Lucrezia Perrella, Ernesto Lodi, Gian Luigi Lepri, and Patrizia Patrizi; supervision, Patrizia Patrizi. All authors have read and agreed to the published version of the manuscript.

## Use of restorative justice and restorative practices in prison: a systematic literature review

### Introduction

Restorative justice is an approach aimed at peaceful conflict management, restoration of the value of justice and accountability among individuals and in communities, through dialogue, respect and solidarity among all persons involved (EFRJ, 2018, p. 3).

The restorative justice paradigm, also following the Recommendation CM/Rec (2018)8, is part of a complex international debate on regulatory changes, implementation measures and operational protocols to be adopted in the judicial, penitentiary, school, social and, more generally, in communities, with the main aims of promoting individual and collective well-being, countering recidivism and spreading a participatory sense of social security, in a perspective of enhancing social, community and cultural relations in general (Lodi et al., 2022).

Today, public policies are questioning the need to promote and experiment new actions/interventions that can better foster the promotion of wellbeing and the optimal functioning of individuals, communities, organizations, and institutions, as well as improve the lives of all people and the safety of the places where people live, work, and operate (Read et al., 2019). Also by virtue of the goals of the 2030 Agenda, which aim to combat the phenomena of social exclusion and marginality, fight inequalities and build peaceful societies that respect human rights, the attention of public policies is also directed to the experimentation and promotion of new forms of local welfare in the areas of: peaceful management of conflicts; protection and listening to the victim, also with respect to the risks of secondary victimization; active reintegration of offenders; promotion of opportunities for participatory democracy as a means of involving people and systems in the prevention of deviance, crime, recidivism; conflict situations within organizations; promotion of individual and collective well-being.

Many restorative justice experts and researchers agree that restorative justice can be defined as a theoretical approach comparable to a socio-political movement that aims to change/transform the current justice systems. In fact, it is proposed as an approach capable of reducing the punitive and exclusionary nature of the current penal measures (Johnstone, 2014; Patrizi, 2019; UNODC, 2008; Zehr, and Mika, 1998), which see the objective of the re-educative function of punishment as a failure. In fact, current prison systems use punitive practices to control, manage and respond to the misbehavior of people detained in prison, very often exacerbating

disciplinary problems rather than containing them. In addition, each prisoner follows a treatment programmed with the aim of being 're-educated', made more responsible and no longer adhering to the deviant/criminal code of conduct with a view to re-entering society. However, research shows that prison (and punishment), instead of being (re)educational, is very often ineffective (both in deterring crime and in preparing people for life after release), inhumane, stigmatizing and characterized by violence and conflict (e.g., between prisoners and between prisoners and staff, such as prison officers) (Johnstone, 2014). Therefore, there is a need to review current prison systems and make practices within them more constructive and meaningful, as well as to make prison a safe place to live and work. The restorative approach and its practices could be a viable alternative to the practices currently used in prisons, where the focus is both on repairing the harm caused by the offence and rebuilding relationships through the involvement of victims, offenders, and the community (Carroll, and Warner, 2014; Johnstone, 2014; Patrizi, 2019; Wacquant, 2014; Wood, 2015), and on new ways of addressing/managing/responding to the different conflicts that may occur within prison.

Based on existing research studies in literature, the aim of this systematic review was to highlight which restorative practices are implemented in prisons and the results achieved, analysing its effects in terms of its advantages, criticalities, and challenges.

#### *Restorative justice and restorative practices in prison*

In recent years there has been a significant growth in the application of restorative justice and restorative practices also within prisons, both in terms of restorative practices activated to involve prisoners, victims, prison staff (educators, police officers, directors) and institutions, and as a possible prison disciplinary policy. In fact, while many researchers support the idea of restorative justice as a possible alternative to imprisonment (EFRJ, 2020; Garcia et al., 2020; Johnstone, 2014; Płatek, 2007; Ross, and Muro, 2020; Ruggiero, 2011; Van Ness, 2007; Van Ness, 2014), there is an awareness that for some offenders a restraining response (e.g., detention) is necessary. Therefore, if incarceration is sometimes an appropriate and fundamental sanction, restorative justice and restorative practices will have to enter prisons so that this possibility can also be offered to detained offenders and, if possible, to victims and society (Dhami et al., 2009; Edgar, and Newell, 2006; Garcia et al., 2020; Johnstone, 2014; Ross, and Muro, 2020; Van Ness, 2007; Zehr,

2005), in combination, for instance, with treatment programmes.

Restorative justice is a paradigm that cannot be identified with a specific programme or field of application (Johnstone, 2014; Johnstone, and Van Ness, 2006; Patrizi, 2019; Wright, 2002; Zehr, 2002), as it represents a cross-cutting approach that can be applied in different contexts and for different purposes. Moreover, within the restorative justice paradigm, there are different programmes that vary according to the people involved and the context in which they are applied. These can be: family group conference, restorative conference, victim-offender mediation (VOM), community-building circles.

Regarding issues of criminal relevance, restorative justice is not necessarily the other pole of retributive justice, although the two paradigms represent different systems in terms of the meaning they attach to crime and consequently in the goals they pursue in responding to it (Johnstone, 2014; McCold, and Wachtel, 2003; Patrizi, 2019; Wright, 2002; Zehr, 2005). Restorative justice, in fact, is normative in nature and sees crime as a violation of state law because of which responsibility for the act is determined in terms of guilt and the respective punishment is imposed. For restorative justice, the offence is seen as a harm caused and suffered by the victim (not by the state) and emphasizes repairing the harm as a means of restoring justice, relational balance, and trust in bonds, taking care of all parties affected by the harm (victims, perpetrators, community), since, for restorative justice, it is not enough to punish the offence to achieve these goals. Therefore, it is possible, and it would be desirable, for both to dialogue together so that their mutual diversities and specificities are a strength that enables them to build systemic responses through integrated pathways, attentive and capable of welcoming/taking care of all the needs of those affected by the crime/harm. In fact, the most recent research in this field (Armstrong, 2012; Johnstone, 2014; Carroll, and Warner, 2014; Hechler et al., 2023; Shapland et al., 2011; Waquant, 2014; Wood, 2015) shows that restorative justice and restorative processes represent a space for listening and responding to needs that have remained unheard and/or unreceived by traditional justice systems, and victims and offenders who participate in restorative processes experience justice in a much more satisfying and meaningful way than those experienced in court. For example, with regard to victims, restorative processes have been shown to achieve at least 85% satisfaction among victims (Armstrong, 2012; Chapman, 2019; Hechler et al., 2023; Laxminarayan, 2011; Shapland et al., 2011; Wallace, and Wylie, 2013) and reduce their fear of suffering further harm (Armstrong, 2012; Hechler et al., 2023; Strang, 2002; Van Camp, 2017; Zehr, 2005) due to the opportunity they are given to tell the truth about what happened, to ask why, and to make known the consequences of the harm they have suffered. Thus, restorative processes can help the offender to take responsibility for his or her actions in terms of

harm and consequences on the victim, and to change with a view to reintegration into the community. In this sense, restorative processes may also be a protective factor with respect to the containment of the risk of reoffending, as they may help to change the offender's perspective, discourage crime (Latimer et al., 2005; Lauwaert, and Aertsen, 2015; Robinson, and Shapland, 2008) and contribute to the reduction of reoffending rates and thus also of incarceration levels (Chapman, 2019; Johnstone, 2014; Latimer et al., 2005; Shapland, and Robinson, 2011; Sliva, 2018).

The development of restorative justice and restorative practices as a prison-wide approach, i.e. as a prison disciplinary policy, allows restorative justice processes to be used not only to promote the repair of the harm caused by the offence for which the prisoner is in prison, but also to manage and respond to different conflicts/problems (between prisoners, between prisoners and prison officers, between prisoners and educators, etc.). Therefore, the restorative approach and practices can facilitate collaborative and cooperative decision-making processes with respect to what is right to do to restore harm, resolve conflict and heal a wounded relationship, thus helping to build a fair, safe, supportive, and inclusive prison environment and, at the same time, to promote and develop interpersonal and individual skills such as empathy, self-efficacy, and non-violent communication.

## Materials and Methods

For the aims of this study, studies that have activated restorative justice processes within prisons for adults and/or minors have been taken into consideration.

This systematic literature review was conducted between May 2022 and May 2023 and the scientific articles included were selected based on the following inclusion criteria:

- years of publication between 2010-2023;
- target: adult and/or juvenile prisons;
- interventions: restorative justice's practices;
- English language literature;
- full-texts publications directly accessible from the scientific databases or by request to the author(s).

The research was done in line with the PRISMA guidelines, checklist, and the flow chart (<http://www.prisma-statement.org> accessed on: 04/06/2023). 233 articles were found based on the search carried out with the keywords: "restorative justice" and/or "restorative practices" and/or "prison" and/or "detention" and/or "correctional". The figure 1 presents a PRISMA flow diagram of the article's selection process.

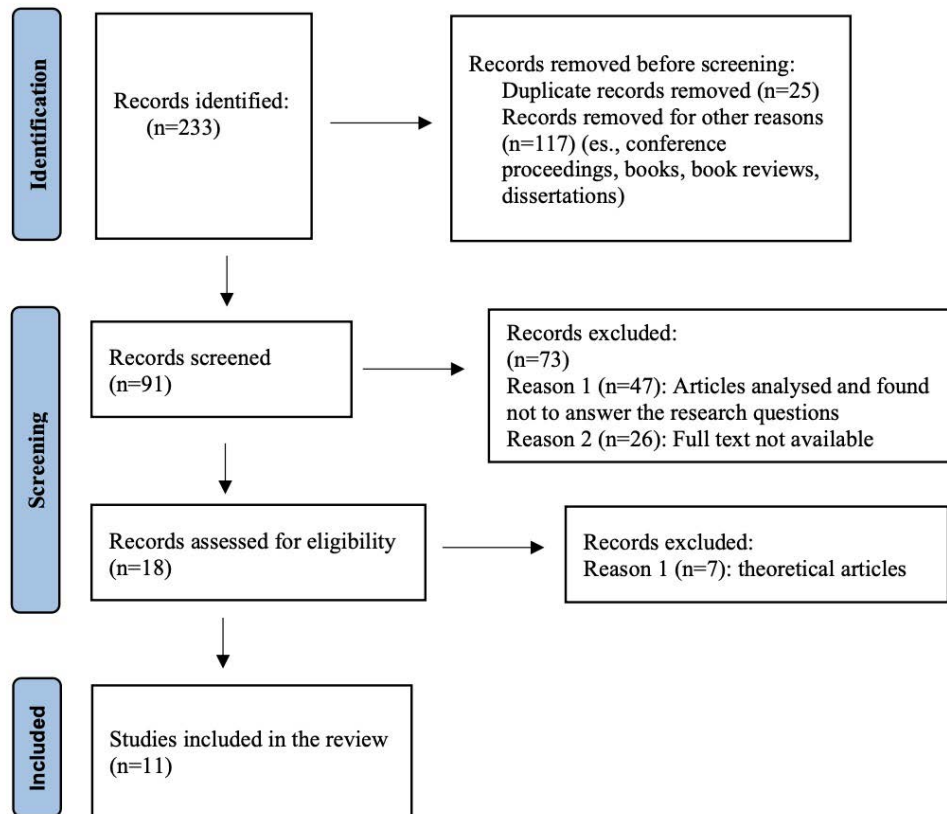


Figure 1 – Study selection process by PRISMA flow diagram

As can be seen from the figure above (Fig. 1), of the 233 articles found 25 were excluded because they were duplicates and 117 because they were books, book reviews, conference proceedings and doctoral dissertations. There were 91 articles evaluated as eligible: of these, 26 were excluded because full texts were not available (none of the 26 required articles were submitted) and 47 did not answer the research questions. 18 articles were evaluated as eligible but in the end 7 articles were excluded because they were a theoretical article. These 7 articles are reported in Appendix A (Table A1) as a possible subject of the reader(s) to be interested in. Therefore, at the end of the selection process, 11 articles were evaluated as suitable and thus included in this systematic review. To proceed with the content analysis of the articles, a codebook was developed, and the qualitative data analysis was subsequently conducted using SPSS 25.0 software. The codebook was set up on 50% of the selected records and then verified on the remaining 50% (Losito, 2002).

Two experts coded the studies according to the response categories created. In two records, discrepancies emerged in the interpretation of the data, which were then submitted to two other external coders and the supervisor. Two independent experts coded the articles according to the constructed categories. In 2 articles were their different

modes of interpretation by independent coders (only one category interpreted differently by coders for each article). The 2 articles were submitted to 2 other independent coders and subsequently to the research supervisor. A final discussion with the supervisor and research team resolved the doubts on these 4 articles.

## Results

The studies included in this systematic review were conducted in five countries (USA, 5; UK, 3; Canada, 1; Brazil, 1; Israeli, 1) and all studies concern correctional institutions with adult prisoners. One study is multimethod research (Armour, and Sliva, 2018); five studies are qualitative studies (Bohmert et al., 2018; Calkin, 2021; Gavrielides, 2014; Nowotny, 2018; Walker, and Greening, 2010); three studies are randomized controlled trials (RCT) (Duwe, 2013; Duwe, 2018; Weimann-Saks, and Peleg-Koriat, 2020), in which one (Duwe, 2018) is an update of the original protocol (Duwe, 2013); one study is quantitative studies (Stewart et al., 2018); one study used mixed methods (interviews and case studies) (D'Souza & Shapland, 2023).

The characteristics of the 11 included studies and the qualitative synthesis are reported in Appendix B (Table A2) following the PICOS scheme: participants,



interventions, comparisons, outcomes, and study design.

None of the studies planned to train the participants involved in Restorative Justice and its practices, either in terms of raising awareness or in terms of training people so that they could directly activate and facilitate the practices.

The people involved in the studies as the participants were prisoners, prison staff (director, penitentiary police, educators, counselors) victims (direct and indirect), families, citizens, for a total of about 910 participants from about 31 prisons.

The studies included in this review were aimed at analyzing the impact of the implementation of restorative justice and its practices, both as a prison-wide approach and as practices activated in response to specific cases, through a comparison with the pre-implementation period. Specifically, in 81,8% (9 studies) of the studies,

prisons provided traditional disciplinary practices and policies; in 18,2% (2 studies) prisons provided traditional disciplinary practices and policies oriented towards punitive approaches.

#### *The restorative practices used in prison*

In all 11 articles examined, it was found that every prison implemented and empowered at a minimum one restorative practice, either in terms of practices as part of the treatment pathway or in terms of practices to manage, address and respond to conflict situations within the prison (e.g., harmful behavior, violence).

As can be seen in Figure 2, the most frequently used restorative practice was circles (n = 9), followed by victim-offender mediation (VOM) (n = 4), restorative conferences (n = 3).

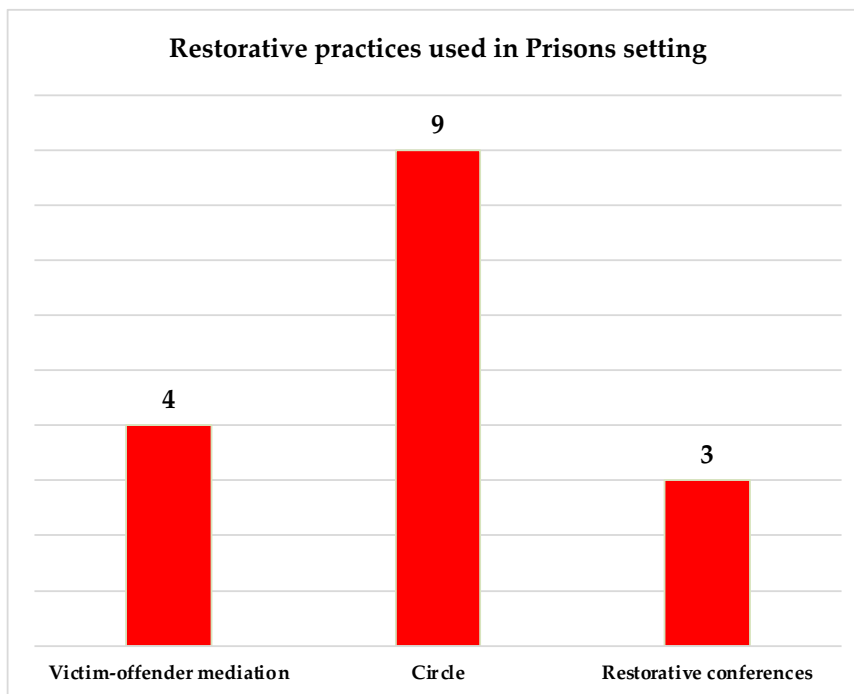


Figure 1 – Study selection process by PRISMA flow diagram

Within prisons, restorative practices have been used both as practices that become part of the treatment pathway and as practices that are activated to manage, address, and respond to conflict situations within the prison (e.g., in situations of violent acts).

Concerning circles, the following have been activated: circles between prisoners and victims (Armour, and Sliva, 2018; Walker, and Greening, 2010; Weimann-Saks, and Peleg-Koriat, 2020), circles between prisoners (Bohmert et al., 2018; Calkin, 2021; Gavrielides, 2014; Nowotny, 2018; Duwe, 2013; Duwe, 2018), circles between prisoners and prison guards (Calkin, 2021; Gavrielides,

2014; Walker, and Greening, 2010), circles between prisoners and their families (Calkin, 2021; Walker, and Greening, 2010), circles between prisoners and community members (Bohmert et al., 2018; Walker, and Greening, 2010; Duwe, 2013; Duwe, 2018).

Circles between prisoners and families and between prisoners and community members were activated with the aim of fostering the (re)construction of positive relationships, also with a view to reintegration into the community. In other cases, circles and conference have been activated instead of the traditional prisoners' councils.

Restorative conferences have been activated both to address and manage mostly serious conflicts and as alternative disciplinary processes in the case of acts for which a sanction was envisaged, to find a joint agreement on how to respond to the events that occurred, as well as at the end of victim-offender mediation processes.

On the other hand, victim-offender mediation was activated in almost all cases at the request of the prisoners themselves who expressed a wish to meet the victim, except in the study of D'Souza, and Shapland (2023), as mediation was part of the trial and was therefore proposed by the researchers.

*The effects of restorative approach and restorative practices*

The analysis of the studies revealed positive results with regard to several aspects: reduction in incidents, disciplinary sanctions and prison offences and conflicts; increased ability to manage/resolve conflicts and increased

problem-solving strategies and non-violent communication; increased personal and collective responsibility and group cohesion; increased responsibility and awareness for the harm caused to the victim and its consequences; offender's distancing from the criminal behavior and deviant identity; greater sense of justice perceived by victims; reduction of recidivism; greater perceived social, moral, emotional and instrumental support, also with a view to re-entry into the community; (re)building of positive relationships between inmates, between inmates and families, between inmates and officers; perceived fairer processes and treatment respectful of human rights.

As can be seen from Figure 3, studies have shown that the effects of applying the restorative approach and restorative practices in prison are: discipline and conflict (1); support (5); social, interpersonal, and emotional skills (3); interpersonal relationships (2); responsibility and awareness of harm caused (7); experience of detention (2); reduction of recidivism (7).

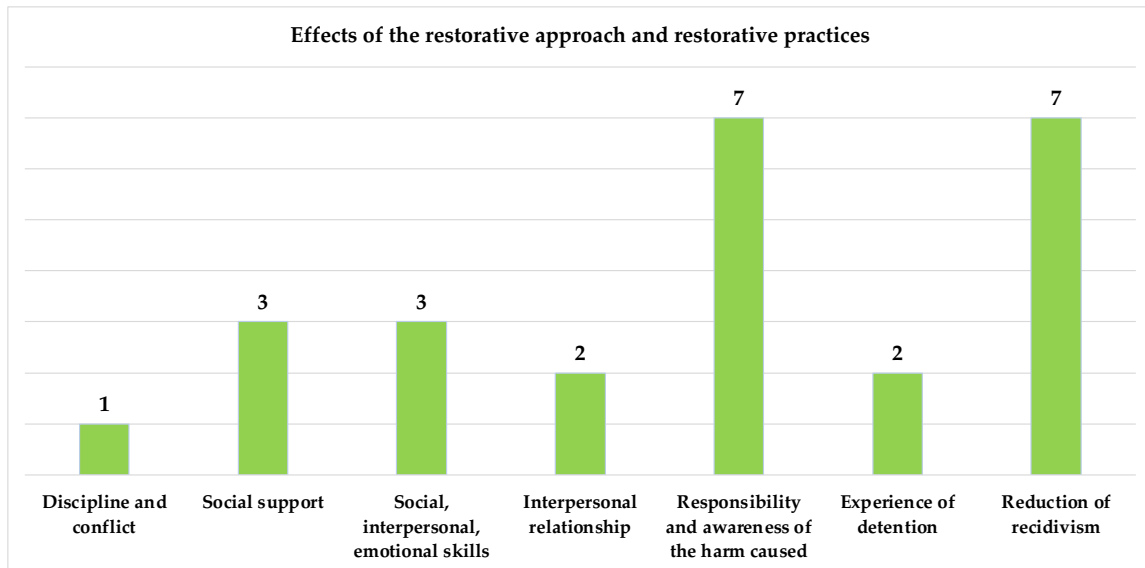


Figure 3 – Effects of the restorative approach and restorative practices

Studies have shown that restorative practices help to increase inmates' *responsibility for their actions in terms of awareness of the harm caused to victims* (Armour, and Sliva, 2018; Bohmert et al., 2018; Duwe, 2013; Duwe, 2018; D'Souza, and Shapland, 2023; Walker, and Greening, 2010; Weimann-Saks, and Peleg-Koriat, 2020) as a direct consequence of their own actions, compared to inmates who did not participate in such practices and that this is true even with detainees who manifest low or no self-acceptance of responsibility.

Furthermore, prisoners who have participated in programmes that include such practices show more positive attitudes towards the possibility of participating in a restorative process [51] to repair the harm caused. In

addition, mere exposure to videos of real (even indirect) victims telling their story and the harm they have suffered can also contribute to such outcomes.

Participation in restorative encounter groups within prison that involve prisoners and victims (Armour, and Sliva, 2018; Stewart et al., 2018), or prisoners, prisoners and families, prisoners, and police officers (Calkin, 2021; Nowotny, 2018), can contribute to the development of both *positive interpersonal relationships* and *social, interpersonal, and emotional skills*. For example, an increase in trust, cooperation, caring and mutual support (Armour, and Sliva, 2018; Stewart et al., 2018), the development of innovative strategies and methods of peaceful conflict management and problem-solving, respect, empathy, non-

violent communication, and personal and collective responsibility can be evidenced (Calkin, 2021; Nowotny, 2018), and repercussions on mental and emotional well-being (D'Souza, and Shapland, 2023).

The studies analyzed have shown that confrontation with one's own actions, consequences and the harm resulting from them, made possible by participation in restorative practices and/or processes, increases the likelihood of greater responsibility for the harm caused to the victim. This significantly contributes to distancing the offender from the criminal behavior and deviant identity, resulting in a *reduction of recidivism* (Armour, and Sliva, 2018; Bohmert et al., 2018; Duwe, 2013; Duwe, 2018; D'Souza, and Shapland, 2023; Stewart et al., 2018; Walker, and Greening, 2010). The reduction of recidivism, and thus consequently of incarceration rates, also has effects on the costs of imprisonment for institutions/governments (Duwe, 2013; Duwe, 2018). Indeed, while the model and its implementation are already cost-effective compared to traditional prison programmes, lowering criminalization rates leads to a general reduction in the *costs of the criminal justice and prison system*.

In addition, social, moral, emotional, and instrumental support (e.g., in finding employment or housing, etc.) provided to offenders (Armour, and Sliva, 2018; Walker, and Greening, 2010; Duwe, 2013; Duwe, 2018; Stewart et al., 2018), both by victims and community members who participated in restorative processes, towards reintegration into the community, was found to contribute significantly to reducing recidivism rates. Furthermore, the study by Walker L., and Greening (2010) found that victims who participated in restorative practices and/or restorative processes experienced a greater sense of perceived justice.

The study by Nowotny et al. (2018) found that the systematized use of restorative practices can also lead to beneficial outcomes in terms of better skills in dealing with behavioral issues and prison discipline, as well as increased adherence to rules. In fact, a significant *reduction in levels of violence and prison's crimes* emerged with a consequent *reduction in the need for disciplinary sanctions and punitive measures* compared to when traditional practices were used, which included the use of force not only by inmates but also by prison staff.

Related to this is another aspect that emerged from some of the studies analyzed: sometimes, prison-internal decision-making systems and treatment methods are not always considered to be fair, legitimate, and respectful of prisoners' rights, and this negatively affects the detention experience of prisoners and prison staff (Calkin, 2021; Nowotny, 2018). Restorative processes could be used as decision-making practices for sentencing, prisoner councils or other ways of working within prisons, either when conflicts and/or incidents liable to disciplinary sanctions occur, or as dialogue and decision-making practices in general (Calkin, 2021; Nowotny, 2018). In this sense, both prisoners and prison staff who have

experimented with RJ practices for these purposes report an *improved experience of detention*: RJ practices support respect, communication, personal and collective responsibility, and a rehabilitative culture, also acting in preventive terms regarding possible future situations.

In accordance with what just described, the need to implement restorative justice and practices to improve the prison experience opens the consideration of how RJ can be implemented as a whole-prison oriented disciplinary policy (Calkin, 2021; Gavrielides, 2014; Nowotny, 2018), also in combination with current prison policies, on how to combine restorative practices and treatment programmes (Duwe, 2013; Duwe, 2018; Stewart et al., 2018; Weimann-Saks, and Peleg-Koriat, 2020) and on the difficulties that are encountered/can be encountered for these purposes, as well as in general for the application of restorative practices in prison. The difficulties encountered in the application of the restorative paradigm and the experimentation of restorative practices within prisons are due, for example, to current prison laws and the character of a prison itself (Gavrielides, 2014; Weimann-Saks, and Peleg-Koriat, 2020).

Despite the positive outcomes that could be achieved, including in terms of reducing the costs of imprisonment (Duwe, 2013; Duwe, 2018; Gavrielides, 2014; Weimann-Saks, and Peleg-Koriat, 2020), there is a lack of adequate training programmes for staff, support from institutions, regulatory and practical frameworks, guidelines, and economic investments [45-46-47-51-52] (Calkin, 2021; Gavrielides, 2014; Nowotny, 2018; Stewart et al., 2018; Weimann-Saks, and Peleg-Koriat, 2020), considered key aspects for the application of restorative practices in prison. Furthermore, the study by D'Souza, and Shapland (2023) reveals not only a lack of knowledge of the paradigm and thus of adequate training in it, but also a certain scepticism and fears in the application of restorative justice and its practices with serious crimes.

## Discussion

The purpose of this research was to examine which restorative justice practices have been implemented in prisons and what kind of results have been achieved.

It emerged that the most used restorative practices are circles, i.e., practices involving several people rather than practices involving only the victim and the offender, such as victim-offender mediation (VOM). This, on the one hand, might confirm that the use of restorative justice is due as a more comprehensive and holistic approach than traditional models, on the other hand, the difficulty of being able to activate restorative processes with the involvement of victims within prison.

Firstly, the results of this study show that most of the restorative paths activated had mainly rehabilitative/treatment goals, underlining a still very reocentric vision. Overcoming the vision of the centrality

of the prison and the prisoner to shift the attention to the victim should be a prerogative, since restorative justice was born to give victims a space to listen and to respond to needs that remained unheard and/or unreceived by traditional justice systems and where the victim does not have to 'serve' the offender's re-educative process.

The circles represented moments of reflection, listening, sharing of the actions performed and of the consequent harm, also through direct confrontation with the harm (in the cases of circles between prisoners and victims, both direct and indirect). In some cases, circles and conferences were activated instead of traditional prisoner councils.

It emerges that the offender's encounter with the victim and/or the harm caused can help the offender to become aware of the harm and to take responsibility for his or her actions in terms of the consequences on the victim. This can also be a protective factor against the risk of reoffending. Moreover, in broader terms, restorative processes enable the parties involved to mend the relational fracture that has been created because of the crime committed. Indeed, the offence harms interpersonal and social relationships, e.g., with family and community members, as well as with victims, who are inextricably linked to their offender. The restorative practices activated made it possible to help support people in the (re)creation of a responsible and supportive relational context, made up of a critical re-elaboration by the offender of his conduct (involving also, when necessary and possible, the victim), of a personal restorative commitment, of a restoration of life according to legality. These aspects have proved to be central to the offender's social recovery with a view to reintegration into the community, as well as in preventing re-offending and recidivism, and in reducing incarceration rates (Thomas et al., 2019; Strémy, and Griger, 2020). This also influenced the costs of incarceration for institutions/governments, as the reduction of criminalization rates led to an overall reduction in the costs of criminal justice and the prison system, which is also in line with the relevant literature (Aos et al., 2006; Vooren et al., 2023).

Restorative justice processes and practices have also been activated to address the various conflicts that have occurred within prisons, both as a prison disciplinary policy aimed at building safer places in which to serve one's sentence and work.

Restorative circles and conferences have proved to be useful practices for the management of conflicts, problems, and detrimental behavior of prisoners (e.g., violence and offences), as they have enabled the construction of listening moments useful for co-constructing responsibilities, as well as meaningful actions and solutions through the involvement of all parties concerned and/or affected by the detrimental conduct. In addition, there was an increase in pro-social behavior, trust, fairness and positive relationships, empathy, awareness, and responsibility, foster the ability to express and manage emotions, mental and emotional well-being.

Therefore, the use of restorative practices can lead to positive outcomes in terms of increased ability to manage behavioral problems and prison discipline, reduced levels of violence and prison offences and a consequent reduction in the need for disciplinary sanctions and punitive measures (Millana et al., 2020).

The activation of restorative conferences as an alternative to traditional disciplinary processes represented participatory and co-constructive decision-making processes that allowed for proactive and respectful engagement in addressing the problem/conflict and finding common ways and solutions to resolve it, rather than having a sanction imposed passively.

A certain difficulty in implementing the restorative approach and restorative practices in prison has emerged and the complexity of implementing restorative justice cannot be underestimated. Although it is essential to define models, standards, and guidelines with respect to the implementation of these practices, it is not possible to apply a standard and univocal model, especially within places such as prisons, and therefore each action must always be adapted, constructed, studied, since the place where it is experienced. Some problems arise from the difficulty of involving/motivating prisoners, since, on the one hand, sometimes the proposal to participate in restorative justice pathways is late and the prisoner may believe that detention itself, and thus serving the sentence, is already an assumption of responsibility for the crime committed and that he is already paying his debt for it. On the other hand, within prison there are rules and codes of behavior that very often hinder the possibility of participating in pathways that involve talking about the crime, one's emotions and feelings, and confrontation with other people, especially with prison staff and even more so with prison officers (Albrecht, 2011). The involvement of victims is also sometimes complex. As for prisoners, the proposal to participate in restorative justice processes is sometimes delayed for victims and, due to the closure of the trial with the conviction of the offender, they may feel satisfied with the sentence, consider the punishment just and not want to reopen the wounds. In addition, victims may perceive that they are being 'used' for the offender's re-education process and/or to obtain benefits from the offender and/or that the offender's choice to participate is not so much due to a real desire to be accountable for the actions committed and their consequences as to possible rewards, even though, in both cases, the prisoner does not actually benefit directly. Finally, it is possible that the proposal to meet the prisoner in prison may frighten the victim, since, also due to stereotypes and prejudices, prison is seen and perceived as an insecure and potentially re-victimizing place (Wood, 2016).

Another difficulty concerns the implementation of the restorative approach as a disciplinary strategy in prison, if its implementation does not consider the already existing disciplinary system and does not act to build a single system that considers the specificities of both (Perán,

2017; Wood, 2016). It is essential to customize programmes and procedures through a context assessment that identifies the main areas of strength and possible areas to be exploited, starting from small changes to an extended and shared action plan. This has been very difficult to achieve due to the lack of adequate training programmes for staff, support from institutions, regulatory and practical frameworks, guidelines and economic investments, which are considered key aspects for the implementation of restorative practices in prison, as well as for rethinking prison as a place where both RJ and PR principles and values and restorative practices and treatment programmes can be integrated within the prison paradigm, where the use of alternative methods can have significant therapeutic effects.

Reflection on current punitive disciplinary policies within prison systems is a health justice issue and the value of implementing alternative systems and practices, such as restorative justice, is increasingly emphasized. Indeed, it is crucial to foster new actions that aim to promote responsibility in the offender for the actions perpetrated and for the harm suffered by the victim, that counteract the negative effects of incarceration, and that restore the relationship with the community (Romano, 2011; 2012), instead of traditional approaches that sometimes further increase suffering, fragility, vulnerability, and inequalities. Prisons provide disciplinary policies that are predominantly punitive in nature, in which prisoners are passive subjects and sole beneficiaries of predetermined rehabilitation/treatment programmes, when instead the challenge would be to think of restorative justice models that are flexible and consider specific educational, psychological, and contextual needs.

Moreover, communication within the prison is marked by internal laws such that talking about actions committed and personal matters, as well as with prison staff (especially officers) is very often in conflict with prison codes, which makes the prison itself an unsafe place. The management of daily prison life is articulated through regulations and rules that, to enforce/maintain internal social order, provide for forms of surveillance and disciplinary sanctions/measures, issued directly by the prison warden, in the event of their violation. This approach, however, requires the quasi-passive obedience of prisoners to the prison authorities and the need to comply with the rules becomes a means of avoiding disciplinary sanctions. Thus, it becomes increasingly necessary for institutions and practitioners to work towards restorative justice practices becoming complementary to those already present in traditional justice systems (Moreno Álvarez, 2019).

The starting assumption, therefore, becomes the need to try to change one's view of rule-breaking: misconduct is not only a violation of rules, but also a violation of human beings and relationships, actions have consequences, and these consequences can cause pain/harm to those who suffer them. A restorative process pushes people to take responsibility for the actions they

have taken because, instead of having a sanction imposed on them, they are asked to confront others and engage proactively, constructively, and respectfully in addressing the problem/conflict/harm and finding together strategies and solutions to solve it. In this way, the restorative approach and practices can facilitate collaborative and cooperative decision-making processes with respect to what is right to do to restore harm, resolve conflict and heal a wounded relationship, thus contributing to building a fair, safe, supportive, and inclusive prison environment and, at the same time, promoting and developing interpersonal and individual skills such as empathy, self-efficacy, and non-violent communication (Butler, and Maruna, 2016; Millana et al., 2020). Moreover, as demonstrated by virtuous experiences in this field (Lepri et al., 2019; Liebmann, 2019; Straker, 2019; Van Cleynebreugel, 2019), restorative justice and its practices make it possible to promote accountability (a central element in rehabilitation/treatment pathways) and social security (fundamental for communities in view of offender reintegration) and consequently the community should always be included in prison work as well.

From the studies reviewed, interesting findings emerged regarding the benefits of the application of restorative justice and restorative practices in prisons, as also confirmed by the scientific literature on the subject, and by the theoretical articles and reviews in Appendix A.

## Conclusions

This study was conducted according to the PRISMA guidelines, and its purpose was to provide an overview of the adoption of restorative approach practices in prisons and to demonstrate their benefits. Although this review indicates positive results, the criteria for the realization and implementation of restorative approach practices in prisons are changeable and highly dependent on regulatory and institutional policies.

The importance of understanding the restorative approach as an influential element of cultural and institutional transformation implies that cultural and institutional transformations themselves are deterrents to the implementation of restorative justice practices in prisons. Reflections on the current knowledge, implementation and sustainability of restorative justice and its practices in prisons, as well as the difficulties in their integration within prison disciplinary systems, pose theoretical and practical challenges.

For this purpose, further studies on the topic would both enable a better understanding of the potential implications of restorative justice and restorative practices in promoting desired outcomes, and support institutions and prisons in implementing effective interventions and ensuring a positive, safe, respectful, equitable and welfare-oriented prison environment. Furthermore, a qualitative synthesis was carried out in this review. Therefore, it should be emphasized that a systematic review that

includes a quantitative synthesis of the data would certainly be necessary to provide a comprehensive research picture of the available evidence on the beneficial and effective use of RJ and PR in prisons.

Finally, the evidence in terms of direct correlation about the benefits of restorative justice and restorative practices in prisons is still limited and suggests further studies. Therefore, most of the studies about restorative justice and practices in prison are published in non-indexed journals and therefore their actual impact on the prison population may currently be underestimated.

## Conflicts of Interest

The authors declare no conflict of interest.

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**Appendix A**

**Table A1.** Academic scientific literature excluded from the systematic review ( $n = 7$ ).

First author, Year	Study design	Population	Intervention	Comparison	Outcomes
Albrecht, 2011	Theoretical article	Prisons in Norway	Implementation of restorative practices in the model of prison practices	Traditional system and practices	Critically reflecting on the theoretical and practical challenges for the application of restorative justice and restorative practices in prison, analysing possible limitations/problems and strengths/resources
Butler, and Maruna, 2016	Theoretical article	Prisons in UK	Whole-prisons restorative approach	Punitive discipline policies	Reflection on the development and systematization of RJ practices in the prison environment, to: replace prison disciplinary hearings with restorative processes; addressing conflicts within prisons; promote responsibility, empathy, listening
Millana et al., 2020	Theoretical article	Prisons in Spain	Restorative justice and restorative practices as an alternative prison disciplinary strategy	Traditional punitive practices	Greater responsibility than the behavior performed; development of alternative and peaceful conflict resolution strategies; development of peaceful relations between prisoners; non-violent communication; reduction of reoffending; reduction of disciplinary sanctions; more opportunities for dialogue; greater sense of control over one's life
Perán, 2017	Theoretical article	Prisons in Spain	Implementation of restorative practices in the model of prison practices	Traditional system	Difficulty of joining the prison punitive paradigm without abolishing the prison paradigm and at the same time applying the principles and values of RJ and PR; difficulty implementing RJ and RP due to overcrowded prisons and lack of staff; possible exploitation by prisoners; need for awareness and training for prison; need for regulatory and practical frameworks; RJ and RP to prevent, address and manage the harms of imprisonment; RJ as a potential approach to prison reform; greater attention to human rights; reduction of violence
Strémy, and Griger, 2020	Theoretical article	Prisons	Implementation of restorative practices in the model of prison practices	Traditional system	Reflections on the punitive prison discipline and system as a question of health justice and on the importance to promote accountability for one's own actions and the harm caused to the victim, to fight the negative effects of incarceration and restore the relationship with the community
Thomas et al., 2019	Theoretical article	Prisoners with mental illness	Restorative circles to facilitate reentry in the community of offenders with mental illness	Traditional practices	Community integration; increased positive social support and (re)relationship building; deviation of the perpetrator from criminal behavior and deviant identity; increased accountability; collective efficacy; reduced social isolation; need for regulatory and practical frameworks
Wood, 2016	Theoretical article	Prisons	Restorative justice approach and practices in prison	Traditional prison system	Reflection on the current knowledge, implementation, and sustainability of RJ practice in prisons; difficulties in integrating RJ and PR in the prison setting, partly due to inaccessibility of victims; The importance of comprehending the restorative approach as an influential element of both cultural and institutional transformation implies that the same cultural and institutional transformation and where cultural and institutional transformation are deterrents to the application of RJ and PR in prisons.



Appendix B

Table A2. Characteristics of the included studies (n = 11)

First author, Year	Study design	Population	Intervention	Comparison	Outcomes
Armour, and Sliva, 2018	Multimethod research (qualitative data from surveys and questionnaires)	18 offenders, 4 victims and 2 facilitators in a Texas prisons (USA)	Restorative justice group program (Bridges to Life-BTL) to reduce the recidivism and to facilitate the healing process of victim volunteers and offenders	Traditional practices	Greater responsibility for the harm caused to the victim; deviation of the perpetrator from criminal behavior and deviant identity with consequent reduction of recidivism; increased group cohesion between prisoners and victims, including trust, cooperation, caring, support
Bohmert et al., 2018	Qualitative study (surveys)	18 level II sex offenders (Minnesota, USA)	Minnesota Circles of Support and Accountability (MnCOASA)	Traditional practices	Greater social, moral, emotional, and instrumental support (e.g., employment, housing, etc.) also with a view to returning to the community; greater responsibility for the harm caused to the victim; deviation of the perpetrator from criminal behavior and deviant identity with consequent reduction of recidivism
Calkin, 2021	Qualitative study (semi-structured interviews)	29 inmates, 16 officers and governors, and 4 professionals in 3 UK prisons	Scope of application of RJ practices in prison, in particular their complementarity with rehabilitation practices and possible support from institutions	Traditional practices and punitive discipline policies	Positive relationships and (re)building of positive relationships between prisoners, between prisoners and families, between prisoners and officers; fairer trials; increased ability to manage/resolve conflicts, problem-solving strategies, non-violent communication, and personal and collective responsibility; need to implement RJ and RP to improve the inmate incarceration experience and as a prison disciplinary policy
Duwe, 2013	Randomized controlled trial – RCT (Preliminary Results)	62 sex offenders (Minnesota, USA)	Minnesota Circles of Support and Accountability (MnCOASA)	Traditional practice	Greater responsibility for the harm caused; reduction of recidivism (for both sexual and other crimes); reduction of the costs of detention for the institutions; economically advantageous intervention model; possibility of application to other types of prisoners with a high risk of violent recidivism
Duwe, 2018	Updates to the original trial protocol (Duwe G., 2013)	100 sex offenders (Minnesota, USA)	Minnesota Circles of Support and Accountability (MnCOASA)	Traditional practice	Greater responsibility for the harm caused; reduction of recidivism (for both sexual and other crimes); reduction of the costs of detention for the institutions; economically advantageous intervention model; possibility of application to other types of prisoners with a high risk of violent recidivism
D'Souza, and Shapland, 2023	Mixed methods (interviews and case studies)	5 offenders and 7 victims, 36 RJ's experts and 42 policemen in UK prison	Implementation of restorative justice and practices with serious and organized crime and restorative practices of victim-offender mediation and conference	Traditional practices	Non-use until then of RJ in serious and organised crime because it was considered inappropriate considering the type of crime; lack of knowledge of the paradigm; risk for inmates participating due to laws within the prison that give rise to the idea that participation means repentance; increased awareness of the harm caused, even with inmates who manifest low or no self-acceptance of responsibility; deviation of the perpetrator from criminal behaviour and deviant identity resulting in reduced recidivism; increased social capital; benefits for mental health and emotional well-being.
Gavrielides, 2014	Qualitative study (surveys)	20 interviews with prison guards, RJ professionals, policy makers and academics in a UK prison	Implementation of restorative practices in the model of prison practices	Traditional system	Difficulty of joining the prison punitive paradigm without abolishing the prison paradigm and at the same time applying the principles and values of RJ and PR; need for regulatory and practical frameworks; need to set up RJ and RP to counter isolated enforcement; need for training and knowledge; need for support (including financial) from the institutions; difficulty in creating a safe place for the participants due to the "prison internal laws"; need to implement an RJ model that is flexible and considers specific educational, psychological, and contextual needs

Nowotny, 2018	Qualitative study (semi-structured interviews)	28 people: 4 senior security representatives, 9 support service providers, 2 members of the judiciary and 13 detainees in a Brazilian prison	Restorative practices (circles) to reduce prison violence among prisoners and implementation of restorative practices in the model of prison practices	Traditional practices and punitive discipline policies	Reduction of accidents, disciplinary sanctions, and prison crimes; non-violent communications, respect, responsibility; better perceived experience of detention; treatments respectful of human rights; need for regulatory and practical frameworks; need of training; need for support (including financial) from the Institutions
Stewart et al., 2018	Quantitative study (external data and questionnaire)	122 offenders in a Canada prison	Restorative practices of victim-offender mediation during and post incarceration to address recidivism	Traditional practices	Reduction of recidivism rates; deviation of the perpetrator from criminal behavior and deviant identity; social support; need to implement RJ and RP alongside correctional rehabilitation programs
Walker, and Greening, 2010	Qualitative study (semi-structured interviews and questionnaires)	50 offenders; 280 people in totally (family, friends, victims, prison staff/counselors and offenders) in USA prison	Implementation of restorative practices to facilitate reentry in the community and circle as a tool for restorative process	Traditional practice	Greater perceived social support: greater sense of justice perceived by victims; increased responsibility for the harm caused and its consequences; reconstruction of the link between prisoner and family and between prisoner and community; reduction of recidivism
Weimann-Saks, and Peleg-Koriat, 2020	Randomized controlled trial – RCT	133 male detainees from two Israeli prisons (68 from a rehabilitation prison and 65 from a normal prison)	Restorative practices as a tool to increase victims' awareness of harm, willingness to participate in a restorative process and whether attitudes towards this willingness varied between prisons with different therapeutic-rehabilitation orientation	Traditional practices	Increased awareness of the harm caused, even with detainees who manifest low or no self-acceptance of responsibility; increased willingness to participate in restorative processes; increased accountability; need for combine restorative practices and treatment programs; need for standards and guidelines; need to implement an RJ model that is flexible and considers specific educational, psychological, and contextual needs.

## The suggestibility of child witnesses suspected victims of abuse: an overview between research and psycho-forensic implications

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### Abstract

In a forensic context, the suggestibility of child witnesses represents a main factor to be analyzed in relation to testimonial skills because it has implications with other psychological functions, such as memory, language, attention and intelligence. Suggestibility involves both cognitive, emotional and social factors that can intervene to increase or reduce suggestive vulnerability. There are two main models of suggestibility: immediate or interrogative suggestibility and the delayed suggestibility linked to the effect of misinformation on the original memory.

In this review we will present an overview of current literature on suggestibility of children and on the relationship between immediate and delayed suggestibility with the demographic, cognitive, and psycho-social variables that may influence susceptibility to suggestion. Particular attention was paid to studies involving suspected victims of abuse in order to understand the effects of trauma and its consequences, such as the development of post-traumatic stress disorder, on the suggestibility of the child witness.

The main aim of this review is to give a practical guide for forensic experts recommending to follow the indication for an objective evaluation based scientific evidence, such the use of valid instrument for the measurement of the levels of immediate and delayed suggestibility and of basic cognitive abilities (executive functions, attention, memory, language, etc.). Furthermore on the basis of the results this review we aimed to indicate new future research focuses.

**Keywords:** suggestibility, child, individual differences, misinformation, forensic interview.

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## The suggestibility of child witnesses suspected victims of abuse: an overview between research and psycho-forensic implications

### Introduction

Scientific studies and the long experience achieved in recent years on the testimony of children suspected victims of abuse highlighted how the way in which are interviewed during their judicial hearing can lead to poor and/or inaccurate testimony which has legal implications in terms of their reliability and testimonial credibility.

Several studies showed even young or preschool children can be capable of giving reliable and accurate testimonies (Lamb et al., 2018). At the same time, the literature clearly highlights how children – like adults too – can be suggestible both by how questions are formulated and by being exposed to post-event information (Grattagliano et al., 2010).

Unfortunately, even today in many cases children continue to be interviewed using suggestive questions, misleading information, repeating the same questions and creating emotional pressure on them (Lamb et al., 2018). These factors can alter the authenticity of children's statements, leading to testimony with distortions and suggestive alterations (Gulotta, 2020).

In cases where a child is a victim-witness, a technical psychological assessment is carried out by an expert on his or her ability to testify. The expert's task is to ascertain the generic and specific skills to testify. It has recently been highlighted that it is central to detect the levels of suggestive vulnerability and to measure how much and how the cognitive and emotional functions can lead a child to resist to internal and external suggestibility (Vagni & Maiorano, 2023).

In preschool children it is increasingly easier to record cognitive and linguistic skills greater than those that could be recorded a few years ago in children of the same age, while the risk of them being suggestible always remains a critical element (Vagni & Maiorano, 2023).

The awareness that testimony requires specific skills has led the field of forensic psychology to identify a more specific assessment that measures children's cognitive abilities, semantic knowledge and recall abilities, to support the clinical evaluation of basic abilities to bear testimony. It is undeniable that today's children are exposed to many more stimuli and forms of learning that facilitate their evolutionary processes, and this leads in the majority of cases to recognizing their adequate generic ability to testify, except in cases where sensory deficits or intellectual and language difficulties emerge.

However, this does not always correspond to a similar ability to resist suggestive vulnerability factors, understood as a specific competence to bear witness.

In this review we will try to explain what suggestibility

is and which social and psychological factors can intervene in making children more vulnerable. The aim is to report the updated contribution of studies on this topic to provide practical indications useful for understanding how children function when faced with suggestive information and what an expert assessment must take into account to provide an expert opinion on the specific suitability for testify about children considering their age, cognitive functions and psychological characteristics.

### Theoretical paradigms on suggestibility in the forensic field

Since the 1970s, studies on suggestibility in the forensic field have highlighted an important differentiation between immediate suggestibility and delayed suggestibility (Schooler & Loftus, 1993; Ridley & Gudjonsson, 2013).

We can define immediate suggestibility as the immediate acceptance of the misleading suggestions contained in a leading question, while delayed suggestibility refers to incorporating misleading information into one's memory and, therefore, reporting in a subsequent recollection of the event (Schooler & Loftus, 1993).

The immediate and delayed suggestibility represent the two major paradigms influencing the forensic field. The first is the individual differences approach, which starts from the psycho-social model of interrogative suggestibility (Gudjonsson & Clark, 1986). This approach studies immediate or interrogative suggestibility and examines the factors that determine why individuals respond differently to suggestions within an interrogative context. It starts from the assumption that suggestibility is a characteristic of people (Gudjonsson, 2018) and that it depends on the coping strategies that people can generate and implement when faced with the uncertainty and expectations of a formal interrogation.

The second approach, called experimental, originated from the works of Loftus and coll. (1974, 1992) and focused on understanding the mechanisms underlying delayed suggestibility. In particular, through the study of the effect of post-event information on the memory of the witness, the emphasis is placed on understanding the conditions (for example the similarity between the event and the misleading information or the plausibility of the latter, the credibility of the source) in which suggestive and inducing questions are able to modify the verbal reports of the witness as well as the underlying mechanisms (discrepancy detection) that influence this

process (Davis & Loftus, 2007; Schooler & Loftus, 1993).

Although they start from different theoretical assumptions, the two approaches should not be considered mutually opposed, but rather complementary (Schooler & Loftus, 1993), as the experimental paradigm ignores the way in which individual variables influence suggestibility, while the individual differences approach does not address the mechanisms underlying the incorporation of post-event information into the original memory.

Several studies investigated the relationship between the two different types of suggestibility for to identify the processes involved and to highlight the common and different factors. Some studies highlighted, for example, how both immediate and delayed suggestibility are due to the failure of source monitoring, i.e. the ability to identify the source from which the memory of a certain event comes (Gudjonsson, 2003, 2021; Schooler & Loftus, 1993; Chrobak & Zaragoza, 2013).

According to Gudjonsson (2003, 2022), the main mechanism underlying interrogative suggestibility is poor source monitoring, and more precisely “source confusion”, as suggestive questions lead interviewees to make incorrect attributions of sources based on familiarity through semantic networks, rather than making systematic and accurate source monitoring judgments before responding.

Schooler and Loftus (1993) define this cognitive mechanism as that of “discrepancy detection”. The inability to grasp the discrepancy between what they observed and what was suggested to them through the misleading questions leads interviewees to accept the suggestions and incorporate them into their original memory (Gudjonsson, 2003, 2018, 2021).

Although the failure of source monitoring seems to be at the basis of both types of suggestibility, the results of some studies suggest that there are substantial differences between the two constructs, which in fact appear to be little correlated with each other (Lee, 2004; Gudjonsson et al., 2016; Vagni et al., 2015) and influenced by different psychological variables (Ridley & Gudjonsson, 2013)

The Gudjonsson and Clark’s model of the interrogative suggestibility is psychosocial and refers to the coping strategies that the interviewee can generate and implement when faced with uncertainty and expectation during questioning (Gudjonsson, 2003).

The Gudjonsson and Clark model postulates that three factors must be present for a suggestible response to occur: uncertainty, interpersonal trust and expectation of success. Uncertainty means when the person being questioned does not know with certainty the right answer to give to the question. This happens, for example, when the memory trace is incomplete or non-existent.

Interpersonal trust is another important prerequisite for giving in to suggestion and occurs when the interviewee believes that the interrogator’s intentions are genuine and that the interrogation does not involve tricks or pitfalls (Gudjonsson & Clark, 1986)

The credibility of the source of information is related

to the interpersonal trust component within the Gudjonsson and Clark (1986) model. There is evidence that children are more likely to incorporate misinformation if it is presented by a credible source (Ost et al., 2005).

Finally, the expectation of success, is an essential prerequisite for the occurrence of a suggestive response. Uncertainty and interpersonal trust are necessary conditions, but not sufficient to put a person in a position to give in to a suggestion. In fact, if the interviewed was uncertain about the answer to give to a certain question, he could declare his uncertainty by answering with the phrases “I don’t know”, “I’m not sure” or “I don’t remember” . However, many people are reluctant to express their uncertainty because they believe that: they must provide a clear answer; others expect them to know the answer to that question and to be able to give it.

One effective way of increasing resistance to suggestions to specific questions in both children and adults is to issue a warning prior to the questioning that questions asked would be difficult and ‘tricky’ and they should only give answers to questions that they truly remembered (Warren et al., 1991). This may increase the critical analysis of the specific question and can lower expectations of success (Hekkanen & McEvoy, 2002).

The Gudjonsson and Clark’s model (1986) introduced two new aspects of interrogative suggestibility: the impact of suggestive questions that leads to accept the leading questions (this is Yield score) and the effect of negative feedback, which leads to changing the answers previously given.

According to this model, there are two factors of suggestibility: yielding, which is the tendency to accept leading questions (Yield), and Shift, which is the tendency to change the given answers following negative feedback (Gudjonsson, 1997).

Gudjonsson created a tool for evaluating these two factors: the Gudjonsson Suggestibility Scales in two parallel forms GSS 1 and GSS 2 (Gudjonsson, 1997);-but it is recommended that the GSS 2, which is comprised of a simpler and more neutral story than the GSS 1, should be used for children and people of low intelligence (Gudjonsson, 1997).

The GSS 1 and GSS 2 both contain a short narrative (story), followed by 20 questions, 15 of which are leading questions (Gudjonsson, 1997).

Traditionally, the GSS measures include ‘immediate recall’, delayed recall’ of approximately 50 minutes, Yield 1 (i.e., yielding to leading questions before negative feedback is implemented), Yield 2 (i.e., yielding to leading questions after negative feedback), and Shift (i.e., the number of distinct changes to questions after negative feedback, irrespective of direction).

More recently, delayed suggestibility’ measured at one-week follow-up has been added to the GSS 2 (Vagni et al., 2015; Gudjonsson et al., 2016). It “refers to the extent to which the person incorporates misleading post-event information into their subsequent recollection”

(Gudjonsson, 2018, p. 82). This allows to measure both immediate and delayed suggestibility with a single instrument, which can be very useful in the forensic field.

In the scientific panorama there is growing interest in investigating how children respond to leading questions and in particular what resistance responses they can express (Gudjonsson et al. 2021, 2022; Vagni et al. 2023).

According to the Gudjonsson and Clark model (1986), there are two main types of behavioural response to leading questions and negative feedback: 'suggestible behavioural response' (SBR) and 'resistant behavioural response' (RBP). SBR is referred to as acceptance of leading questions and RBP as resistance to suggestions (Gudjonsson, 2003).

When asked leading questions interviewees can yield to the suggestion in three main ways: (a) they can reject the suggestion simply saying 'no' (NO answers); b) they can admit they 'don't know' (DK answers); c) they can give a direct explanation by saying for example that what is suggested was not mentioned or didn't happen (DE answers). These three main types of resistant response to leading questions on Yield 1 and Yield 2 (DK, DE, and NO answers) can be readily measured by the GSS scales (Gudjonsson, 1997; 2003).

The Resistant Behavioural Responses (RBR) is a model based on source monitoring framework (SMF; Johnson et al. 1993), that refers to cognitive processes involved in making attributions about the origins of mental experiences (Johnson et al., 1993). According to this model it is possible to hypothesize that people with high ability of source monitoring of information could refuse the leading question by providing Direct Explanations (DE answers) and not just saying No.

According to this model, a study of Gudjonsson et al. (2022), showed that NO, DE e DK answers are different and independent response style that have different effects on resistance to leading questions because of they are driven by different cognitive processes.

Many studies are concerned with DK answers, such as RBR in children (e.g. Earhart et al., 2014; Waterman & Blades, 2011). DK answers may be appropriate and helpful, but nevertheless could indicate a problem with 'source monitoring' because of a failure to identify the discrepancy between what they observed and that subsequently suggested to them by the interviewer. Literature showed how younger children have difficult answering "don't know" and declaring their uncertainty, probably due to their poorer understanding of unanswerable questions and greater expectation that they must provide either 'yes' or 'no' answers (Ceci & Bruck 1993). The ability to give DK answers grows with age (Waterman & Blades, 2011; Gudjonsson et al. 2022) and that suggests that it presents a natural development of cognitive functioning (Roberts, 2002).

Few studies, however, have focused on DE answers in children (Gudjonsson et al., 2022; Vagni et al., 2023). In a recent study, DE answers showed the most consistent and robust challenge to leading questions and

interrogative pressure and unlike the other RBRs were correlated saliently with both IQ and immediate recall (Gudjonsson et al., 2022).

These findings suggest that DE answers are driven by different processes and mechanism than DK and NO answers. In particular, DE answers require that the children recognize the discrepancy between what was observed and that suggested and can articulate an appropriate explanatory resistant response, showing effective strategic source monitoring and control processes (Koriat et al., 2001). Because they require more complex cognitive skills, DE answers are used more by older children (Gudjonsson et al., 2022; Vagni et al. 2023).

### The relationship between suggestibility and other socio-psychological variables

According the literature, both immediate and delayed suggestibility can be influenced by individual, cognitive or emotional characteristics, but also by social factors. However psychosocial factors would have a greater influence on immediate suggestibility rather than delayed suggestibility (Vagni & Maiorano, 2023).

Several studies have investigated the relationship between different variables and immediate suggestibility, measured by the GSS, to understand the factors that can lead people to reject or accept leading questions; other studies have focused on the relationship with delayed suggestibility according to the experimental approach proposed by Loftus (Eisen et al. 2013; Ridley & Gudjonsson, 2013). For a long time the two models of suggestibility deriving from two different paradigms were studied separately and sometimes the results even appeared divergent from each other. Only a few studies have examined both constructs through the additional innovative procedure added in the administration of the GSS (Vagni et al. 2015; Gudjonsson et al., 2016; 2020, 2021, 2022).

According to Gudjonsson (2018) suggestibility is not a personality trait but a psychological characteristic which can be influenced by various factors.

The variables of greatest interest that can influence immediate and delayed suggestibility in children will be analyzed below, in order to present an exhaustive reconnaissance review of the factors that can increase or decrease suggestibility, trying to build a compass that guides the expert in the evaluation of the children involved as eyewitness or victims in forensic context.

#### *Demographic variables*

In order to demographic variables, the literature supports that they are not consistent predictors of suggestibility in children as evidenced by research examining race, socio-economic status, and gender (Bruck & Melnyk 2004; Hritz et al., 2015; Klemfuss & Olaguez, 2020). In particular, in order to immediate and delayed

suggestibility in children measured through the GSS (Gudjonsson et al., 2016) emerged only very weak effects of gender on Yield 1 and 2, but no effect on Shift and delayed suggestibility.

#### *Age*

The analysis of the relationship between age and suggestibility represents a very important aspect in the study of children's suggestibility (Caso et al., 2013; Goodman et al., 2014). Some studies showed that younger children are generally significantly more vulnerable to misleading questions and the misinformation effect than older children (Ceci et al., 2007; Goodman et al., 2014). There could be three possible explanations behind this trend. Firstly, according to the hypothesis that younger children have weaker memory traces of an event than older children, remembering events worse, and therefore could be less resistant to suggestive factors (Goodman et al., 2014). Furthermore, as supported by Bruck and Ceci (2015), the second reason is to be found in the fact that younger children are probably more influenced by social pressure, the lack of social support and the presence of authoritarian figures (see Caso et al., 2013). In support of this thesis, the study by Vagni et al. (2023) highlighted how children from 12 years old can learn to reject leading questions more while their vulnerability to criticism and social pressure tends to remain constant.

The third explanation refers that younger children have fewer language skills and less developed cognitive abilities than older children, and therefore cognitive immaturity can impact the ability to complete the tasks required during an interview (Arterberry, 2022). According to Hirtz et al. (2015), it can be argued that chronological age emerges as a strong predictor of suggestibility in several studies (Ceci et al., 2007), but it has not always been demonstrated that suggestibility decreases with increasing age. Several studies have shown that older children, and often also adults, may be more suggestible than younger children (Brainerd et al., 2008). According to Gudjonsson (2003) the effect of age seems to have a negative impact up to the age of 12 on immediate suggestibility, while subsequently the performance of children over the age of 12 is similar to that of adults. Lee (2004) found that age predicts immediate suggestibility, but not delayed suggestibility. This effect also emerged in the study by Gudjonsson et al. (2016). Gonzalves et al. (2022) highlighted that generally with age children's memory performance tends to increase and suggestibility to decrease (Eisen et al., 2007), however the effects of age can be influenced by cognitive, social and contextual factors such as background knowledge (Brainerd et al., 2008), embarrassment (Saywitz et al., 1991), familiarity (Cordón et al., 2016) and distress (Chae et al., 2018) which can increase, take out or even reverse the effects of age. Increasing age favors more resistant responses such as

direct explanation (Gudjonsson et al., 2022; Vagni et al., 2023).

#### *Memory*

The relationship between suggestibility and memory is complex, and as suggested by Ridley and Gudjonsson (2013) the impact of memory on the both immediate and delayed suggestibility is different, and the literature underline that there is no clear association between memory and suggestibility in children (Bruck & Melnyk, 2004; Klemfuss & Olaguez, 2020). Several studies on adults showed that poor memory is more associated with immediate suggestibility, and specifically with accepting the leading questions, and that people with limited memory capacity are more suggestible than those with normal capacity (Ridley & Gudjonsson, 2013). Different considerations can be put forward on the association between memory and delayed suggestibility. According to Schooler and Loftus (1993) delayed suggestibility and memory are positively associated in a complex way, and therefore a good memory can increase levels of suggestibility since suggestions are also recalled more easily. Furthermore, according to the authors, even poor memory can facilitate the incorporation of post event information especially those presented more recently and those more accessible during the recall phase. However some specific studies on delayed suggestibility and memory in adults have highlighted a negative relationship between poor memory skills and the construction of induced false memories (Zhou et al. 2010). Others studies have not detected any association between memory and delayed suggestibility (Eisen et al. 2013). Furthermore, no clear results emerge from studies that have analyzed the relationship between suggestibility and memory in children (Klemfuss, 2015; Melinder et al., 2005). Given the different findings of the studies, it seems to be good practice in forensic research and evaluation to always take into consideration the relationship between memory and suggestibility (Vagni et al., 2021).

The relationship between memory and suggestibility also involves the source monitoring ability. The Source Monitoring model Framework (Johnson et al., 1993) describes the process of distinguishing between information stored in memory from what has been heard by others or what has happened dreamed or imagined. This ability allows you to discriminate between the actual perception of an event and the imagined version of a memory. Source monitoring errors can lead to the production of memory distortions, confabulations and false memories. Source monitoring includes also reality monitoring which concerns the ability to discriminate events external, i.e. based on perceptual memories, from internal memories, i.e. imagined and the result of inventions and/or cognitive inferences (Nahari, 2018). The witness can be exposed new information suggested by others and undergo the reconstructive process of memory, for which it will have to be able to distinguish which

information is present in his original memory and which were introduced from a different source. The ability of source monitoring increases with age (Sugrue et al., 2009). Therefore, younger child witnesses could not have the cognitive skills necessary to engage in processing that allows them to distinguish between different sources (Earhart & Roberts, 2014). Furthermore the production of confabulations seems to be associated with memories of events experienced as confused and this happens when there is a difficulty in source monitoring (Vagni & Maiorano, 2023).

A new tool for measuring autobiographical narrative skills in children was recently validated (Vagni & Maiorano, 2023; Vagni, Giostra & Simione, 2024). The CRAM test (Children Recalling Autobiographical Memory) measures the ability to report the where, when, what, who and how for each personal event with respect to retrospective and prospective memory. The theoretical model of autobiographical memory of reference is that of Conway and colleagues (Conway et al., 2008).

The results highlighted how high autobiographical narrative skills had a protective effect with respect to immediate suggestibility, according to the study by Kulkofsky and Klemfuss (2008), but not with respect to delayed suggestibility. These results confirmed how the cognitive mechanisms linked to the two forms of suggestibility are different and independent.

#### *Intelligence*

Intelligence is associated with the development and maturity of various cognitive abilities but does not always predict adequate memory capacity and resistance to suggestibility factors. Intellectual deficits tend to favor a greater production of distortions and fabrications especially in tasks of recalling semantically learned events, but only in cases of severe cognitive delay is it associated with greater suggestive vulnerability (Vagni et al., 2021)

Although research showed that children with disabilities intellectuals were more inclined to make errors when asked suggestive questions and misleading compared to normally developing children (London et al., 2013). However the results of recent studies did not always were in this direction. According to Klemfuss & Olaguez (2020) the intelligence, and in particular verbal intelligence, is associated with suggestibility.

Gudjonsson (2003) and examined the relationship between immediate suggestibility and IQ, found that lower intelligence quotients were positively correlated with interrogative suggestibility. In particular this emerged for yield score that, unlike the shift, would seem to be more associated with cognitive factors. However, in a more recent study, Gudjonsson and Young (2010) found only a very weak correlation between intelligence and GSS (Gudjonsson, 2013).

In some studies children with moderate intellectual disabilities were more suggestible than children with normal intelligence matched by age (Milne et al., 2013;

Henry and Gudjonsson, 2007; Giostra and Vagni, 2024), while children with mild disabilities who did not present differences when compared with the control group (Brown et al. 2012; Robinson & McGuire, 2006). Some studies, however, indicated that there are often no differences between children with intellectual disability and children with typical development in relation to performance on open-ended questions (Bruck & Melnyk, 2004; Hritz et al., 2015).

Children with intellectual disabilities may be accustomed to experiencing failures in their performance and this can avoid high expectations of success which in the paradigm of interrogative suggestibility can favor greater vulnerability. At the same time, these children may have low source monitoring skills, experiencing uncertainty and low confidence in their own abilities, leading them to accept leading questions and misinformation.

The results of the various studies seem to highlight how in the forensic field the simple evaluation of cognitive abilities cannot be considered sufficient to evaluate testimonial skills. It is therefore necessary to verify the child's tendency to yield the suggestive questions, to resist socio-emotional pressures, and to reject misinformation from the original memory.

#### *Language*

Language skills are another important cognitive factor related to children's memory and suggestibility in forensic contexts. In order to understand the relationship between language and suggestibility, we report the results of a recent literature review conducted by Perez et al., (2022) who examined studies on memory, suggestibility and testimony in developmental age over the last thirty years to identify the models that explain how language skills influence children's memory of events and suggestibility. This meta-analysis highlighted that language skills are an important predictor of memory and suggestibility of child witnesses. In particular, specific domains of language in children are correlated differently with memory and suggestibility. From this meta-analysis it emerged that linguistic skills are more consistently correlated with children's accuracy during free recall. Higher linguistic skills could decrease the tendency to change the responses after negative feedback, while comprehension linguistic skills are more correlated with children's production of accurate responses to direct and non-suggestive questions. The narrative skills also were instead associated with both increases and decreases in children's levels of suggestibility depending on the type of narrative.

Perez et al. (2022) highlighted that it is not possible to draw clear conclusions regarding the relationship between general language skills and the effect of negative criticism in children. Comprehension and expressive difficulties could make children more vulnerable to changing their responses following negative criticism (Melinder et al., 2005). Therefore, in light of this meta



analysis, we suggest that great care must be taken with children who present difficulties in linguistic production and comprehension, since a negative criticism or even the simple repetition of a question, could affect the ability to confirm own answers, without changing them. Finally, with respect to general linguistic abilities, it emerged that in relation to the susceptibility of children to misinformation, those help mitigate the effects of the suggestions provided by the interviewers, but are not related to the resistance of children to nonverbal suggestions (Roebbers & Schneider, 2005).

#### *Executive functions*

The executive functions are mental process that involve: the ability to process, maintain and control selectively information in order to perform a task, the skill planning and programming of actions to achieve a goal, ability to inhibit an action, problem solving, self-control, selective and sustained attention, attentional shifting, self-monitoring and error detection, the inhibition of automatic responses and abilities decision-making (Vicari & Di Vara, 2017). According to Arterberry (2022) executive functions influence suggestibility, and in particular are implicated in the ability to inhibit the tendency to say “yes” to a leading question. Furthermore, Chae and colleagues (2018) argue that deficits in executive functions can influence children’s vulnerability to interviewer pressure to leading questions (Karpinski & Scullin, 2009). In light of these considerations, it could therefore be stated that children with deficit executive functions could showed a tendency to respond quickly and without thinking to questions, and who are more likely to be influenced by social pressure during forensic interviews, answering each question affirmatively showing to be compliant to the interviewer. On the contrary children with well-developed executive functions are able to avoid responding impulsively, since the ability to inhibit responses the time necessary to reflect on the discrepancy between an interviewer’s suggestions and their own memory of an event, and allows them reasoning and reject suggestions. However, as Klemfuss and Olaguez (2020) argue, the results on the relationship between executive functions and suggestibility are not univocal. For example, some studies (Karpinski & Scullin, 2009; McCrory et al., 2007) demonstrated that the executive function predict resistance to suggestibility in children, while other found results did not support the hypothesis that children with poor functioning executives are more suggestible, and in particular Caprin et al. (2016) in a sample of children, found significant negative correlation only between yield, shift and total suggestibility (GSS2) with digit span score unlike other executive functions.

#### *Theory of mind*

Theory of Mind (ToM) can be defined as the cognitive ability to reason about mental states and worthy

others and understand that others can have states different from one’s own. This skill generally acquired within five years of age (Astington, 1993). Theory of mind involves the acquisition of awareness that the mind guides knowledge, beliefs and desires which guide actions. This skill allows us to consider that people can have beliefs and desires different from ours and that ours could be erroneous and false (Hughes & Devine, 2015). As supported by Vagni and Maiorano (2023) on the level of evolutionary development, among the necessary skills that allow in the forensic context to be able to give testimony, the development of a theory of mind represents for children a guide in understanding that others may not know what happened in relation to the event for which they are interviewed (Arterberry, 2022). Therefore, capacity to understanding false beliefs can be particularly relevant in an interview context, particularly when questions are asked misleading (Arterberry, 2022). According to London and colleagues (2013), children with competence to understand the existence of false beliefs in others, can be able reject a false suggestion made by an interviewer and consequently be less suggestible. Several studies analyzed the relationship between suggestibility and theory of mind, founding mixed results, which showed that there is a complex relationship between the two variables and that it is conditioned by other cognitive factors, such as executive functions and source monitoring, and situational factors, such as pressure during an interview (London et al. 2013; Klemfuss & Olaguez, 2020; Vagni & Maiorano, 2023). This complex relationship, as Vagni and Maiorano (2023) suggested, can be better understood by summarizing the results of several studies as analyzed by Klemfuss and Olaguez (2020). In fact, Melinder and colleagues (2006) found a negative association between ToM and interrogative suggestibility which however it was no longer significant after controlling for the two variable age and executive functions. However in the study by Bright-Paul and coll. (2008) emerged that the ToM predicted resistance to suggestions even controlling the age variable. Karpinski and Scullin (2009) also showed that, controlling for age, children with better executive function were overall less suggestible during the suggestive interview e that after negative feedback older children and with a theory of mind more developed were less suggestible, while another study (Klemfuss et al., 2016) found no association between ToM and interrogative suggestibility among children.

#### *Anxiety and depression*

Witnesses and victims of a crime can develop negative emotional states, such as anxiety during the event, in the investigation phase, when they are heard to give their statements, or during the trial in the courts (Vagni & Maiorano, 2023). It is important to define the concept of anxiety, dividing into “trait”, which refers to the personality structure and which indicates a person’s

general anxious expression, and “state” which refers to the anxiety felt at a given moment and in a specific situation. Ridley and Gudjonsson (2013) highlighted that high trait anxiety is associated with a greater vulnerability both to the leading questions and negative feedback (Gudjonsson, 1988; McGroarty & Thompson, 2013), while on the contrary high levels of state anxiety are associated with lower levels of delayed suggestibility (Ridley & Gudjonsson, 2013).

Drake (2014) conducted a study that aimed to investigate the role of trait anxiety in the relationship between the reported experience of negative life events and interrogative suggestibility. The study found that negative life events evaluated negatively increased the acceptance to the leading questions and social pressures. Furthermore, the trait anxiety moderated the effect of this negative life events intensity rating on Yield 1 scores.

Some studies conducted on children showed that children between the ages of 8 and 11 who had high levels of state and trait anxiety were more inaccurate when answering misleading questions compared to children with low levels (Almerigogna et al., 2007).

Furthermore, Vagni and Maiorano (2023) underline that among the emotional factors that can influence suggestibility, in addition to anxiety, particular attention must be paid to depression, which according to some studies on adults would increase the levels of immediate suggestibility (Drake, 2011; McGroarty & Thomson, 2013). A recent study (Vagni et al., 2022) showed that while anxiety does not seem to assume predictive power on suggestibility, the effect of depression seems to be significant on Yield 1 but even more significantly on Total Suggestibility and Yield 2.

#### *Coping strategies*

The witness's coping strategies are connected to the “general cognitive set” that guides the evaluation of the situation and which affects the choice of coping strategy that can facilitate suggested behavior or help the witness to reject suggestions (Gudjonsson, 2003). Mixed results have emerged in studies on analysis of the relationship between coping strategies and suggestibility involving adult participants. Gudjonsson (1988) found that participants who used avoidant coping strategies were suggestible. Forrester and colleagues (2001) found that coping strategies were not predictors of suggestibility. On the contrary, Howard and Hong (2002) found that the use of an emotional coping strategy made people suggestible. In a more recent study (Bain et al., 2015) a relationship was found between emotion-focused coping and GSS scores (Yield 1, Yield 2 and Total Suggestibility). In relation to delayed suggestibility, Zhu et al. (2010) instead found that false memories were positively correlated with active coping style, but negatively correlated with negative coping, unlike the results obtained by Gudjonsson (1988).

Only one study (Maiorano & Vagni, 2020) dealt with

understanding in children the relationship between immediate and delayed suggestibility measured through the GSS2 and coping styles measured through the Coping Inventory for Stressful Situations (CISS) (Endler & Parker, 1999). The results highlighted that coping strategies were not related to delayed suggestibility, while avoidance-oriented coping positively correlated with immediate suggestibility. Furthermore, avoidance-oriented coping emerged as the only significant predictive model for shift and total suggestibility, and the distraction subscale emerged as the only predictor for yield 1 and yield 2. Therefore, the results of this study highlighted how the use of distraction and avoidance strategies reduces the protective effect of immediate recall and increases immediate suggestibility. The study also showed that both in children and adults – given the convergence of the results with the study by Bain and colleagues (2015) – the use of avoidance coping strategies leads to an immediate increase in levels of suggestibility. Furthermore, in line with other studies, avoidance coping strategies specifically increase both the shift and the total suggestibility score (Gudjonsson 1988, 2018), confirming that avoidance is linked to social and interpersonal pressure factors.

#### *Self-esteem*

According to the literature on eyewitness testimony, low self-esteem can affect levels of suggestibility (Hooper et al. 2016; Ridley & Gudjonsson, 2013) but however in agreement with Hooper et al. (2016) although the results of some studies indicate that low levels of self-esteem are associated with high levels of immediate suggestibility, this relationship has not always been found in all studies (Bain et al., 2015; Drake et al., 2008). Specifically, to explain the relationship between self-esteem and suggestibility, it is necessary to focus on the mechanism by which low self-esteem acting on the negative cognitive evaluation of oneself during a forensic interview, and this could happen in particular after negative feedback from the interviewer, could increase the tendency to accept suggestions (Ridley & Gudjonsson, 2013).

The literature review showed unambiguous results regarding the relationship between immediate suggestibility and self-esteem both in children and adults; while the results relating to delayed suggestibility appeared more mixed. This could be due to the fact that misinformation mainly refers to cognitive and memory abilities rather than psychological characteristics.

#### *Trauma and suggestibility*

To understand how trauma influences suggestibility, it is necessary to highlight that trauma-related psychopathology can produce serious short- and long-term consequences on the cognitive, emotional and relational functioning of children and adolescents. Melinder and colleagues (2020) showed that post-traumatic symptoms in witnesses were associated with

memory deficits in both children and adolescents (Chae et al., 2011; Eisen et al., 2007). Early traumatic experiences can produce deficits in several areas: regulation emotional, executive functions (attention, learning, problem solving and working memory), autobiographical memory and narrative skills (Ford & Greene, 2017), which we remember are the psychological functions that are evaluated in the minor witness alleged victim of sexual abuse, in order to evaluate their ability to testify in court (Vagni & Maiorano, 2023).

The consequences of trauma-related psychopathology on the cognitive and emotional functions of children and adolescents may influence immediate and delayed suggestibility. A history of maltreatment in relation to age and psychopathology represent potential individual difference factors that could influence the suggestibility of the witness (Goldfarb et al., 2018).

The literature suggests that the results of studies that have focused on the analysis of the effects of trauma on memory and suggestibility have found mixed results. According to some studies, children with post-traumatic stress disorder tend to show poor and imprecise memory performance, as well as high levels of suggestibility (Chae et al., 2014), while in other studies no significant relationship was found as shown for example in the study by Eisen et al. (2007).

Chae and colleagues (2011) found instead that the presence of abuse did not significantly predict children's memory errors and suggestibility if considered as single variable or in interaction with age, but the presence of high dissociation symptoms was associated with the increase of memory errors. Exposure to trauma during childhood can predispose a child to develop high levels of dissociation (Eisen et al., 2007) that is associated with memory problems and greater suggestibility in children and adolescents (Benedan et al., 2018; Chae et al., 2011). Regarding the model of interrogative suggestibility, some studies on samples of adults have analyzed the relationship between immediate suggestibility and negative life events (Drake et al., 2008; Drake, 2011), finding that the tendency to be influenced by negative criticism was linked with exposure to traumatic experiences. Gudjonsson (2003) also highlighted that dissociation can lead to increased levels of immediate suggestibility, particularly in the yield and total suggestibility scores. Furthermore, high levels of dissociation can predict high suggestibility (Dorahy et al., 2015; Hébert et al., 2016) and the association between PTSD and the development of dissociation symptoms can lead child witnesses to be more vulnerable to interrogative suggestibility because it increases their uncertainty and the tendency to satisfy external expectations.

Several studies (Gudjonsson et al., 2020; 2022; Vagni et al., 2015, 2017, 2018) have analyzed the impact of post-traumatic stress disorder on the components of immediate suggestibility and delayed suggestibility. Vagni and colleagues (2018) highlighted that the suggestive interview can represent a condition of high stress,

especially in a forensic context, leading to an increase in levels of suggestibility in child witnesses who present vulnerability linked to a traumatic experience.

Gudjonsson et al. (2020) in another study on a sample of children and adolescent witnesses suspected victims of abuse with a history of reported sexual abuse found that symptoms of trauma significantly increased delayed suggestibility and also found that reporting a sexual abuse is more strongly associated with immediate suggestibility than with delayed suggestibility (Vagni et al., 2015).

Also Vagni et al. (2022) found that children and adolescents with high levels of PTSD showed significant vulnerability also and above all in terms of delayed suggestibility and that the use of dissociative defenses can increase levels of both immediate and delayed suggestibility.

Two other studies have explored the model of interrogative suggestibility also analyzing the qualitative pattern of resistant responses to suggestive questions about suspected victims of abuse (Gudjonsson et al., 2021, 2022) found that children who were suspected victims showed greater difficulty answering "no" to questions after negative feedback.

Vagni et al., (2021) instead analyzed the relationship between traumatic symptoms, fabrications, distortions, immediate and delayed suggestibility, also considering the effect of intelligence, age and memory in a sample of children and adolescents suspected victims of abuse, and the results highlighted that PTSD increased the levels of immediate and delayed suggestibility, but had no effect on immediate recall and that, furthermore, it affected the production of a greater amount of distorted and fabricated information in delayed recall.

We could conclude on the basis of those results that trauma has a significant impact on levels of immediate suggestibility, leading child victims both to give in to suggestive questions and not to tolerate the negative feedback provided at the end of the first suggestive interview, and both in terms of delayed suggestibility (Vagni & Maiorano, 2023). It's important in the case of children with post-traumatic stress symptoms and post-traumatic dissociation to verify the impact of PTSD on immediate and delayed suggestibility. However the presence of PTSD cannot be interpreted as direct confirmation that violence has occurred.

## Children suggestibility and forensic implications

The suggestibility of the witness concerns both individual and cognitive characteristics internal to the subject that are stable over time, and social and relational aspects connected to the interaction with the interviewer (Gudjonsson, 2018). Therefore, both social and specific cognitive processes can contribute to producing suggestive effects on the witness in the legal context (Bruck & Ceci, 2015).

According to Gudjonsson (2018), the suggestibility

does not appear as a real personality trait, but as a personal characteristic or tendency that may be more frequently associated with some psychological variables rather than others. Some particular internal conditions, such as having developed traumatic symptoms (Gudjonsson et al., 2020; Vagni et al., 2020, 2021), can increase the levels of both immediate and delayed suggestibility. Even some external conditions, and in particular being subjected to an interrogation (Gudjonsson, 2018) or having the role of witness in the forensic field for children (Vagni et al., 2018), represent conditions where people or witnesses may be more vulnerable to interrogative suggestibility factors and to the effect of post-event information.

Many studies have involved children of different ages in order to detect their vulnerability both to suggestive questions and to post-event information, demonstrating how younger children have a greater tendency to incorporate in their original memory suggestive elements (Loftus et al., 1990).

According to several authors (Ridley & Gudjonsson, 2013; Gudjonsson, 2018), vulnerability to misleading information also refers to difficulties in source monitoring (Johnson et al., 1993). This could explain, how younger children, who do not yet have full developmental abilities to recognize the source of information, may be more vulnerable.

A witness can be exposed to suggestive sources from the first moment of exposure to the crime, and this can be related to several factors: a) emotional states experienced at the time of the event, which affect the accuracy and quality of the memory trace. A fragmented, confused memory trace could more inclined to receive and incorporate more coherent and linear misinformation; b) Prejudices or personal cognitive beliefs, this may for example lead the witness to believe that the offender has some somatic, racial, expressive or physiognomic characteristics, which may not find objective confirmation. c) Co-suggestion factors: if there are multiple witnesses or victims, their interaction can lead them to exchange mutual memories (Grattagliano et al., 2022). d) External sources of suggestion, such as the mass media, the thoughts on what happened by sources considered authoritative or emotionally important (parents, family members, etc.), who try to attribute meaning and reconstruction of what happened. e) Questions and comments from those who collect the revelation. Suggestive questions, repetition of questions, verbal comments and non-verbal messages to what the witness reports both in official settings (judicial hearings) and in informal settings are among the most frequent and incisive factors of suggestibility to which witnesses (including children) are exposed right from the scene of their first revelation.

Sources of suggestion which in any case can concern any witness: anyone who suffers or witnesses a crime tends to talk about it, thus exposing themselves to the effects of suggestive questions, repetitions of questions, reactions and external comments which suggest that the answers

provided may not be clear or credible, feedback or comments that can alter the original memory, reactions of credibility/disbelief to what has been narrated, attribution of meaning by third parties, completion of memories with information deemed more coherent, relevant or clear, etc. All this represents the risk of alteration of the original memory which can contaminate any testimony. In the case of children, this risk seems to be higher, since they appear less capable both of rejecting the suggestibility factors involved in the listening phases and/or in the questions asked of them, and of maintaining accuracy in distinguishing the original information from the posthumous ones. However, suggestibility, being an individual characteristic, does not depend only on age and this may imply that some children may be able to reject sources of suggestion as well as or better than an adult. This refers to individual variability. This is a characteristic which, therefore, must be measured in a specific and targeted way on each minor subjected to expert assessment.

In fact, there is no perfect witness who has no suggestibility. The standardization of instruments that measure suggestibility indicates that the subject capable of resisting is not the one who rejects all suggestions, but rejects the majority of them (Gudjonsson et al., 2016). This suggests that the evaluation of suggestibility cannot be limited to a simple numerical value, but implies having to evaluate multiple psychological factors and how they interact with each other in the individual case. It is not sufficient to claim, for example, that the child was exposed to multiple listening sessions to indicate that he was influenced; it is necessary to evaluate whether and what post-event information or questions actually altered the original memory.

The expert's evaluation must be based on objective scientific evidence, such as the measurement of the levels of immediate and delayed suggestibility, basic cognitive abilities (executive functions, attention, memory, language, etc.) and how they intervene to guarantee resistance or vulnerability. It is also necessary to evaluate the presence of other clinical conditions such as anxiety, depression, post-traumatic stress disorder or other clinical disorders to verify their impact on autobiographical memory processes and on the ability to manage suggestibility factors (Vagni & Maiorano, 2023).

In the forensic context it therefore becomes central to evaluate how a child manages the factors involved in listening or in a suggestive interview, and to what degree the child manages to remain anchored to the original trace or at contrary to incorporate post-event information.

If, on the one hand, we can include many scientific studies that have detected mechanisms linked to both interrogative, immediate and delayed suggestibility in children, in some cases also involving minor victims of abuse and/or mistreatment (McWilliams et al., 2021). However, there are few contributions that have simultaneously measured the suggestive vulnerability to suggestive questions and misinformation of children in a

forensic context that sees them as real witnesses and at the same time suspected victims of abuse.

According to some recent studies (Gudjonsson, 2021; 2022; Vagni, et al., 2023), it appears important not to limit the evaluation only to the suggestibility score, but also to consider his resistant responses. Some responses, such as Direct Explanation, indicate a greater degree of resistance and source monitoring to guarantee that the child's ability to reject suggestions is maintained over time. The ability to provide "Direct Explanation" and "Don't Know" answers are linked to the age and degree of cognitive maturity of the child.

Some individual and psychological variables may be linked to having been exposed to negative life events and having developed as a result some emotional and behavioral manifestations compatible with their state of victimization (Vagni et al., 2020; Gudjonsson et al., 2020; 2021). The psychological reactions to the negative life experiences can affect the skills to manage the internal and external suggestive factors (Gudjonsson et al., 2022). Some studies have highlighted how in children and adolescents having been victims of emotional neglect or sexual abuse leads to low performance in memory tasks, which would tend to appear poor and inaccurate, and this would increase their tendency to give in to suggestive questions (Chae et al., 2011, 2014; McGroarty & Thomson, 2013).

The expert will therefore have to evaluate both internal characteristics and external situations by describing the description of their interaction specific to the individual situation and not by axioms or prejudices.

## Conclusion

The overview of the scientific literature presented above highlighted that children's suggestibility is a complex process linked to social factors but also to psychological characteristics. Some socio-demographic factors, such as age, and some individual characteristics can lead the child to be more vulnerable. The intersection of multiple emotional, cognitive and social factors can lead to various scenarios: a) children capable of rejecting both suggestive questions and social pressures during the interview and the misinformation effect; b) children vulnerable to both suggestive interviews and misleading information which leads them to alter the original memory; c) children resistant to the factors of immediate suggestibility but inclined to accept the misinformation effect; d) children who are suggestible by the leading questions and socio-emotional pressures during the interview but who manage to maintain their original memory accurate and unaltered after the suggestive interview; e) children who accept suggestive questions but resist socio-emotional pressures, and vice versa.

The expert's task is to evaluate the child's vulnerability to both immediate and delayed suggestibility factors. It is also the task of the witness expert to indicate and explain

how which cognitive, emotional and social factors can increase the child's suggestive vulnerability or, on the contrary, guarantee resistance.

Factors such as intelligence, linguistic abilities, autobiographical narrative skills, attention, executive functions, emotionality, expectations of success, insecurity, etc. should be evaluated by the expert and related to the individual tendency to suggestibility.

The centrality that the evaluation of suggestibility has in cases of childhood testimony suggests that the measurement procedure must be objective and the interpretation of the results based on scientific studies.

However, it is necessary to highlight how the tools for measuring immediate and delayed suggestibility are based on a learning task and not on autobiographical memory. The results of the learning task should be associated with the narrative autobiographical skills. It appears important to increase studies in this field which deal with child witnesses and which link autobiographical memory, resistance to suggestive questions and the effect of post-event information.

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