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Bredenoort, Myrthe; Roeg, Diana; van Vugt, M.D.

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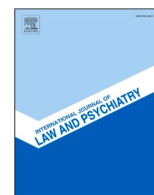

A shifting paradigm? A scoping review of the factors influencing recovery and rehabilitation in recent forensic research

M. Bredenoort [a,b,*], D.P.K. Roeg [c,d], M.D. van Vugt [e,f]

[a] Junior researcher at Tilburg University, department Tranzo, Prof. Cobbenhagenlaan 125, 5000, LE, Tilburg, the Netherlands
[b] Junior researcher at Stichting Kwintes, Laan van Vollenhove 3213, 3706, AR, Zeist, the Netherlands
[c] Head of Research at Stichting Kwintes, Laan van Vollenhove 3213, 3706, AR, Zeist, the Netherlands
[d] Senior researcher at Tilburg University, department Tranzo, Prof. Cobbenhagenlaan 125, 5000, LE, Tilburg, the Netherlands
[e] Senior researcher HVO-Querido, Eerste Ringdijkstraat 5, 1097, BC, Amsterdam, the Netherlands
[f] Senior researcher at Trimbos-Instituut, Postbus 725, 3500 AS, Utrecht, the Netherlands

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A B S T R A C T

Forensic research and practice have historically focused on risk assessment and prevention. This risk-oriented paradigm is shifting towards a more recovery-oriented perspective.

The aim of this scoping review is to provide an overview of research on the factors influencing rehabilitation and recovery and discuss the recovery paradigm in a forensic setting.

We performed a systematic search of the literature from the past 10 years, in Pubmed, Cinahl and PsycInfo, on recovery and rehabilitation. All types of study designs were included. Data was analysed and charted using an Excel template with various data items of interest.

Clinical, personal, social, functional and forensic factors were found to be of influence on recovery and rehabilitation. A number of these overlapped with factors of influence on recidivism and desistance, others did not. Most studies on recovery and rehabilitation focused on a clinical forensic setting.

This study provides an overview of the current body of knowledge on the factors influencing recovery and rehabilitation in forensic clients, and encourages researchers and practitioners in their focus on the recovery paradigm in forensic care. The body of evidence on rehabilitation and recovery is not yet as profound as that on recidivism and desistance. More knowledge on recovery trajectories for offenders in prison or ambulatory care, for example, is required.

1. Introduction

1.1. Background

Knowing what factors influence an offending individual to act differently and what helps in this personal process towards change is important. Most offenders are eventually released from prison to society (Hughes & Wilson, 2002), but recidivism rates remain high. A recent Dutch study showed a recidivism percentage for ex-prisoners of 47% after two years (Weijters, Verweij, Tollenaar, & Hill, 2019). After a stay in detention under a hospital order this percentage is lower. Approximately 19% recidivates within two years after release from detention under an unconditional hospital order, and after a conditional order this percentage is 23% (Drieschner, Hill, & Weijters, 2018).

It is important for forensic practitioners to understand which factors influence recidivism, desistance, rehabilitation and recovery, especially because of the movement towards community-based forensic care (Manguno-Mire, Coffman, DeLand, Thompson Jr., & Myers, 2014). Positive psychology, which encourages looking beyond the illness (Seligman & Csikszentmihalyi, 2000) and utilising personal strengths and resources (Bannink & Jackson, 2011), has received growing attention. Therefore, in addition to punishment, it is important to address rehabilitation during and after detention. Research shows that this reduces recidivism, for example, with positive empirical outcomes of risk-need-responsivity model (RNR)-based interventions (Andrews, Bonta, & Wormith, 2011).

Recovery is a broadly accepted and applied concept in regular mental health practice (Shepherd, Boardman, & Slade, 2008; Van

* Corresponding author at: Tilburg University, department Tranzo, Prof. Cobbenhagenlaan 125, 5000, LE, Tilburg, the Netherlands.
E-mail addresses: m.bredenoort@tilburguniversity.edu (M. Bredenoort), diana.roeg@kwintes.nl (D.P.K. Roeg), maaike.van.vugt@hvoquerido.nl (M.D. van Vugt).

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Weeghel, Van Zelst, Boertien, & Hasson-Ohayon, 2019) with the commonly used definition of recovery by Anthony (1993, p.525) being that 'it is a way of living a life that is satisfying, hopeful and contributing, even with limitations caused by illness'. Leamy, Bird, Le Boutillier, Williams, and Slade (2011) formulated a framework that describes five processes of recovery: connectedness, hope and optimism about the future, identity, a meaningful life and empowerment (CHIME). Research on recovery in forensic settings, however, is limited (Viljoen, Nicholls, Greaves, de Ruiter, & Brink, 2011). Shepherd, Doyle, Sanders, and Shaw (2016) created a framework for recovery in the forensic domain with three main themes: hope and social networks, safety and security and work on identity.

Forensic research and practice have a history of focusing on risk assessment and prevention. Research used to focus on the question of why offenders start their risky behaviour rather than why they decide to stop (Laub & Sampson, 2002). The leading model in forensic practice is the RNR for offender assessment and treatment (Andrews et al., 2011). RNR consists of multiple principles for rehabilitation based on extensive research with risk, need and responsivity as the most important themes. The model contains eight central risk/need factors to reduce recidivism (Andrews, Bonta, & Wormith, 2006). These include the first 'big four' static risk/need factors: antisocial associates, antisocial cognitions, antisocial personality pattern and history of antisocial behaviour. The four dynamic factors are substance abuse and circumstances in the domains family and marital, school and work and leisure and recreation (Andrews et al., 2006, 2011). The minor risk/need factors include personal and emotional distress, mental disorder, physical health issues, fear of official punishment, physical conditioning, low intelligence, social class of origin, seriousness of current offence and other factors unrelated to offending (Andrews et al., 2006).

Evidently, the focus on risks is important, but strengths-based perspectives such as the good lives model (GLM) framework are gaining attention in forensic research and practice. GLM is a framework for offender rehabilitation and has tentatively emerged as an empirically supported model (Mallion, Wood, & Mallion, 2020). Where RNR contains risk/need factors, GLM contains classes of 'primary goods' that describe goals to strive for a 'good life': life, knowledge, excellence in work, excellence in play, excellence in agency, inner peace, friendship, community, spirituality, pleasure and creativity (Ward & Fortune, 2013).

To describe processes in which an individual renounces criminal behaviour and strives for a productive, socially responsible life (Ward & Maruna, 2007), terms such as reintegration, rehabilitation, re-entry, desistance and correctional treatment have been used (Ward, Fox, & Garber, 2014). Anthony's (1993) definition of recovery has similarities with the essence of rehabilitation as described above. The label 'rehabilitation' is often used by psychologists and 'reintegration' by criminologists (Laws & Ward, 2011; Ward & Laws, 2010; Ward et al., 2014).

1.2. *Aim of the study*

There is a vast amount of evidence regarding factors that influence recidivism and the processes of desistance and rehabilitation. Recovery is a relatively new theme in forensic research and practice. Therefore, with this scoping review we map the current state of research on rehabilitation and recovery and discuss the body of knowledge on the recovery paradigm in a forensic setting. To be thorough and to be able to compare the findings, we also explore whether the past 10 years of research have yielded any new factors of interest for recidivism and desistance. To our best knowledge, no literature studies to date have presented an overview of a combination of research on recidivism and desistance as well as on recovery and rehabilitation.

The operationalisation and measurements of the constructs of strengths and protective factors have been applied in various ways (Miller, 2015), as have risk factors. We sought available evidence on what influences recidivism, desistance, recovery and rehabilitation.

Our article focuses on offenders in general as well as in specific forensic settings, such as prisons, parole or forensic clinics.

2. Method

2.1. *Study design*

A scoping study maps relevant literature in a certain field to examine the extent, range and nature of research activity. It summarises and disseminates findings and identifies gaps in literature (Arksey & O'Malley, 2005). We followed the framework for scoping reviews as described by Arksey and O'Malley (2005): 1) identifying the research question (for our study, the research aim); 2) identifying relevant studies; 3) selecting studies; 4) charting the data; and 5) collating, summarising and reporting the results.

2.2. *Eligibility criteria*

We included studies conducted in Western countries in a forensic setting and with an adult target group (≥ 18 years). We define a forensic setting as a context where the sample has been convicted of a crime. This can describe a population of offenders in general or refer to a sample staying in or released or discharged from prison, a forensic clinic or a treatment or re-entry program. It can also describe a population of offenders under supervision, on probation or serving a community sentence. For the themes of recidivism, desistance and rehabilitation, we included only follow-up studies and meta-analyses since there is a range of research on this topic and these designs provide a fair level of evidence (Evans, 2003). Since recovery is a relatively new concept in forensic practice, we present a more comprehensive overview of the literature in this area. All types of study designs reporting on factors that influence recovery were included.

2.3. *Search strategy*

We systematically searched the bibliographical databases Pubmed, PsycInfo and Cinahl for literature (in November 2020). We used a combination of search terms regarding a) setting and population (*forensic*), b) the outcome of the study (*mental health recover*, rehabilitat*, desistance, recidivism, reoffend*, repeat offend**) and c) the sample group (*not youth, not juvenile)*. To identify relevant studies, we used *published from January 2010– November 2020*, *English and Dutch language*, *peer reviewed* and ≥ *18 years* as search filters. No additional sources were consulted.

2.4. *Study selection*

After removing duplicate articles, the first author (MB) made a selection of the remaining studies in three rounds, screening for relevance based on 1) title, 2) abstract and 3) full-text assessment. The second author (DR) randomly assessed 20 studies in each round as well as the studies that raised doubt to enhance interrater reliability. We discussed differences in selection until we reached consensus. When doubt persisted, we included the study in the next round to make a more careful decision.

2.5. *Data charting and data analysis*

According to Arksey and O'Malley's framework, data charting is a technique for synthesising and interpreting data by sorting it according to key themes. Doing so allows us to present our narrative account of the findings through both descriptive and qualitative content analysis.

First, we assigned the included studies into two categories: recidivism and/or desistance and rehabilitation and/or recovery. For each of the two categories, we produced an Excel template to list information: first author, year of publication, country, study design, sample group

and setting, type of offence and main findings. Many papers investigated multiple factors in addition to the main factor(s) of research. In our Excel sheets, 'main findings' refer to the conclusion of the researchers on the main factor(s) of their research. The Excel sheets are listed as an appendix.

For the recidivism and desistance studies, we assigned the main factors that were investigated to an overarching theme (e.g., intimate relationships and contact with peers to 'social variables'). These factors are categorized in Table 5, done by the first author (MB). When in doubt, there was consultation with the other authors. Not all factors indeed influenced recidivism or desistance. We categorized for positive effect (i.e. lower levels of recidivism, protective factor or contributing to desistance), no effect and negative effect (i.e. risk factor for recidivism). This can refer to relationships as well as associations.

Next, we listed the data on offender recovery and rehabilitation. The essence of recovery overlaps with the definition of offender rehabilitation, therefore we assigned these papers into one category. For this category we also included qualitative studies. Qualitative studies do not provide statistical information. With the papers in this category, we extracted the factors that the sample groups mentioned as helpful (positive effect) or impeding (negative effect) in their processes of recovery and rehabilitation.

For both of the categories, our categorization is dichotomous, we did not categorize effect size or explained variance.

3. Results

The search resulted in 4798 articles, resulting into 95 studies after the selection process (Table 1).

3.1. Rehabilitation and recovery

Eighteen studies focused on rehabilitation and/or recovery among offenders. Half of these studies were qualitative and half were quantitative (all follow-up studies) (Table 2). We categorized emerging factors according to the four types of recovery (clinical, personal, social and

Table 1
Prisma flow chart.

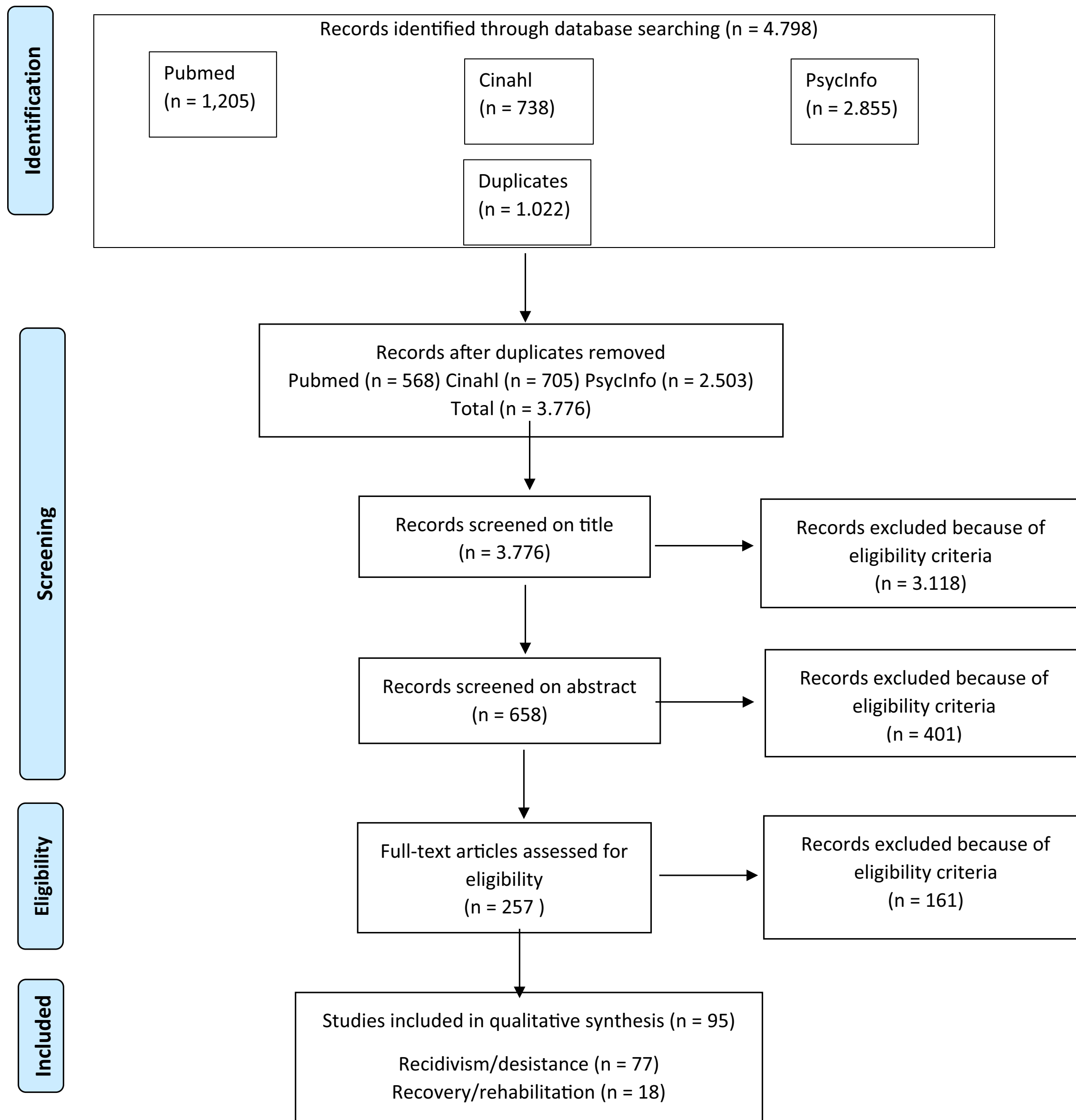

Table 2
Study characteristics.

Rehabilitation and/or recovery N = 18	
Study design Number of studies	
Follow up	9
Qualitative	9
Country	
Australia	1
United States of America	6
Canada	3
European country	8
Forensic setting	
(Ex-)prisoners	3
Offenders on probation/supervision/ parole	1
(Ex-)forensic clinic, evaluation or (outpatient) treatment patients	10
General offender population	4
Duration of follow-up	
(mean) ≤ 3 years	4
(mean) > 3 years	5

Table 3
Factors influencing rehabilitation or recovery in 2010–2020 literature.

Number of studies reporting on this factor (N)	Reference
Clinical factors (n = 14) Positive effect Medication Treatment variables Clinical staff skills and relationships Positive changes in protective factors Negative effect Mental health problems Risk of substance abuse Mixed evidence Substitute medication	Adshead, Ferrito, and Bose (2015), Aga et al. (2019), Bakken and Visher (2018), Coupland and Olver (2020), Dias, Kinner, Heffernan, Waghorn, and Ware (2018), Ferrito, Vetere, Adshead, and Moore (2012), Manguno-Mire et al. (2014), Mezey, Kavuma, Turton, Demetriou, and Wright (2010), Nijdam-Jones, Livingston, Verdun-Jones, and Brink (2015), Olsson, Strand, Asplund, and Kristiansen (2014), Olsson, Strand, and Kristiansen (2014), Pollak, Palmstierna, Kald, and Ekstrand (2018), Senker and Green (2016), Viljoen et al. (2011).
Personal factors (n = 5) Positive effect Personal development Acceptance Autonomy Tranquillity Hope	Adshead et al. (2015), Aga et al. (2019), Ferrito et al. (2012), Olsson, Strand, and Kristiansen (2014), Pollak et al. (2018).
Social factors (n = 10) Positive effect Helping others Supportive network Peers Belonging Connectedness to community Negative effect Stigma Connectedness to criminal community	Aga et al. (2019), Ferrito et al. (2012), Folk, Mashek, Tangney, Stuewig, and Moore (2016), Mezey et al. (2010), Mowen and Boman (2019), Moore, Stuewig, and Tangney (2016), Nijdam-Jones et al. (2015), Olsson, Strand, & Kristiansen, 2014 Pollak et al. (2018), Viljoen et al. (2011).
Functional factors (n = 8) Positive effect Financial resources Daily structure with activities and programs Practical resources New skills Housing Employment Negative effect Limited post release employment No appropriate housing	Aga et al. (2019), Bakken and Visher (2018), Dias et al. (2018), Manguno-Mire et al. (2014), Nijdam-Jones et al. (2015), Olsson, Strand, and Kristiansen (2014), Senker and Green (2016), Visher and Bakken (2014).
Forensic factors (n = 6) Positive effect Acknowledgement and understanding of the offence Perception of identity Being in a secure setting Rules and norms of the facility Forms of repayment Negative effect Length of stay	Adshead et al. (2015), Ferrito et al. (2012), Mezey et al. (2010), Nijdam-Jones et al. (2015), Pollak et al. (2018), Senker and Green (2016).

functional recovery) following Aga, Laenen, Vandevelde, Vermeersch, and Vanderplasschen (2019). Additionally, we found a fifth category in the data: forensic recovery. Most recovery studies have been conducted in a clinical setting and therefore refer to their sample group as 'patients' (Table 3).

3.1.1. *Clinical factors*

Fourteen studies reported on clinical factors that influence recovery and/or rehabilitation. Ten of these studies were conducted in a clinical forensic setting. Nine studies had a qualitative design, and five were quantitative studies.

The studies indicate that medication and forms of treatment or therapy (Aga et al., 2019; Ferrito et al., 2012; Mezey et al., 2010; Olsson, Strand, & Kristiansen, 2014; Viljoen et al., 2011) are helpful when a patient is open to them. However, not all patients think they need this assistance (Mezey et al., 2010), and regarding medication substituted for drug use, opinions vary (Senker & Green, 2016). Therapy was found to be useful when it helped patients gain insight into their mental illness and the role it played in their offence. A good relationship with the staff, the skills of the professionals (Adshead et al., 2015; Ferrito et al., 2012; Mezey et al., 2010; Nijdam-Jones et al., 2015) and experiencing safety in the facility (e.g., reduced coercive measures or transfer to a quieter ward; Olsson, Strand, & Kristiansen, 2014) were essential to achieve this.

Mental health problems pose challenges for individuals at every stage of the criminal justice process from arrest to reintegration and can complicate successful community re-entry (Bakken & Visher, 2018; Dias et al., 2018). In one sample, women with mental health problems were at greater risk of poor re-entry outcomes in comparison to men (Bakken & Visher, 2018). Women who made a 'successful return' (i.e., did not return to the hospital) experienced more protective factors and had significantly fewer risk factors than individuals still in recovery did (Viljoen et al., 2011). Having fewer 'incidents' (e.g., relapse into psychosis or treatment nonadherence) during the program was also related to 'success' (i.e., not having probation revoked; Manguno-Mire et al., 2014).

When assessing protective factors in treated violent offenders, improvements in protective scores are linked to both a decrease in recidivism, as well as linked to an increase in positive community outcomes (Coupland & Olver, 2020).

3.1.2. *Personal factors*

Five qualitative studies described factors that influence personal recovery and/or rehabilitation.

Internal factors such as personal development, acceptance, autonomy, tranquillity, rest (Aga et al., 2019) and being able to relax and think positively (Olsson, Strand, & Kristiansen, 2014) help patients in their personal recovery. During this process, it is important to experience hope (Ferrito et al., 2012; Pollak et al., 2018) and resiliency during times of relapse (Senker & Green, 2016;).

3.1.3. *Social factors*

Ten studies mention various social variables that influence recovery and/or rehabilitation. Six of these studies had a qualitative design and four a quantitative design.

Findings regarding social support indicate that an offender's social network plays an important but complex part in reintegration (Mowen & Boman, 2019; Visher & Bakken, 2014). Social variables associated with recovery include a sense of belonging (Aga et al., 2019), helping others

and having a social network with supportive contacts and meaningful relationships (with friends, family, staff and other patients; Aga et al., 2019; Ferrito et al., 2012; Mezey et al., 2010; Nijdam-Jones et al., 2015; Viljoen et al., 2011). Feeling connected to the community positively predicts community adjustment (Folk et al., 2016).

The stigma associated with mental illness and being an offender is a factor that holds back recovery (Mezey et al., 2010) and negatively influences reintegration (Moore et al., 2016). Dias et al. (2018) address that disclosure support for ex-prisoners could help with sharing information in their workplace that can trigger employer stigma.

3.1.4. Functional factors

Functional variables that influence recovery and/or rehabilitation are reported in eight studies, half of which were qualitative and half quantitative.

To achieve functional aspects of recovery, patients having a daily structure with activities and involvement in programs is important (Aga et al., 2019; Nijdam-Jones et al., 2015; Olsson, Strand, & Kristiansen, 2014; Viljoen et al., 2011). Dias et al. (2018) stress the importance of vocational rehabilitation after release from prison. For employment as a rehabilitation target, these researchers refer to the evidence-based approach to supported employment, namely individual placement and support. Acquiring and committing to new skills helps patients connect to others and has a positive effect on their self-identity. Vocational skills are viewed as 'opening doors to recovery and successful community reintegration' (Nijdam-Jones et al., 2015).

Additionally, a stable financial situation is helpful (Manguno-Mire et al., 2014; Aga et al., 2019; Visher & Bakken, 2014), as are practical recourses such as having a driver's license, internet and a mobile phone. These resources are mostly regarded as important for connecting to other people and are therefore closely linked to social recourses (Aga et al., 2019). Inappropriate housing (i.e., going back to the 'old' neighbourhood with drug dealers) hinders the process (Senker & Green, 2016).

3.1.5. Forensic factors

In addition to the four known forms of recovery(clinical, personal, social and functional), some studies mention a fifth form specifically for the forensic domain. Aga et al. (2019, p.1) define this 'forensic recovery' as 'an additional mechanism, besides more established recovery dimensions, that is unique to mentally ill offenders'. Six qualitative studies have reported on factors of influence for this form of recovery.

Forms of repayment are described as a factor relating to these kind of experiences. The reality of incarceration creates a turning point for some offenders and provides a feeling of making amends (Ferrito et al., 2012). Being in a secure setting with the rules and norms of the forensic facility is also regarded as helpful (Mezey et al., 2010; Nijdam-Jones et al., 2015).

Patients sometimes experience the time spent in the facility as an impediment to recovery because it makes patients feel sad, desperate and hopeless (Nijdam-Jones et al., 2015) or feels like a waste of time (Pollak et al., 2018). However, the length of the stay gives some patients time to rationalise and understand their offence. It is helpful to discuss the perception of identity with regard to the offence (Nijdam-Jones et al., 2015). Exploring and narrating their life story helps participants regain an understanding of their own identity after having committed a crime (Adshead et al., 2015; Ferrito et al., 2012).

3.2. Recidivism and desistance

The 77 included studies on recidivism and/or desistance consist of 71 follow-up studies and six meta-analyses, most of which are from the US and Europe (Table 4). We categorized the duration of follow-up in mean $\leq$ 3 years of >3 years since follow-up of three years is common (Alper, Durose, & Markman, 2018). Thirteen themes with an influence on recidivism and desistance were found, of which only adult victimisation is not one of the previous known described by the RNR and GLM models (Table 5).

Table 4
Study characteristics.

Recidivism and/or desistance N = 77	
Study design Number of studies	
Meta-analyses	*6*
Follow-up studies	*71*
Country (follow-ups)	
European country	20
Australia	4
United States of America	38
Canada	8
Russia	1
Forensic setting (follow-ups)	
(Ex-)prisoners	29
Ex-prisoners in a reentry program	2
Offenders in a halfway house	1
Offenders on probation/supervision/parole	11
(Ex-)forensic clinic, evaluation or (outpatient) treatment patients	13
General offender population	15
Duration of follow-up	
(mean) $\leq$ 3 years	41
(mean) > 3 years	30

3.2.1. Adult victimisation

Four studies reported on adult victimisation as a direct or indirect factor that influenced recidivism. Taylor (2015) examined to what extent recent victimisation is associated with reoffending. More frequent and recent victimisation showed a direct effect on recidivism, and the likelihood of reoffending was much greater for offenders who had recently experienced victimisation. Tripodi et al. (2019) found a relation between child abuse and adult victimisation, specifically intimate partner violence, in a sample of women. These researchers state that the effect of child abuse on recidivism is indirect with depression as an intervening variable and that child abuse has a significant relationship with intimate partner violence as an adult. Miller and Marshal (2019) examined risk factors for sexual and nonsexual recidivism in a group of female sex offenders. The results provide support for prior victimisation as a gender-specific risk factor. More specifically, this includes sexual abuse as a child as well as experiencing physical abuse as an adult. Zweig et al. (2015) examined the relationship between in-prison victimisation and recidivism. They saw that prisoners are vulnerable to physical and sexual violence during incarceration. They found that men and women who experience in-prison assault have negative emotional reactions to these experiences (i.e., hostility and depression). This was found to increase negative behaviour when they were released and can have consequences for their mental health and wellbeing in the long term.

4. Discussion

Forensic research and practice have historically focused on risk assessment and prevention. This risk-oriented paradigm is shifting towards a more recovery-oriented perspective.

With this scoping review, we provide an overview of research on factors influencing rehabilitation and recovery and discuss the recovery paradigm in a forensic setting. To be thorough, we also provide an update of the past 10 years of research on recidivism and desistance.

Adult victimisation occurs as a risk factor for recidivism. It is not a part of the central eight risk factors, but the importance of this risk factor is emphasised in various studies. In offenders in detention under a hospital order, Hilterman and De Graaf (2011) found adult victimisation as a risk factor of recidivism in a sample of patients in the Netherlands.

Table 5
Factors influencing recidivism and/or desistance in 2010–2020 literature.

Number of studies reporting on this factor (N)	Reference
Social variables (N = *19*) Positive effect Parenthood activities High quality relationships Family support / family ties Ties to social institutions Prison visitation Associates Marriage Closeness to others Spare time spent with family / friends Negative effect Criminal peers / family Mixed evidence / No effect Intimate social network members Social support Instrumental family support Marriage Prison visitation	Adams, Morash, Smith, and Cobbina (2017), Atkin-Plunk and Armstrong (2018), Barr and Simons (2015), Barrick, Lattimore, and Visher (2014), Bouman, de Ruiter, and Schene (2010), Cobbina, Huebner, and Berg (2012), Cochran (2014), Greiner, Law, and Brown (2015), Kendler, Lönn, Sundquist, and Sundquist (2017), Kras (2019), Mitchell, Spooner, Jia, and Zhang (2016), Mowen and Boman (2018), Orrick et al. (2011), Shannon, Jones, Newell, and Payne (2018), Spjeldnes, Jung, Maguire, and Yamatani (2012), Taylor (2016), Ullrich and Coid (2011), Van der Knaap et al. (2012), Walker, Kazemian, Lussier, and Na (2020).
Gender (N = *2*) Negative effect Male gender	Becker, Andel, Boaz, and Constantine (2011), Zgoba and Salerno (2017).
Employment or school (N = *9*) Positive effect Employment Training	Aaltonen (2016), Bunting, Staton, Winston, and Pangburn (2019), Delaney, Laux, Piazza, Ritchie, and Jenkins (2014), Greiner et al. (2015), Makarios, Steiner, Travis, and III. (2010), Ramakers, Nieuwbeerta, Van Wilsem, and Dirkzwager (2017), Tripodi, Kim, and Bender (2010), Ullrich and Coid (2011), van der Knaap, Alberda, Oosterveld, and Born (2012).
Childhood trauma and victimisation (N = *4*) Negative effect Childhood trauma Interparental violence Receiving child abuse Childhood adversities Childhood sexual abuse	Dalsklev et al. (2019), Fowler, Cantos, and Miller (2016), Krona et al. (2017), Nunes, Hermann, Renee Malcom, and Lavoie (2013).
Adult victimisation (N = *4*) Negative effect Victimisation (and history) Victimisation during incarceration	Marshall and Miller (2019), Taylor (2015), Tripodi et al. (2019), Zweig, Yahner, Visher, and Lattimore (2015).
Mental health variables (N = *31*) Negative effect Comorbid disorder Psychopathy (some forms of) Mental illness Outpatient treatment Substance use/abuse Receiving any therapeutic response Antisocial behaviour in youth (in conjunction with actuarial indicators) Alcohol dependence ADHD Personality disorder Antisocial personality disorder Mixed evidence/ No effect Psychosis Personality disorder Mental health disorder in general	Abracen et al. (2014), Anderson, Walsh, and Kosson (2018), Baillargeon et al. (2010), Cale and Lussier (2012), Cimino, Mendoza, Thieleman, Shively, and Kunz (2015), Delaney et al. (2014), Ducat, McEwan, and Ogloff (2015), Fazel and Yu (2011), Golenkov, Large, and Nielssen (2013), Håkansson and Berglund (2012), Hirschel, Hutchison, and Shaw (2010), Houser, Saum, and Hiller (2019), Langevin and Curnoe (2011), Lund, Forsman, Anckarsäter, and Nilsson (2012), Makarios et al. (2010), Marshall and Miller (2019), O'Driscoll, Larney, Indig, and Basson (2012), Pflueger, Franke, Graf, and Hachtel (2015), Rezansoff, Moniruzzaman, Gress, and Somers (2013), Shannon et al. (2018), Shepherd, Campbell, and Ogloff (2018), Skeem, Winter, Kennealy, Louden, and Tatar 2nd. (2014), Sturup and Lindqvist (2014), van der Knaap et al. (2012), van Horn, Eisenberg, van Kuik, and van Kinderen (2012), Vasiljevic, Öjehagen, and Andersson (2017), Walter, Wiesbeck, Dittmann, and Graf (2011), Webster, Dickson, Staton-Tindall, and Leukefeld (2015), Wilson, Draine, Hadley, Metraux, and Evans (2011), Wilson and Wood (2014), Yu, Geddes, and Fazel (2012).
Legal variables (N = *12)* Negative effect Criminal history / sanctions Number of convictions together with age at index crime Prison discipline allegations Offence type Victim variables	De Rooy, Bennett, and Sydes (2019), Caudy, Durso, and Taxman (2013) Delaney et al. (2014), Ducat et al. (2015), Fries, Rossegger, Endrass, and Sing (2013), Lund et al. (2012), Lund, Hofvander, Forsman, Anckarsäter, and Nilsson (2013), Pflueger et al. (2015), Shannon et al. (2018), Sturup and Lindqvist (2014), Wakeling, Freemantle, Beech, and Elliott (2011), Zgoba and Salerno (2017).
Physical variables (N = *1*) Negative effect Brain dysfunction	Langevin and Curnoe (2011).
Housing (N = *4*) Positive effect Immediate accommodation after release Negative effect Problems with accommodation Living in a rural area Living in an area with high recidivism rates	Golenkov et al. (2013), Stahler et al. (2013), Ullrich and Coid (2011), van der Knaap et al. (2012).
Attitude (N = *3*) Positive effect Shame proneness Negative effect Guilt proneness Attitudes supportive of offending / criminal thinking	Helmus, Hanson, Babchishin, and Mann (2013), Tangney, Stuewig, and Martinez (2014), Walters and Cohen (2016).
Religion (N = *2*) Positive effect Involvement in religious activities Returning to a religious county No effect Individual religious involvement	Stansfield and Mowen (2019), Ullrich and Coid (2011).
Age (*N* = *9*) Positive effect Older age Age Negative effect Younger age	De Rooy et al. (2019), Delaney et al. (2014), Fries et al. (2013), Katsiyannis, Whitford, Zhang, and Gage (2018), Pflueger et al. (2015), Shannon et al. (2018), Wakeling et al. (2011), Webster et al. (2015), Zgoba and Salerno (2017).
Sets of factors (N = *5*) Positive effect Protective strengths items START strength total scores Negative effect Central Eight START vulnerability total scores Mixed evidence Central Eight	Miller (2015), Lowder, Desmarais, Rade, Coffey, and Van Dorn (2017), Nilsson, Wallinius, Gustavson, Anckarsäter, and Kerekes (2011), Wilpert, van Horn, and Boonmann (2018), Eisenberg et al. (2019).
Ethnicity (*N* = *2*) No effect Ethnicity	De Rooy et al. (2019), Webster et al. (2015).

Among a group of female forensic patients, 54% had experienced adult victimisation (De Vogel, Stam, Bouman, Ter Horst, & Lancel, 2014). The prevalence and importance of being aware of adult victimisation is also indicated in studies with severe mental illness (SMI) patients and individuals living in supported housing. Recently, a Dutch 10-year research program on violence against psychiatric patients was completed. Several studies revealed a high prevalence of adult victimisation among individuals with SMI, outpatients and clients in sheltered housing. In a study by Kamperman et al. (2014), 47% of the sample group of outpatients with SMI had become a victim of a crime in the past year. The prevalence of victimisation for this group was significantly higher than for the general population. Individuals living in supported housing have found to be at greater risk of becoming a victim, and more awareness on this is needed (Albers, Roeg, Nijssen, Van Weeghel, & Bongers, 2018; Zarchev et al., 2021). In forensic care, there can be thin

line between creating a victim and becoming one. It is important that both men and women have the opportunity to discuss what has happened to them or what can be done to prevent them becoming a victim.

Reentry experiences of men and women have important differences (Bakken & Visher, 2018; van der Knaap et al., 2012). Most criminological studies investigate a male sample group, but interest in and need for research regarding women's risks and needs is growing (Slotboom, Hoeve, Ezinga, & van der, 2013). In the Netherlands, the Female Additional Manual (FAM) was developed (De Vogel, De Vries Robbé, Van Kalmthout, & Place, 2011) as an additional assessment tool. The FAM assesses the risk of violence against others and the risk of general criminal behaviour. Additionally, the FAM assesses self-destructive behaviour, which appears more in women, as well as victimisation and trauma (De Vogel et al., 2011; De Vogel et al., 2014).

In addition to clinical, functional, personal and social factors influencing recovery and rehabilitation, included studies attended to forensic factors influencing recovery that are unique to offenders. Shepherd et al. (2016) created a framework for recovery in the forensic domain with three main themes: hope and social networks, safety and security and work on identity. In comparison to the other domains of recovery, safety and security is uniquely important for the forensic group (Shepherd et al., 2016). The forensic influencers of recovery regarding the role of forms of repayment, rules and norms in the forensic facility, length of stay and regaining insight and understanding of identity after an offence adhere to Shepherd and colleagues' description of this process. Cynicism and a traditional attitude towards punishment among professionals can negatively influence the way professionals adhere to a rehabilitative attitude (Kras, Dmello, Meyer, Butterfield, & Rudes, 2019). The experiences described by Nijdam-Jones et al. (2015) and Pollak et al. (2018) regarding the forensic factors holding back recovery, such as the feeling that the time spent in the facility is a waste of time and feeling desperate and hopeless, show similarities to the concept of hospitalisation in regular mental health care. Hospitalisation describes a phenomenon where the patient becomes less independent during treatment, increasingly relying on professionals, and experiences apathy (Donker, 1993).

It is important to emphasize that the various forms of recovery do not stand on their own but influence each other and can overlap (Davidson, Borg, Topor, & Mezzina, 2015). The recovery studies focused mostly on mentally ill offenders in a clinical forensic setting. Less is known about what would help offenders in the process of forensic recovery when they do not reside in a clinic but rather in prison, supported housing or outpatient care. Knowledge of recovery in regular mental health care could potentially be useful in prison or probation offices, for example.

4.1. Strengths and limitations

The integrated focus on factors influencing recidivism, desistance and recovery and rehabilitation is an important strength of this study. To our knowledge, this study is unique in forensic research since most studies focus on either recidivism and desistance or recovery and rehabilitation. This trend reflects the complex gap in forensic care where an important task is to prevent recidivism and protect society by providing treatment and security (Drieschner & Weijters, 2018), but there is growing awareness that this task can coexist with and even enhance helping offenders recover. In particular, the knowledge of the combination may assist practitioners in helping offenders in their process of reintegration.

Regarding appraisal of sources of evidence, we did not consult research protocols of the papers included. We based our results on articles published in peer reviewed journals only.

The number of studies and level of evidence regarding factors influencing rehabilitation and recovery in the forensic setting is relatively low so far. Half of the included papers on this subject have a qualitative design. These described experiences provide a first indicator of what hinders and enables recovery and rehabilitation and should inspire additional quantitative research to confirm their influence. Lastly it is important to emphasize the heterogeneity of the studies. The variety in offence type, setting and sample group makes it difficult to compare or generalise the results. For a scoping review, however, this is not uncommon since it prioritises aspects of the literature providing an overview or exploration and guiding future research (Arksey & O'Malley, 2005).

5. Conclusion

The body of evidence on rehabilitation and recovery is not yet as profound as that on recidivism and desistance. Most recovery studies focus on a clinical forensic setting. Recovery-oriented care in general mental health practice is well established. In forensic care, the paradigm is also shifting from focusing on risks only to a more recovery-oriented climate. Included studies on rehabilitation and recovery revealed a first indicator of clinical, personal, social, functional and forensic factors that influence these processes. The stigma that rests on offenders was one of the factors holding back recovery and can hinder forensic professionals in embracing the recovery paradigm. With our article, we hope to inspire researchers and practitioners to pursue more recovery-oriented research and care in the forensic domain.

This study provides a first exploration and overview of recent literature and encourages researchers and practitioners to focus on the recovery paradigm in forensic care. More knowledge on recovery trajectories for offenders in prison or ambulatory care, for example, is required. A second recommendation is to examine if and in which way influencing factors interrelate for recidivism and the processes of desistance, rehabilitation and recovery. It is expected that they influence each other, but further study will have to determine whether this stands true, to what extent and for which individuals.

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Open access

This article was submitted for open-access publication.

Declaration of Competing Interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijlp.2022.101812.

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