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LIBERATION BEHIND BARS

Meditation Interventions in Prison Populations

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This paper draws on a literature review which questioned whether meditation interventions in prison populations encourage desistance from crime. The purpose of this paper was to discover possible connections between criminological theories of desistance and the research findings of meditation courses in prison. A brief analysis of the evaluation findings on the presented meditation courses is implemented. This paper concludes that meditation projects in prison populations may not reasonably address desistance; however, there is evidence that the effects of such adjunct interventions can encourage prisoners to progress on the path toward desistance through mindfulness and other pro-social values.

Keywords: incarceration, meditation, crime desistance

Table of contents

Chapter 1 – Background	4
1.1 Chapter Outline	4
1.2 Background and problem area	4
1.3 The paradigm of prison	5
1.4 Incarceration and correctional practice today	5
1.5 Theoretical discussion: Desistance from crime.....	7
1.6 Desistance as a process	9
1.7 The role of desistance in rehabilitative interventions.....	10
Chapter 2 – Research Question	11
2.1 Chapter Outline	11
2.2 Aims and Objectives	11
2.3 Research Question.....	11
Chapter 3 – Method.....	12
3.1 Chapter Outline	12
3.2 Data extraction and synthesis.....	12
3.3 Ethical Considerations	14
3.4 Declaration of Conflicting Interests	15
3.5 Limitations	15
Chapter 4 – Literature Review.....	16
4.1 Chapter Outline	16
4.2 Vipassana Meditation.....	16
4.3 Mindfulness-Based Stress Reduction.....	18
4.4 Transcendental Meditation.....	19
4.5 Mixed-Method Meditation	22
Chapter 5 – Analysis.....	23
5.1 Chapter Outline	23
5.2 Domain Analysis.....	23
5.3 Comparative Analysis	24
5.4 Conclusion.....	25
References.....	27
Annex.....	35

1 – Background

1.1 Chapter Outline

The first chapter gives a glance on the main issues which will be elaborated in this thesis. The background and problem area will provide a brief explanation about the concept of meditation in both general and prison populations. Having learned about the history of prison, and the current correctional practices, it may be of little surprise for the reader why there is a need to reconsider offender rehabilitation. Consequently, this chapter will lead to a discussion on the theoretical knowledge on the process of crime desistance.

1.2 Background and problem area

The effects of mindfulness and transcendental meditation on the general population have been scrutinised for the last 30 years (Ivanovski & Malhi 2007). Medical research in general populations has shown that meditation has both long- and short-term effects on individual's memorisation, self-awareness and perspective-taking (Hölzel et al. 2011). Additional studies found that meditation may support participants to regain emotional balance (Lazar et al. 2005), to improve maladjusted coping strategies (Astin 1997), and to experience fewer depressive episodes (Ramel et al. 2004). It has been further suggested that regular meditation practice may reduce problems related to substance abuse (Bowen, Wietkewitz & Marlatt 2006).

In prison populations, research on meditation interventions has found that participants' psychological and social functions may improve (Samuelson et al. 2007), substance dependence may decline (Bowen et al. 2006; Gelderloos et al. 1991), and recidivism rates may decrease (Bleick & Abrams 1987; Himelstein 2011; Magill 2003). It is, therefore, suggested that the outcomes of meditation interventions may support prisoners on the path toward desistance from crime.

The concept of meditation may at times be presented as a plain Buddhist doctrine or a way for prisoners to procrastinate (Perelman et al. 2012). Nevertheless, some correctional institutions, mainly in the United States, have agreed to hold meditation courses for inmates. For those prisoners who are interested in meditation, the continuous practice of body and mind awareness can be challenging, yet rewarding. In essence, the essential tools in meditation practice are dedication, persistence, patience and training of new skills (Kabatt-Zinn 2009).

In the light of the debate on whether the imposed sentence length acts as a crime deterrent (Blumstein & Nagin, 1978; Durlauf & Nagin, 2011a; Piquero et al. 2001), and with high rates of re-offending (Armstrong & Barton 2012; Langan & Levin 2002), there is a need to gather evidence on the desistance process and the outcomes of meditation interventions as an adjunct rehabilitation approach.

This paper will focus on nine research reports on meditation projects that were held in correction facilities between 1978 and 2013. The intention of this paper is to (1) narrate the paradigm of prison, (2) outline criminological theories on desistance from crime – in particular those concepts which focus on desistance as

a process, (3) explain briefly the role of desistance in rehabilitative interventions, (4) review and analyse findings on meditation in prison populations, and (5) illustrate possible connections between the theory of desistance with the key findings of meditation in prison populations.

1.3. The paradigm of prison

In Western philosophy, the concept of legitimised retribution may be associated with the *Social Contract* theory. To name one description, Rousseau (1762) points out that personal freedom can only be experienced to its full extent if an individual takes part in a collective society. Consequently, sound co-existence requires mutual social agreements in order to encourage compatibility amongst citizens. Although Rousseau emphasises the sovereignty of the individual, he further reasons that such self-determination must not exceed the limits of the *general will*. Accordingly, and in favour for the popular sovereignty, the politics of criminal justice may at times require a suspension of the individual's supreme power.

The social and political function of punishment has undergone numerous transformations, in particular during the eighteenth century. Foucault (1975) argues that the changes of power-relations during this time brought about drastic reforms for the right to punish. Consequently, there was a shift from an active retribution – often exercised as a public spectacle –, toward passive penalties of deferred privileges. As a result, so Foucault, the theatrical element of physical retribution was replaced by an “economy of suspended rights” (p. 11). In other words, public physical chastisement was replaced with custodial institutions of rules, rituals and surveillance. Foucault recognises this shift towards the institutionalisation of punishment as the birth of the modern prison. Garland (1996), notes that during the European prison reform era, governments justified the monopolisation of punishment through pledges “to curb and cure the social problem of crime” (p. 449). Current juridical and social punishment, thus, focusses on the inmate's obedience and their reflection on the allegedly wrong action of the past (Caplow & Simon 1999; Kohlberg, Scharf & Hickey 1971). Bourdieu (1999) argues that most members of the public support the plausibility of the prison, for it restrains criminals from threatening the collective morality. He further argues that – independent of the prison sentence – social suffering continues, because the some offenses may result in life-changing effects for both victim and convict. It has been widely discussed whether punishment has a preventive and deterrent effect (for instance Andenaes 1966; Bourdieu 1999; Cook 1977). Nevertheless, retribution is still regarded as an indispensable pillar of criminal justice systems (Garland, 2012; Morris and Tonry 1991).

1.4 Incarceration and correctional practice today

The enforcement of social order through criminal justice institutions is defined by the constitution of each government (Skolnick 2011). Nevertheless, as Durlauf and Nagin (2001b) argue, incarceration itself must not be understood as a policy; it is rather the effect of policies that determine who is being imprisoned and under what circumstances. Contemporary scholars of penology (for instance Beckett & Western 2001; Garland 1996; Gottschalk 2008; Sutton 2004) have stressed the

fact that until today incarceration conditions and sentence length for convicts depend on the political agenda of nation states.

In regards to incarceration rates, it is of importance to understand that during the past 15 years, the number of people in custody has risen by 6% across all five continents. Worldwide, there are 10.2 million prisoners (Walmsley 2013). However, these figures represent a global view. Focussing on data from Europe and the United States, crucial differences come to light. With an estimate of 716 prisoners per 100 000 inhabitants, the United States has a five times higher prison population than Western-European countries. Second in line is the Russian Federation with 475 inmates per 100 000 citizens; followed by Belarus with 335 prisoners per 100 000 inhabitants (Scott 2013). In contrast, countries like France, Poland, Sweden and Finland have seen a decrease in prison populations since the 2000's (Aebi et al. 2014).¹

With growing number of prison populations, the rehabilitative effectiveness of penal institutions has been questioned by both scholars (see for instance Berman 2004; Bernfeld, Farrington & Leschied 2003; Cullen 2006; Petersilia 2001) and governments (for example Justitiedepartementet 2014; UK Ministry of Justice 2013).

Whether the severity of punishment acts as a crime deterrent has been discussed widely (for instance Blumstein & Nagin 1978; Durlauf and Nagin 2011a; Piquero et al. 2001). In regards to the penal practice of some countries, there is little evidence for a positive relationship between strict correctional practice – such as solitary detention, military-type drills or continual drug testing – and recidivism rates (Aos et al. 2001; Kupers & Toch 1999; Mauer 2001). However, some scholars have found evidence that harsh disciplinary action may trigger prisoners to develop resistance and disobedience to authority (Bosworth 2001; Haslam & Reicher 2012). In particular Haney (2008) points out that the institutional cut-down on individual liberties fosters hostility and aggressiveness amongst inmates, which in turn may stand for sustenance of criminogenic prison environments.

In reality, those ex-offenders, who are released from prison are often not equipped with the necessary skills for a sound reintegration into society. Regardless, and almost independent of incarceration time, the majority of people who are imprisoned experience a cutback on human capital (Christian, Mellow & Thomas 2006). For instance, most people who enter prison experience suspension of previously functioning social networks, and their related pro-social benefits are suspended (Rose & Clear 1998). In addition, the prisoners' previously achieved professional competencies may find little purpose in custody (Decker et al. 2014; Western 2002). Furthermore, Hopkins (2012) argues that released prisoners may have slighter chances for re-employment or experience a general decline in career opportunities and salary expectations.

It may come as no surprise that a considerable amount of released prisoners are reconvicted within a short term. In the United States, data collection from 1994 show that 51.8% of all released adult prisoners returned to prison within three years after release (Langan & Levin 2002). In the United Kingdom recidivism

¹ Data collection on prisoner population implies certain limitations. Wamsley (2013) notes that certain countries, for instance, do not define adolescents or local police detainees as prisoners.

accounts from 2011 indicate that 26.9% of all released individuals who were jailed have reoffended within one year (Ministry of Justice 2013). Swedish statistics report that 40% of those who were released reconvicted within three years (Swedish National Council for Crime Prevention 2014).

1.5 Theoretical discussion: Desistance from crime

Desistance from crime can be understood as a lasting abstinence from criminal behaviour, in particular for those for who offending had become a behaviour pattern. Criminological theory on distance from crime focusses on the underlying motivation for why and when offenders desist from crime. This subchapter will form the discussion on which theories incorporate the concept of agency within the resistance process. I will commence by reviewing the essential findings in criminological research on desistance. Then the attention will be drawn to theories that support the notion of human agency in rehabilitative interventions. Altogether, this discussion will support the importance of desistance-based models in offender rehabilitation.

There is an increasing volume of literature dedicated to the dynamic process of desistance, mainly because it provides crucial knowledge in the development of crime prevention and rehabilitation programmes. The research field shares a common fascination which originates from the findings in life-course criminology: independent of the severity in criminal careers, some offenders desist from criminal activity, whereas others persist throughout their lifetime (see for instance Laub & Sampson 2009).

Early approaches in the field favoured for maturation in an offenders' life to cause desistance (Petersilia 1980; Rowe and Tittle 1977). Whereas other scholars supposed that – independent of the length and intensity of a criminal career – initially an offenders' weakened social bonds can be re-established (Elder 1985; Laub & Sampson 1993). Such a change in a trajectory may be, for instance, through marriage, employment or military service. For it is assumed that involvement in such an event requires a certain level of conformity through the individual, and strengthens social bonds (Laub, Nagin and Sampson 1998; Uggen 2000).

Consequential theories expanded on a transition between persistent criminal careers and desistance which may be encouraged through a *turning point*. Such turning points can be defined as a decisive moment “at which a significant change occurs” (Merriam-Webster Dictionary 2014). In terms of a criminal career, such events can be caused through an offender's experience or awareness which may change the trajectory over an extended period.

It has been broadly discussed that start, length and order of turning points throughout the life-course may differ amongst individuals. Laub and Sampson (1993) have assumed that personal progress in life and role expectations in family or society, may play an important part how turning points are adapted in practice.

However, support for the accountability of turning points is not universal. For instance, Kazemian (2007) pointed out that social norms in contemporary Western society have undergone a tremendous transition. She states that people may marry at a later stage in life, are more likely to divorce and that the impact of military service on youth has almost vanished. Kazemian thus concludes that:

It may be worthwhile to adapt measures of social bonds to the changing societal norms and values. Failure to do so may offer a biased interpretation of the role of social bonds in the desistance process (2007, p. 16).

Additional theories on desistance have suggested that personal identities are subject to change. To name one example, some offenders may desire to change their narrative over a lifetime, for instance because certain lifestyles and habits may exhaust or disappoint an individual. That is why some offenders may wish to re-evaluate priorities on their path in life (Crow 2002; Farrall & Calverley 2005; Warr 1998).

By challenging the generalisation of desistance theories, Shover points out that:

When applied to individuals, it is clear that the break with crime is not always clean cut and final. In real life, desistance is gradual, drawn out over years and interrupted by occasional relapse, at least in the short run (in Maruna 2013, 9).

Laub and Sampson (2009) combined various data collections and methods in order to evaluate the factors of continuity and change in criminal behaviour among delinquent boys up to the age of 70. The authors' research was mainly concerned with one phenomenon: some offenders happen to desist (for instance through marriage or employment) whereas others persisted in criminogenic behaviour far into adulthood. The authors, thus, concluded their findings in a general theory which supports the notion that desistance is a process in which routine activities, informal social control, and a sense of human agency need to be present. Laub and Sampson interpreted their findings with the assumption that adolescent offending rates may provide uncertain indication for future criminogenic developments. Furthermore, the authors were able to confirm the importance of turning points in the pathway toward desistance. The diverse life choices by the study subjects indicated that turning points may have a causal effect only if context and human agency are recognisable and practicable for the individual. Accordingly, so the authors, stable employment provided access to self-confidence and a promoted sense of responsibility – such as commitment at work, punctuality, team-effort – and a change in routine activities. Nevertheless, individuals had different prospects for turning points. This why both scholars concluded that a twist in a criminal career can initiate change; albeit, it may not be definite.

Farrall and Calverley (2005) in particular have pointed out that age and turning points are indicating and contributing factors for desistance from crime; however, the transition towards desistance may only succeed once an individual has found meaning to the event, for instance through self-confidence or belief in someone, who in turn provides trust in and support for the convict. Accordingly, the process of regaining self-confidence or trust may provide support and hope in those times when the prisoner feels isolated or in despair.

Despite the fact that insecure life conditions offer hardly any support in the process toward desistance, there are exceptions to general assumptions. For instance, Bottoms and colleagues (2004) have found evidence that there are people who desist, in spite of given social and structural context, and possible extensive criminogenic history. The authors reason that ex-convicts may not necessarily depend on classical desistance factors only – such as self-motivation, social bonds, and economic ties (for a detailed overview see Farrall 2006) in

order to practice a conformist lifestyle. Corresponding to this notion, Maruna (2007) has observed that against all “common wisdom”, there are “false positives” (p. 6). Those are ex-convicts that are believed to desist from crime in spite of all given difficulties, for those individuals may have developed some sense of agency to maintain control over their life.

That is one of the reasons why Maruna regarded this way of making good with the past as an agency. That is mostly because such people may draw from self-sustainable sources, such as personal motivation, somewhat independent of structural circumstances. Accordingly, whether this process may be achieved through psychological, spiritual or any other guidance, is less significant in definition, as far as the results of a sound restoration process are concerned.

1.6 Desistance as a process

Desistance, thus, can be viewed as a process rather than a single event. Rehabilitation from criminal patterns of behaviour cannot be measured through the occurrence of a single event. Nevertheless, the process of change requires opportunities and events which enable change to happen and identity to shape.

As the practicality on the theory of desistance is not as evidential as suggested, other scholars have stressed the fact that closer attention needs to be drawn to the developmental stages within the desistance path (for instance Farrington 2005). Some authors have suggested how offenders may succeed in letting go from their criminogenic past:

Through analysis from previous studies on adolescent male and female offenders, Giordano and colleagues (2003) outlined a series of cognitive transformation steps towards a readiness for change. The concept has been listed in four stages, corresponding to the initial transformation steps and their requirements: First, an individual needs to turn towards “a basic openness to change”; Second, the necessity of change in the very moment (“the hook”) must be present; Third, the patterns of the ego structure need to be addressed; fourth, deviancy as an attitude needs to be replaced with new action plans (pp. 1000-1002).

In connection to the final stage of the above model, Vaughan (2007) proposes a rather rational approach. He has found that dedication towards a moral high ground in life may be the key element in the desistance process. Accordingly, such a commitment might be particularly useful in distancing oneself from a criminogenic past.

One of the most recent desistance-based models has been designed by Walker and colleagues (2014). Based on observations on intimate-partner violence offenders, the authors propose that change in behaviour occurs by letting go of the past without condemning it. The transition towards desistance has been suggested through a 4-step model: first, acceptance of previous aggressive behaviour needs to be integrated; second, violent or non-violent reaction needs to be seen as a choice of reaction; third, non-violent reaction needs to be identified as a healthy choice; fourth, the non-violent approach needs to be recognised as a fundamental element in the change process.

Walker and colleagues argue for this model because ex-offenders can reflect on their choice at each stage, and allow old reaction patterns to be an accepted element in the gradual decision process. It is thus anticipated that dynamic, rather

than linear models, allow individuals to let accept their past by letting go gradually.

1.7 The role of desistance in rehabilitative interventions

In line with the above-mentioned suggestions on desistance-focussed rehabilitation approaches, several scholars have urged to re-think offender rehabilitation (such as Cullen & Jonson 2011; Farrall & Maruna 2004; Maguire & Raynor 2006).

In a broad examination on the effectiveness of current cognitive behavioural therapies for juvenile offenders, Lipsey (2009) discovered that most therapies, which were based on punishment and restriction, have proven to be least effective in terms of desistance outcomes. However, the author notes that those interventions, which emphasised on skill-building techniques amongst prisoners, had a greater impact on the desistance process.

Porporino (2011) urged criminal justice authorities to provide “service to support desistance” rather than to “fix” offenders (p. 61). He suggested that rehabilitative interventions may need to address the offender’s needs, personality and behaviour in interaction with the intervention practice. Moreover, the author stressed the fact that the individual criminogenic background may be taken into consideration when matching offenders with intervention schedules. Accordingly, the convict’s maladjusted coping strategies need to become an integrative part of the therapy strategy. Lastly, so he argues, personal motivation toward change can only be achieved through human agency.

That is why some scholars argue that there must be a dynamic interchange between the aims of cognitive-behavioural approaches, and an offender’s personal motivation to take the first step on the path towards a crime-free future (for example Farrall, Bottoms & Shapland 2010).

In relation to the aforementioned criminogenic effects of imprisonment and the significant recidivism rates amongst ex-convicts (see subchapter 1.4), correctional institutions may be required to introduce more efficient rehabilitation interventions. One of the possibilities, to support prisoners on the path toward desistance, is the practice of meditation.

2 – Research Question

2.1 Chapter Outline

The second chapter will shed light to the aim of and motivation for this paper. Furthermore, there will be a brief outline of the research questions posed in this essay.

2.2 Aims and Objectives

This paper aims to find a connection between the theory of desistance from crime and the literature on meditation projects in prison populations. The focus of this essay will be to review and critically assess the ways in which meditation interventions in prison populations can support the desistance process.

There is much interest for meditation course outcomes in general populations. As mentioned in subchapter 1.2, research on the general population has demonstrated evidential advantages of meditation practice.

Although it can be assumed that prisoners can benefit from similar results, there is a lack of research in this population group.

I have chosen to conduct a literature review in order to understand which meditation techniques have been applied in prison populations and what outcomes can be detected from the presented research. In addition, this approach was chosen to shed light into an unknown research area.

2.3 Research Question

First, which results can be observed from meditation interventions in prison populations?

Second, can meditation interventions in prison populations encourage desistance from crime?

3 – Method

3.1 Chapter Outline

In particular the connection between theory and empirical findings can contribute to existing knowledge in the field. In this way, researchers can take a glimpse on what evidence has been found by fellow colleagues (Boote & Beile 2005). First, in this chapter there will be an account for the method which I have selected to conduct this research. Second, there will be an outline of the applied data extraction and synthesis process within the review process. This chapter will be closed by ethical considerations, a declaration on conflicts of interest, and an illustration of research limitations.

3.2. Data extraction and synthesis

Data sources and selection of material

The literature search has been conducted through the academic online data bases *Summon*, *Web of Science*, and *PsychINFO*. In order to pre-select criteria, only research articles were chosen.

First, the primary key term *meditation* was entered. In addition, a combination of: AND *incarcerat**, OR *prison**, OR *crim** were added. In addition, an ancestry approach was executed by browsing the references of all studies which were retrieved through search engines.

Second, initially retrieved search hits were screened for a relation to the literature review aspects.

Third, inclusion criteria for the retrieved material were applied: (1) a quantitative intervention report was presented; (2) the research study had a control or quasi-control group; (3) the report focussed on a meditation intervention (4) participants had to be incarcerated at the time of the study; (5) pre- and post-interventions (measuring dependent variables) were included in the presentation; (6) the report was presented in English language; (7) the report was published between 1974 and 2014.

Fourth, research studies were excluded if they were: (1) review articles; (2) qualitative studies; (3) studies which did not focus on meditation; or (4) unpublished articles.

Fifth, research outcomes were scrutinised on whether they focussed on desistance from crime and whether pre- and post-course assessments were evaluation. An additional focus was set on outcome measure which focused on a possible decline in criminogenic causes.

Data extraction

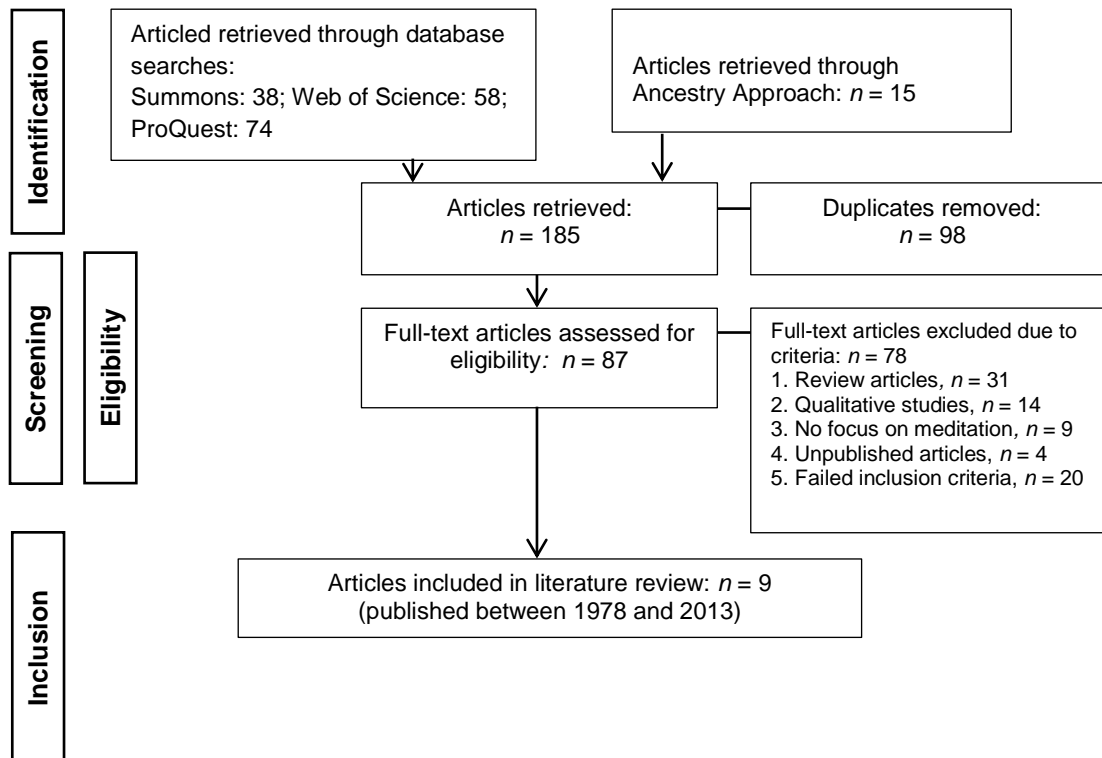
First, all retrieved articles were screened by title and abstract. A secondary focus was given on the type of study, the participant population, intervention method, and the presence of a comparison group. The remaining articles were then

scrutinised on completeness and the use of variables which measured the outcomes. All included articles were short-listed in categories.

Data synthesis

Results of database search. As figure 1 indicates, retrieved data were first screened for duplicates, then for exclusion criteria. In total, nine articles remained for the literature review.

Figure 1. Results of database search



Initial results of included studies. The results of the included studies were summarised, based on the content of the title and abstract. This was done to further assess the method quality of the individual article in terms of control group, randomisation, blinding, and attrition. To group the interventions, they were categorised by their meditation style, and quality scores (for instance whether randomisation or blinding was applied or whether the attrition rate was mentioned).

Description table of all included studies

A descriptive table 1 (see annex) was designed to summarise the final results of the included studies. Measures and outcomes of each included study were divided into the following categories and clusters:

Study and location: Authors, publication year, literature title and country of intervention.

Type, time, range: Style of meditation (see differentiation in subchapter 4.1), duration of intervention (by length each meditation session and over all time-range over weeks or months).

Population sex, age (M), incarceration: population gender, median age – if stated in the literature – and incarceration type (for instance: maximum-security prison or detention centre).

Participant n and attrition: Number of participants and attrition rate – if mentioned in the report – divided by experimental and control group.

Purpose: The purpose of the study stated by the authors.

Applied measures: First, all controlled trials are grouped into their range of application, for instance: Baseline, Post-Course and Follow-Up assessment. Second, dependent whether experimental and control group received similar or different variables or measures, they will be outlined in the same order as the original literature stated them.

Outcome: Segregated into control and experimental cohort, the research results are stated according to the applied measures. For easy readability, an increase or decrease of the proposed measures is indicated first, followed by the outcome (for example: increase mood stability).

Limitations/Comments: Brief limitations of the study are stated. This is done to point out characteristics of the applied method or procedure which may impact on the interpretation of the result. Comments are additional remarks which often raise general questions on the conducted study. For instance if money was paid for study participation (see also the discussion subchapter 3.3)

Visualisation of data in statistical graphics

Visual presentations composed from the basic data of the selected studies may provide an overview on the diversity within the research designs. Graph 1 outlines the number of experimental and control group participants for each study. Graph 2 illustrates the research settings of the included studies. Please refer to the annex for both graphs.

3.3 Ethical considerations

This paper draws on research studies that present anonymous participant data . The data synthesis, evaluation and presentation is based on pre-set selection criteria (as mentioned in subchapter 3.2) which do not support discrimination against criminal history, age, ethnicity, gender, sexual orientation, or disability of study participants. All authors of the reviewed studies assured that participation on either experimental or control group was voluntary, which means that participants were able to leave the intervention if they felt so.

Gostin et al. (2007) have pointed out that prisoners experience limitations in personal privacy, self-autonomy and access to health-care or information services, to name a few examples. That is why scholars, who wish to conduct research in prison environments, need to bear in mind that ethical protection of prisoners needs to be universal and consistent with the common standards.

Some of the here presented research studies offered money for participation in or completion of surveys. Dickert and Grady (1999) argue that such practice may not only influence individuals' decisions to take part in research; it may also influence volunteers' response because they may feel inclined to over-achieve with their contribution.

3.4 Declaration of Conflicting Interests

The author declares no potential conflicts of interest with respect to the research.

3.5 Limitations

As most authors have noted, the prison as a research environment can be challenging. Byrne (2005) has pointed out that prisons are custodial institutions in which the general public has little to no access. Depending on the jurisdiction and security level of the penitentiary, living conditions for inmates may be confined, controlled, and – at times – violent. For researchers, this environment imposes certain challenges while conducting research.

Bosworth (2014) has stressed the fact that scholars may differ from inmates in terms of linguistic styles and cultural or religious affiliation. She further pointed out that prisoners may experience incarceration in despair and hopelessness. Such experiences may influence how an incarcerated person may meet the scholar, and how the quality and success of the research may be affected. In short, there is an inevitable difference between the reality of prison environments and the commonly open and welcoming research surroundings in which researchers usually remain.

None of the authors in the presented studies have mentioned any difficulties in approaching prisoners. However, some research interventions had to be either postponed or temporarily interrupted due to unforeseen incidences within the social prison environment. In some of the presented studies it was noticeable, that high attrition in research populations was caused due to sudden inmate transfers, early parole release, or toughened security measures.

4 – Literature Review

4.1 Chapter Outline

This literature review is structured in the following way: First, each meditation technique will be explained in terms of theoretical psychological mechanisms, practice, and the common structure or schedule of the intervention. Second, in relation to the first research question on the outcomes of meditation interventions in prison populations, evidence-based research findings will be presented, analysed and critiqued. Third, current research implementations and a conclusion will be suggested.

Based on their distinctive style, four meditation practices are differentiated: Vipassana meditation (VM), transcendental meditation (TM), mindfulness-based stress reduction (MBSR), and mixed-method meditation (MM).

4.2 Vipassana Meditation

VM is a mindfulness mediation technique which has been described by Kabat-Zinn (2009) as a method to develop awareness on the present moment. The word *Vipassana* means *insight* (Hart 2011). VM derives from a Buddhist meditative practice. All VM courses, which are presented in this paper, are taught according to the instructions by Satya Naraya Goenka. The presented interventions follow the same routine as those courses for the general population. During a 10-day retreat all participants follow five principles: to refrain from killing, lying, sexual activity and from using any intoxicants (Bowen et al. 2006; Hart 2011; Perelman et al. 2012). Throughout nine days of the retreat, participants remain in *noble silence*, which means that meditation students do not talk, keep eye-contact or communicate verbally or non-verbally to others. An exception is given for questions directed to the instructor at given interview times. Based on a strict routine, attendants meditate for 10 hours per day. Nevertheless, there are scheduled breaks. In the evening, video-discourses are held which elaborate on Buddhist keynotes in relation to the VM practice. One or two meditation teachers conduct a VM course in order to provide instructions and guidance (Kabat-Zinn 2009).

During the initial three days, participants practice a breathing exercise, which supports mental awareness through observation (Delgado-Pastor et al. 2013). On the fourth day, Vipassana meditation instructions are given. Accordingly, through precise observation, the participant becomes aware of physical sensations throughout the body. At the end of each retreat day, evening discourses are held to address mindfulness practice in relation to the concept of impermanence. Meditation students are encouraged to experience and understand the fleeting nature of sensations, for they occur independently of the individual's craving for or aversion. The essential teaching of this mediation technique is to find liberation from attachments of the mind (Goenka 2000; Hart 2011).

Study 1. Bowen et al. (2006) have investigated the short-term effect of VM on post-incarceration substance use and psychosocial outcomes. This ten-day VM course was conducted in a minimum-security prison in the United States. Inmates were invited to participate at VM on a voluntary basis. During baseline

assessment, 63 individuals formed the experimental group. 242 partakers established the control group. Participants were both female (20.8%) and male (79.2%), at an average age of 37.5. The experimental cohort practiced VM (as described above), whilst the control group attended conventional institutional education and rehabilitation classes.

Bowen and colleagues surveyed both groups through self-report measures before, and respectively three and six months after the intervention. There was a high attrition, so that only 173 members of both groups were available for follow-up tests. On a range of measures, both group members were assessed on: Daily Drinking Questionnaire, Daily Drug-Taking Questionnaire, Short Inventory of Problems, Drinking-Related Locus of Control Scale and Life Orientation Test.

The results of the 3-month follow-up (on release) indicated that the experimental group – in comparison to the control group – demonstrated a significant decrease in alcohol and substance consumption, alcohol-related problems, psychiatric symptoms, and prosocial outcomes. Study 1's hypothesis, whether VM has a positive impact on the above outcomes, was confirmed.

Bowen and colleagues have acknowledged some limitations to the study. First, randomisation was not applicable because prison staff and VM teachers wished to conduct the intervention only with determined inmates, in order to facilitate a course with presumed little attrition rates and the least disturbance. Second, although data for the 6-month follow-up assessment were collected, appropriate interpretation was not possible due to a high attrition rate. Further, it is to note that participants received money for completing both baseline and follow-up assessments (see considerations on 3.3)

Study 2. In a similar nature, Perelman and colleagues (2012) conducted a study on the effect of VM on psychology and behaviour on incarcerates. This intervention was operated in a high-security prison in the United States. At three occasions, VM courses were given under the observation of the researchers. In total, 127 volunteers were recruited. After baseline assessment, 60 experimental-group members and 67 control-group members participated in this research study. Both cohort members were male long-term offenders with a median age of 35.4. The experimental group attended a full 10-day course, whereas the control group took part in a stress-management or stress-coping seminar.

Perelman and colleagues conducted both preliminary and post-course assessments on both groups. The applied measures were: At baseline: record of rule infractions within the institutions and medical health report. Pre- and Post-Test: Cognitive Affective Mindfulness Scale Revised; Novaco Anger Inventory Short-Form; Profile of Mood States Short-Form, and Trait Meta-Mood Scale. Post-test surveys included rule-infraction records and medical status; additionally, qualitative experience feedback was collected.

The post-course analysis revealed that the experimental (VM) group experienced a significant increase in mindfulness and emotional intelligence. Additionally, meaningful decreases in mood-disturbance and rule infraction were reported. The control group showed a less significant increase in mindfulness and emotional intelligence. As with the VM group, a decrease in institution rule-infraction was noticeable. Both cohorts did not indicate an improvement of their health status. Although the research hypothesis was confirmed, certain limitations were present in this study: First, randomisation was unachievable because volunteers were initially asked to commit for a 10-day VM course. Second, due to facility

restrictions, the group size was limited to 35 members for each cohort during each intervention. Third, high attrition was noticeable; however, this was more often the case for the control cohort. (For an outline on attrition, please refer to 3.5).

4.3 Mindfulness-Based Stress Reduction

MBSR is based on the principles of mindfulness meditation, as described in the 4.2). Although the base of instructions is similar to VM – regarding breathing and body-awareness exercises – the intervention structure is dedicated toward long-term retreats in clinical populations (Kabat-Zinn 2009). The emphasis of this intervention is to calm the unbalanced mind of those who have suffered from extreme hardships on a physical, mental, and social level.

MBSR has been reported to increase awareness, support self-reflection and memorisation (Hölzel et al. 2011). It has been further reported that MBSR can be supportive for individuals' stress-management in both general and clinical populations (Carmody and Baer 2008; Biegel et al. 2009).

Study 3. The intervention applied by Samuelson (2007) was conducted in several minimum- and maximum-security facilities in the United States. The research aim was to scrutinise the effect of MBSR on hostility, self-esteem, and mood disturbance. The experimental group consisted of 1350 male and female inmates. The workshops available for this group lasted between six to eight weeks. Depending on the restriction of each prison unit, each workshop hosted between 12 and 20 participants. The meditation session went on for 1 and 1 ½ hours each, followed by a group discussion. The control group consisted of 180 female and male quasi-waitlist and quasi-follow-up candidates, who finished both pre-test and follow-up assignments. However, they did not participate in MBSR interventions due to loss of interest or group-size restrictions. At the beginning and end of each MBSR workshop, both groups were tested on Cook and Medley Hostility Scale, Rosenberg Self-Esteem Scale, and Profile on Mood-States. The results showed a significant decrease in hostility and mood-disturbances; and a significant increase in self-esteem amongst the experimental group. The control group demonstrated a noteworthy decrease in hostility and mood-disturbance; although a substantial improvement on self-esteem was not discovered.

Study 3 presents a unique project, in regards to the vast study population. Although the research hypothesis was confirmed, there are notable limitations. First, the control group was not adequate for a strict research interpretation, because those candidates were in the expectation to attend an MBSR intervention at a later stage. Second, randomisation was not possible. Third, group size and retreat conditions varied due to different security restrictions.

Study 4. This research aimed to discover the effects of mindfulness-training (MT) on attentional task-performance. Leonard and colleagues (2013) described the applied mindfulness-training to derive from MBSR treatment structures. The main commonality in practice is the focus on self-awareness through observation of body awareness. Participants were adolescents with an average age of 17.4 years. All volunteers were imprisoned in several units within one US high-security institution. The experimental group ($n = 147$) practiced MT during 75-minutes sessions over a period of three to five weeks. The control group attended cognitive-perception intervention sessions. Pre- and post-test surveys were collected before and after the intervention. Both assessments included variables

measuring alertness, orientation, conflict monitoring, and an overall performance of those tasks.

The analysis discovered that both experimental and control group showed decreased attentional-task performance. Nonetheless, in contrast to the control group, those who practised TM performed with slightly higher precision in the task performance tests.

Study 4 has demonstrated that MT has not substantially improved attentional task-performance amongst the research population. The research hypothesis, thus, was not confirmed.

Nevertheless, slight performance improvements on alertness and conflict monitoring were noticeable once the study results were compared between MT and control group. Albeit, the authors noted that the atmosphere within the prison and amongst inmates was tense, so that several intervention sessions were disrupted at times. A major difference in this study is the proposed activity for the control group during research, for those adolescents attended an intervention that focuses on cognitive perception – as opposed to the many *routine as usual* schemes presented in other studies here (for a broader discussion, see 5.2)

4.4 Transcendental Meditation

TM is described as a technique that enables meditators to develop a higher conscious awareness through wakeful alertness. TM derives from Vedic Psychology, which, in its core, focuses on the functional organisation, development and consciousness of human beings (Miller & Cook-Greuter 2000). The goal of the practice is a transcendence towards a quiet mind. It is achieved by sitting with closed eyes and reciting a mantra each time the mind wanders (Travis & Pearson 2000). At some stage the recitation interference becomes automatic, and thought processes are expected to calm down. Both duration and sequence of a TM session vary. Orme-Johnson and David (1973) recommend two exercises per day, for 15 to 20 minutes each. According to Walton, Schneider and Nidich (2008), physical and mental functions may be restored due to the stress-releasing effect of TM. Observations on the psychosocial and psychosomatic benefits of TM were previously confirmed through clinical studies in general populations (for example Hjelle 1974, Speca et al. 2000).

Study 5. Abrams and Siegel conducted this study in 1978. The aims were; first, to test whether TM served as an acceptable intervention in prison populations; and second, to analyse the effect of a 12-week TM intervention on anxiety, hostility, behaviour and psychosomatic outcomes. The participants were males ($n = 115$) who served in either medium or maximum sections in a United States prison. An age indication was not provided. Due to facility rules, not all enlisted volunteers were able to practice TM at a time. Abrams and Siegel thus proposed to separate the list into four groups: experimental group 1 ($n = 30$), quasi-control 1 ($n = 25$), experimental group 2 ($n = 23$), and quasi-control 2 ($n = 26$). As a result, while each experimental group practiced TM, the quasi-control fraction went on with daily routines. Although the authors did not provide details for the duration of each session, it was mentioned that meetings were regular and under guidance of a teacher.

Both pre- and post-tests were each conducted before and 12 weeks after each TM course. The applied measures were: State-Trait Inventory, Buss-Durke Hostility

Inventory, and Eysenck Personality Inventory. Additionally, data on blood pressure, sleep patterns, and smoking habits were collected.

The results indicated that experimental groups 1 and 2 showed a significant decrease in anxiety, neuroticism, hostility, and insomnia. Further, both quasi-control groups 1 and 2 showed less significant improvements for the above measures.

Abrams and Siegel (1978) confirmed both study hypotheses. Certainly, the study was conducted with certain limitations. First, the quasi-experimental design raises concerns, because data collection was not scientifically sound. In particular control group 2 consisted of people who have practiced TM, and who were following *routine as usual* after the course. It is debatable whether such group characteristics provide a base for a result comparison. Second, although the authors noticed this very briefly, a complete dataset for control group 1's smoking patterns went missing due to a staff interception. Third, although the authors reported on low attrition, participants' attendance was not surveyed. The validity of the collected self-report measure is, thus, questioned.

Study 6. During a 6-year follow-up study, Bleick and Adams (1987) examined whether TM practice may reduce recidivism amongst prisoners. The experimental group consisted of 259 volunteers who learned TM during several 12-week interventions within three different US prisons. All volunteers were males who either served in medium or high-security units. The control cohort consisted of 259 parolees who matched baseline criteria, such as age, criminal record, and drug-use history. Although the authors introduced a general description on TM as a technique, it remains unclear to which extent, and under which circumstances TM was practiced. Self-report pre-test measures, in particular to measure recidivism potentials, were for instance: marital status, education, employment, military career, narcotics consumption, criminal career, and onset age. Follow-up surveys were applied (1) immediately after the date of release, (2) initially after six months, and (3) consequential once a year. The applied measures were: criminal record at the time of data collection; and the current number of re-offenses – if applicable.

The research results showed that there was an affirmative decrease of recidivism amongst those who learned TM, compared to the control group. Thus, Study 6's hypothesis was confirmed.

The authors acknowledged that the average sentence length amongst members of the experimental group was longer as compared to the parolee fraction. Therefore, the following additional data were included during analysis: First, the parole outcome of TM participants in comparison to the state-wide average; second, on each follow-up occasion, TM group members' criminal records and measure variables were compared with the subsequent year, whereas parolees' records were simply matched.

It is worth to mention that the study population was quite high in numbers in relation to most of the here presented studies. However, as the authors pointed out that the comparison group match did not directly correspond to the experimental groups' characteristics. An additional result was retrieved through cross-sectional analysis on the control group intervention method and recidivism outcome. It was proven that *treatment as usual* interventions – such as psychotherapy, prison education, and vocational training – did not conclusively reduce recidivism amongst the research population. In this connection, it is worth mentioning that it

remains unknown to the authors whether released participants continued to practice TM; thus, Study 6's results on decrease in recidivism – which are based on a 12-week intervention of TM – need to be interpreted with caution.

Study 7. In 2003, Hawkins and colleagues conducted a nine-month research on the effects of TM in terms of psychosocial and cognitive risk factors for criminal behaviour. All participants were male, with a median age of 28.2. They were incarcerated in either minimum or maximum divisions in a Netherland Antilles prison. Experimental group members ($n = 149$) practiced 1 ½ hours of TM per week; whereas the control group ($n = 151$) continued with a *routine as usual* agenda. Baseline assessments were made over age, criminal history, and education level. The pre- and post-course assessment included 21 dependent variables which can be grouped in social dynamics, psychosocial aspects, and cognitive performances. Data collection occurred each time, immediately before and after completion of an intervention. In addition, a cognitive reaction test was conducted during each meditation session. Although initial randomisation was anticipated at the first baseline assessment, only the non-randomised participant data were analysed due to attrition (32.5%) among both control and experimental cohort prior to the intervention.

The results of the analysis demonstrated that the experimental group showed improvements in cognitive distortion and intelligence-related measures. Psychological well-being amongst meditators improved slightly, but not as anticipated. The control group measures can be summarised by demonstrating no significant change to any of the measures.

The research hypothesis of Study 7 was confirmed. The list of measures was very comprehensive. The data analysis was, thus, quite extensive. The exhaustive variety of measures may contribute to the validity of some of the presented results.

Although it can be viewed as a progressive approach to include such a large number of participants into the research on TM, Study 7 includes several limitations: First, all TM members' data were collected, independent on whether they attended meditation sessions. This may be due to a high attrition in the first randomized group. The cognitive reaction data collection was conducted at each meditation session. Therefore, attendance records would have been realisable. Second, it is debatable why a second cohort was recruited. The authors acknowledged this flaw, yet it was neglected to explain such a *secondary recruitment* phase. Third, it is suggested that a follow-up, for instance within six months after the intervention, would have shed more light on the consistency of the presented improvements. Fourth, the presented study told little about the activities of the control group – which may provide further explanation on such insignificant improvements throughout all measures.

Study 8. Alexander, Walton and Goodman (2003) researched the impact of TM on self-development and psychopathology. The study venue was a maximum security prison in the United States. All participants were male; the population age was non-retrievable. On a time stretch of 20 months, the experimental group ($n = 46$) practiced 40 minutes of TM daily. The control group ($n = 114$) attended educational programmes on alcohol or drug use issues, counselling, religion, education; or criminal policy seminars. At baseline, data were retrieved about age, ethnicity, religious affiliation, and criminogenic background. Pre- and post-course assessments included 14 variables on personal development, consciousness and

psychopathy. The results were presented as followed: The experimental group showed significant improvements in psychopathological measures, consciousness, and development. In comparison, the control group also showed improvements in development, consciousness and psychopathology; yet, not as significant.

The research hypothesis in Study 8 was confirmed. Considering the large number of participants, there was a relative low attrition (24%) amongst the TM group, as compared to the *treatment as usual*-cohort (42.75%). There are two drawbacks: First – as mentioned in earlier comments – it is anticipated that such research on meditation interventions applies longitudinal follow-up surveys, in order to understand whether the results can be confirmed over time. Second, all study participants received money for completion of the measures.

4.5 Mixed-Method Meditation (MM)

The following study was introduced through an explanation for the benefits of both transcendental and mindfulness meditation. Nonetheless, the applied meditation technique was described as a *structured meditation program*. According to the authors, this mixed meditation model was developed in co-operation with the researchers and the facility where the research took place. The outline of the meditation structure was derived from the *Relaxation Response* method (Benson and Klipper 1993), in which body and mind are calmed through mental exercises.

Study 9. The research population consisted female incarcerates in a low-security detention centre in the United States. The aim of Sumter, Monk-Turner and Turner's (2009) research was to study the effects of a 7-week meditation programme on participants' medical symptoms, emotions, and behaviour. The experimental group ($n = 17$) met for 2 ½ hours per week in order to rehearse instructed breathing, walking, mantra recitation and yoga exercises. Each MM session was completed with a voluntary discussion on MM experiences. The control group ($n = 16$) continued with *routine as usual* within the facility. Prior to and after the intervention, both groups were surveyed through a modified symptoms checklist by Borysenko (2014). This inventory was concerned with participants' physical condition – such as physical pain – and psychological symptoms – such as feelings of anger, guilt, or hopelessness.

The results of Study 9 showed that, on the one hand, the experimental group experienced a reduction in harmful emotions, destructive behaviour, and medical difficulties. On the other hand, the control group showed paradoxical reactions. Namely, an increase in harmful emotions, destructive behaviour, and medical difficulties.

Study 9's hypothesis was confirmed by demonstrating that this MM programme had a positive effect on the measured variables.

Nevertheless, these results need to be interpreted with some considerations. First, the measure tool (Borysenko 2014) appears to have limited validity because it cannot be controlled in any way. To name one example, the researchers excluded variables on smoking, alcohol and drug use. That is because it was assumed by Sumter, Monk-Turner and Turner that the consumption of any intoxicants was prohibited on the site, and thus irrelevant for the survey. This assumption is, however, in contrast to other hypotheses on substance use in prison settings (see for instance study 1, Bowen et al. 2006).

5 – Analysis

5.1 Chapter Outline

The literature presented above has demonstrated which effect meditation interventions may have on incarcerated populations. Due to space restrictions, the presented theories and research studies can only be analysed briefly. In relation to the second research question, whether meditation interventions in prison populations can encourage desistance from crime, this analysis will be separated into two separate subsections. This chapter opens with a domain analysis on meditation as an adjunct intervention. The comparative analysis aims to relate possible connections between the discussed desistance theories and the reviewed meditation outcomes.

Having narrated the prison paradigm, outlined a few theories on crime desistance, reviewed some meditation interventions and analysed plausible connections to theory and research findings on desistance, this chapter will be completed by concluding remarks.

5.2 Domain Analysis

In total, all presented studies share one common domain, which is the teaching of meditation as an adjunct approach to conventional therapies in prison populations. Despite this prevalent goal, the studies differ by meditation style, practice and measured outcomes. Such taxonomies, however, are only assumptions for the effects on each participant for each intervention. In order to analyse the subsets of the domain, 5 clusters can be distinguished:

The role of the meditation student. Firstly, all experimental group members were naïve to meditation practice. Which means that either conscious enrolment into a meditation programme or selection into a meditation cohort may have caused inner doubt – for instance: am I able to commit to the event? How may it change my way of life? And how may I cope with the possible challenges of sitting in meditation? All of the displayed meditation styles require dedication, persistence and the foremost patience. Although some studies reported on attrition, the general assumption remains that many individuals have proven some sense of self-determination.

The role of the experimental cohort. One the one hand, the code of discipline in VM requires complete silence for 10 intervention-days, whereas, on the other hand, MBSR and MM consist of group discussions. In the case of TM, the chanting of mantras was anticipated during sessions. In relation to the determination by the many participants who continued practicing meditation, the group cohesiveness may have played a supportive role for individuals to maintain their practice.

The role of the control group. In order to assure validity of an experiment, comparative groups are essential in research. As in Studies 3 and 5, waitlist control-groups were present. The performance of the control cohorts varied from: *treatment as usual* – which consisted mostly of traditional education classes; to *routine as usual* – here, inmates continued with their ordinary prison routine; over *cognitive therapy* sessions (as in Study 4). It is certainly preferable if control-

group members can take part in activities that enhance their psychological or physiological abilities. Nevertheless, as I interpret the researcher's description of the prison environments they were granted access to, many correctional institutions may have permitted routine exceptions only for a limited amount of people.

The role of the meditation teacher. All presented studies reported on structured or semi-structured teaching instructions. With the exception of some TM interventions, meditation teachers conducted such meditation courses in order to provide guidance and support. I assume that for many course instructors the prison environment was a novelty. Depending on the personal preconception, teaching in prison environments may present challenges and obstacles to overcome. Only then it may have been possible to build trusting relationships to meditating prisoners and institution staff.

The role of the correctional institution. Not all studies mentioned how the general public, politicians and facility staff reacted on both concepts of meditation and research in prisons. Nonetheless, Study 1 described in detail a narrative of acceptance, rejection and reconciliation in view of mindfulness approaches in penal institutions. Studies 6 and 4 offered additional insight on the disturbing consequences of prison violence during meditation sessions, which gave the authors reason to doubt on the continuity of the intervention.

In a nutshell, failure or success of meditation interventions in prison populations does not merely rely on the provision of a guiding technique. The progress of such interventions depends, moreover, on a complex and sound interplay between participants, teachers, cohorts, and prison staff.

5.3 Comparative analysis

In investigating possible connections between the presented theories on desistance from crime and the research studies on meditation interventions in prison populations, there are several connotations to mention. First, there was a vast difference in presented research methods – some of which focused on short-term effects, whereas others considered long-term results. Conclusively, it is vague to predict outcome expectancies for crime desistance. Second – except for Study 6 – all studies focussed on the outcomes of meditation practices in prison populations and not on desistance from crime itself. Therefore, I would like to draw attention to particular intervention outcomes. Namely those which focussed on the effects that may support individuals to pursue pathways toward desistance after release from prison.

There is proof that many prisoners benefited from participation in meditation interventions. For instance, improvements in pro-social values (Study 1 and 2), emotional intelligence (Study 2), self-esteem (Study 3), and an increase in psychological well-being (Study 7) may help prisoners to engage in self-acceptance, to act in responsibility for social commitments, and those which sustain social ties. In this context, it can be assumed that meditation may support prisoners in re-establishing and nurturing routine social activities (see Laub & Sampson 2009).

Another benefit can be derived from mindfulness (Study 2), mood-stability (Study 3), and increased consciousness (Study 8). Such qualities may help ex-offenders to break free from destructive thought-patterns and negative life narratives. Further, such abilities can help to develop a sense of deferred gratification through commitment within a social group, and to trust in one's ability to change and to develop. In particular, later concepts in the desistance theory (for instance Maruna 2007; Uggen 2000) have supported the notion of human agency.

Particularly in prison populations, contact to friends and family members may be limited. Study 2 was conducted with inmates in a high-security institution. Many participants were sentenced to long-term – partly even life sentences. As Farrall and Calverly (2005) noted, a trustful friend may encourage possibility for change. The presence of mindfulness and self-esteem may enable additional self-support from which an individual can draw if encouraging help is absent.

As some intervention reports mentioned, extended time-frames and sufficient research funds would permit long-term research that, in turn, would enable more thorough and precise documentation about the potential connections between the practice of meditation and desistance.

5.4 Conclusion

This paper aimed to accomplish several things at once, without doing complete justice to the complexity of each of the examined tasks.

This paper provided a body of theories on crime desistance of which some pointed out that desistance is a process, rather than a single event. It was further stressed that there may be a need for more efficient rehabilitative interventions, such as the practice of meditation.

The analysis of intervention outcomes has shown some results that can be observed as benefits for the prison population. Lastly, there is evidence that meditation may not directly encourage desistance from crime, for the practice of all mentioned techniques cannot create desistance.

Nevertheless, I arrived at the conclusion that meditation practice can serve as an additional tool to existing therapy approaches.

The practice of meditation may help prisoners to develop and sustain pro-social values that are supportive on the desistance path. Some links between the theory of desistance from crime and the reviewed treatment outcomes were established. It was particularly the case for those researchers who have placed an emphasis on outcome measures related to human agency. In regards to the research in prison populations, it was noticeable that some interventions did not proceed as they would have had in general populations, for instance in a public community setting. As outlined in the limitation section, there are numerous reasons why research in correctional settings differs tremendously from general environments.

Nevertheless, those prisoners, who participated in any of the above meditation courses, may have gained experiences which were not measurable. Assumingly, some of the intervention outcomes may reveal at a later stage in life, in particular if the practice of meditation is continuous. Meditation interventions cannot be regarded as rehabilitation intervention that focusses on desistance from crime.

Overall, the analysis of the reviewed literature has shown that meditation projects in prison populations may not reasonably address desistance; nonetheless, participants can benefit from the effects of mindfulness and other pro-social qualities.

The presented theories on desistance from crime provided crucial incentives on how meditation courses for prisoners may encourage individuals to break with criminogenic behaviour. In turn, through practice of meditation, ex-convicts can benefit from effects that strengthen interpersonal connections to fellow inmates, relatives, members of the public and prison staff. Through the experience of change in behaviour and personal narratives behind bars, the resettlement processes for ex-prisoners can be sustained. That is also because determination, persistence (in meditation practice), patience and exposure to new mindfulness skills can strengthen those ex-convicts. Lastly, it will be helpful for those who will have to face the chaos and temptations of the world beyond prison walls.

All of the reviewed meditation techniques are not meant to produce desistance. However, their techniques enable individuals from within and beyond prison to get in touch with their own and others' humanness. Notwithstanding, this paper implies that mediation in prison populations cannot deliver predictive factors for people to desist in offending. However, the achievements through meditation practice may show ex-offenders that positive change is possible. For some, this experience may be the first step on the pathway toward desistance.

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Annex

Table 1. Summary of selected studies.

Study and location	type, range, session	Population sex, age (<i>M</i>), incarceration	Participant <i>n</i> and Attrition rate	Purpose	Study design, Data analysis	Applied measure and their survey tools	Outcome	LIM/ CMT
VIPASSANA MEDITATION								
1) Bowen, et al., 2006, <i>Mindfulness Meditation and Substance Use in an Incarcerated Population</i> . USA	VM 10 days 11 hrs	mal: 79.2% fem: 20.8%, age: 37.48 minimum-security prison; n/a	EXP: 63, AR: high CTL: 242, AR: high	short-term effect of VM on reducing postincarceration substance use and psychosocial outcomes	EXP: practiced complete 10-day VM course CTL: Treatment as usual. Attended education and addiction programmes.	BASE; PTA, 3-month FU, and 6-month FU: Daily Drinking Quest; Daily Drug-Taking Quest; Short INVT of Problems ; Drinking-Related Locus of Control SA; Life Orientation Test	EXP: DEC alcohol/substance use on release. DEC alcohol-related problems. DEC psychiatric symptoms. INC psychosocial outcomes. CTL: less significant findings of above results. HYP confirmed.	LIM: no randomisation; CMT: \$\$\$
2) Perelman, et al., 2012, <i>Meditation in a Deep South Prison: A Longitudinal Study of the Effects of Vipassana</i> USA	VM 10 days 11 hrs	mal; 35.4; high security prison, long-term offenders	EXP: 60, AR: high CTL: 67, AR: high	effect of meditation on psychology and behaviour. BASE: mindfulness, anger, emotional intelligence, mood state; PTA:	EXP: practiced complete 10-day VM course CTL: attended stress-management and coping seminar	BASE; Pretest and PTA: Cognitive Affective Mindfulness SA-REV; Novaco Anger INVT SF; Profile of Mood States SF; Trait Meta-Mood SA; PTA additional: Posttreat Impressions	EXP: Sig INC mindfulness, emotional intelligence, Sig DEC mood-disturbance, rule infraction CTL: less Sig INC mindfulness, emotional intelligence DEC rule infraction HYP confirmed.	LIM: max group size 35 due to prison rules. CMT: high AR due to loss of contact on release; \$\$\$

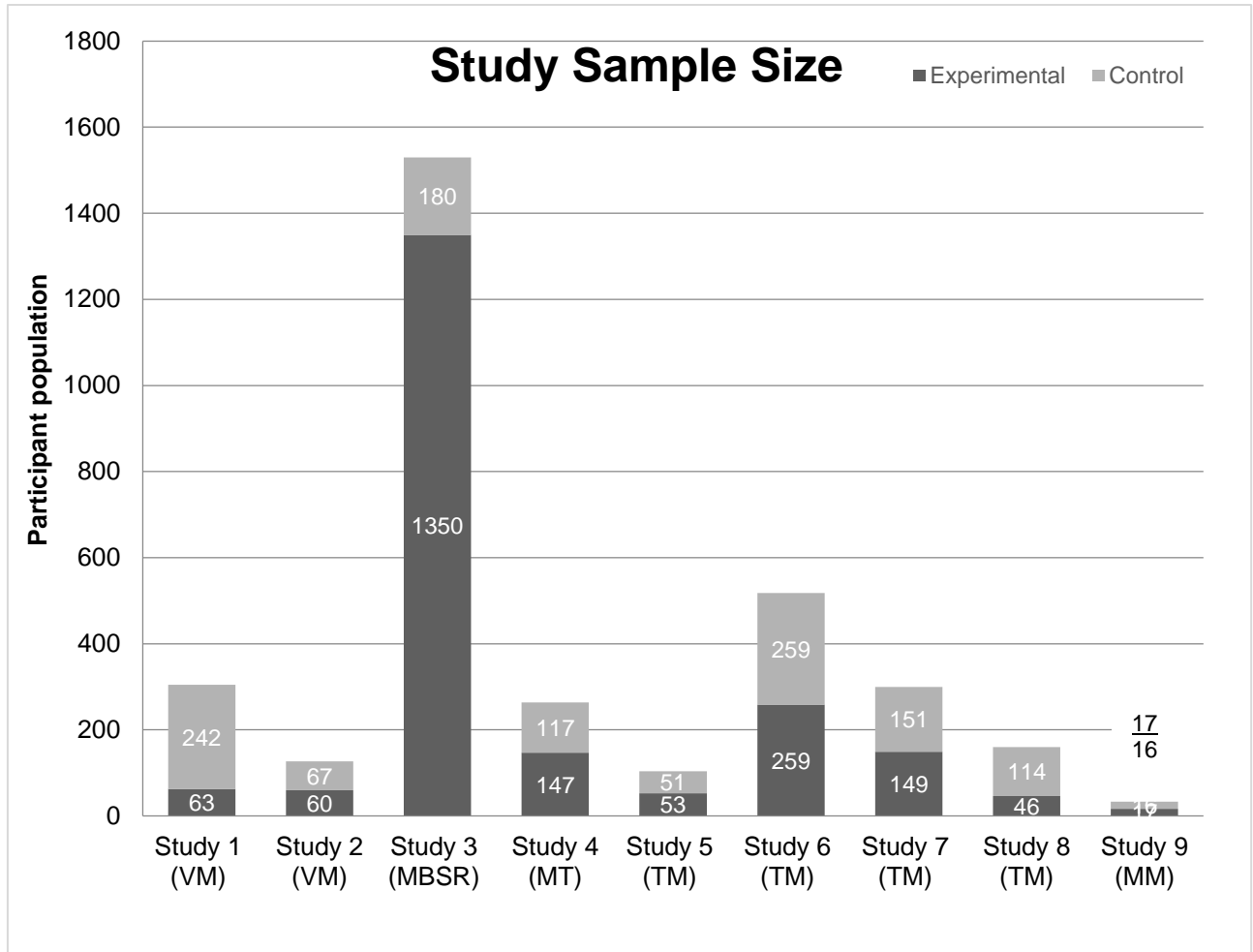
Study and location	type, range, session	Population sex, age (<i>M</i>), incarceration	Participant <i>n</i> and Attrition rate	Purpose	Study design, Data analysis	Applied measure and their survey tools	Outcome	LIM/ CMT
MINDFULNESS-BASED STRESS REDUCTION								
3) Samuelson et al., 2007. <i>Mindfulness-Based Stress Reduction in Massachusetts Correctional Facilities.</i> USA	MBSR 6-8 WKS 1.5hrs per WK	mal and fem; n/a; minimum-security and maximum-security	EXP: 1350 AR: n/a Quasi CTL: 180 AR: n/a	Effect of MBSR on hostility, self-esteem, mood disturbance.	EXP: MBSR in group sessions. Voluntary attendance. CTL: quasi-CTL: waitlisted. Followed usual prison routine.	BASE; Pretest and PTA: Cook and Medley Hostility SA; Rosenberg Self-Esteem SA; Profile on Mood States	EXP: Sig DEC hostility and mood-disturbances; Sig INC self-esteem. CTL: Sig DEC hostility and mood-disturbance. No Sig INC self-esteem. Overall: fem improved more significant than mal. Mal in medium-security improved more than mal in max. security. HYP confirmed	LIM: Quasi control group. No attendance record CMT: prison regulations interfered research
4) Leonard, et al, 2013, <i>Mindfulness training improves attentional task performance in incarcerated youth: a group randomized controlled intervention trial.</i> USA	MT 3-5WKS 75 min	mal; 17.4; high security prison; n/a	EXP: 147, AR: n/a CTL: 117, AR: n/a	effect of mindfulness training on attentional task performance	EXP: practiced formal meditation and cognitive behavioural exercises. CTL: practiced cognitive-perception intervention	BASE. Pretest and PTA: Alerting, orienting, conflict monitoring, overall performance of above tasks.	EXP and CTL: DEC attentional tasks due to incarceration stress. EXP: less degradation attentional performance Higher accuracy and lower response variability CTL: higher degradation attentional performance; Lesser accuracy and higher response variability	LIM: group size, duration due to prison rules. CMT: \$\$\$

Study and location	type, range, session	Population sex, age (M), incarceration	Participant <i>n</i> and Attrition rate	Purpose	Study design, Data analysis	Applied measure and their survey tools	Outcome	LIM/ CMT
TRANSCENDENTAL MEDITATION								
5) Abrams and Siegel, 1978. <i>The Transcendental Meditation® Program and Rehabilitation At Folsom State Prison A Cross-Validation Study.</i> USA	TM 12 WKS n/a	mal; n/a, maximum and medium security	EXP1: 30 AR: 5 CTL1: 25 AR: 11 EXP2: 23 AR: 7 CTL2: 26 AR: 3	eligibility of TM in maximum-security prison. Effects of TM on anxiety, hostility, behaviour, psychosomatic	EXP: regular meditation meetings under guidance of teacher. CTL: quasi-CTL, since they were waitlisted for TM. Followed prison routine as usual.	BASE; immediate pretest and PTA 12 WKS: State Trait INVT; Buss-Durke Hostility INVT; Eysenck Personality INVT; blood pressure, sleep/smoking survey	EXP 1 and 2: DEC anxiety, neuroticism, hostility, insomnia patterns CTL 1 and 2: DEC of above, but less significant. HYP confirmed.	LIM: quasi-experimental. Smoking Survey was lost.
6) Bleick and Abrams, 1987, <i>The Transcendental Meditation program and criminal recidivism in California.</i> USA	TM 12WKS, n/a	mal; n/a; high and medium security;	EXP: 259, AR: high CTL: 259, AR: high	effects of TM on reducing recidivism	EXP: practiced TM in voluntary group sessions CTL: did not practice any meditation, usual prison routine	BASE: age, criminal record, education, IQ, substance use, military record, psychotherapy attendance. FU (1-6 years): criminal record on release, updated records, poss. reduction prison terms, mult. regression on recidivism data	EXP: compared to statewide parolee data: DEC recidivism; compared to CTL: DEC in recidivism HYP confirmed	LIM: lost dataset AR high due to prison conditions /release
7) Hawkins, et al., 2003, <i>Consciousness-Based rehabilitation of inmates in the Netherlands Antilles: Psychosocial and cognitive changes.</i> Netherland Antilles	TM 9 mo 1.5 hrs AVGE/WK	mal; 28.2; minimum and maximum security; n/a	EXP: 149, AR: high CTL: 151, AR: high	effects of TM psychosocial, cognitive risk factors for crim. behaviour.	EXP: practiced TM in voluntary group sessions CTL: did not practice TM , usual prison routine	BASE; Pretest and PTA: 21 dependent variables	EXP: INC psychological well-being. CTL: neglected HYP confirmed	LIM: FU n/a due to high AR and cancellati on

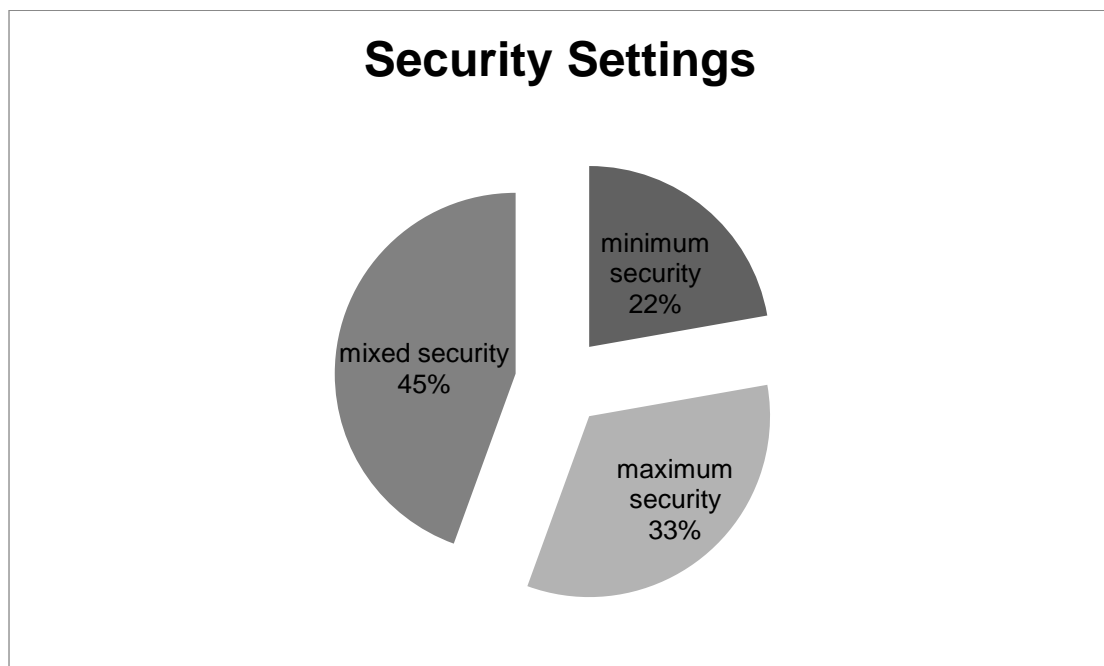
Study and location	type, range, session	Population sex, age (<i>M</i>), incarceration	Participant <i>n</i> and Attrition rate	Purpose	Study design, Data analysis	Applied measure and their survey tools	Outcome	LIM/ CMT
8) Alexander, Walton and Goodman, 2003. <i>Walpole study of the Transcendental Meditation program in maximum security prisoners I: cross-sectional differences in development and psychopathology</i> . USA	TM 20 mo 40 min daily	mal; n/a maximum security;	EXP: 46, AR: 24% CTL: 114, AR: 42.75%	effects of TM on self-development, psychopathology	EXP: TM on their own or in groups; voluntary attendance. CTL: attended courses on alcoholism, counselling, religion, education, drug abuse, and criminal policy discussion	BASE: age, ethnicity, religious affiliation, prison sentence, criminal offenses; FU: 14 tests scales on development, consciousness and psychopathy	EXP Sig improved psychopathological, consciousness, development measures. CTL less Sig improvements of above. HYP confirmed.	LIM: No randomisation CMT: blinding CTL AR calculated as <i>M</i> of all results.; \$\$\$
MIXED METHOD								
9) Sumter, Monk-Turner, Turner, 2009, <i>The Benefits of Meditation Practice in the Correctional Setting</i> USA	MM 7 WKS 2 ½ hrs	fem; n/a; detention centre; non-violent offenders	EXP:17, AR: n/a CTL:16, AR: n/a	effect of meditation on medical symptoms, emotions, behaviour	EXP: practiced meditation; group discussion CTL: no treatment; continued usual routine, PTA	BASE; Pretest and PTA: Altered version of Borysenko, 2014 (1987)	EXP: temp. DEC harmful emotions, destructive behaviour, medical difficulties. CTL: temporary INC harmful emotions, destructive behaviour, medical difficulties. HYP confirmed.	LIM: Ques may be unscientific. CMT: CTL retreat conditions questionable

Abbreviations: AR = attrition rate; AVGE = average; BASE = baseline measure; CBT = cognitive behavioural therapy; CMT = comments; CTL = control group, DCR = decrease; EXP = experimental group; fem = female; FU = follow-up analysis; hrs = hours; HYP = hypothesis; INC = increase; INVT = inventory; LIM = limitations; *M* = median; mal = male; MBSR = Mindfulness Based Stress Reduction; MM = Mixed method meditation; mo = months; n/a = not available or retrievable; PTA = post-test analysis; Quest = questionnaire; RDN = reduction; REV = revised; SA = scale; SF = short form; Sig = significant; TM = Transcendental Meditation; VM = Vipassana meditation; WK/WKS = week/s; \$\$\$ = participation paid.

Graph 1. Sample size of selected studies.



Graph 2. Prison security settings for selected studies².



² *Mixed security* for this data collection means that meditation interventions were offered for inmates from several security settings within one institution.