IO1 - CONCEPTUALISATION AND METHODOLOGICAL SUPPORT

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Status: Final Version
Date: 03/05/2021

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Introduction

The current intellectual output presents a literature review on prison staff stress and its management, with a focus on leadership. Scientific literature on prison staff stress and stress management asserts that prions are stressful working places with complex challenges for staff, namely the balance between control/safety and care/rehabilitation, while dealing with the potential to be harmed (Fraser, 2014). Therefore, occupational stress has gathered the attention of both researchers and practitioners, which resulted in the proliferation of scientific papers in the field of job stress and intervention programmes that address stress management and aim at reducing its negative impact.

The current report is organised in three chapters. Chapter I presents a state of the art analysis in which current empirical studies in the field of prison staff job stress are reviewed; Chapter II reviews a collection of approaches, lessons learned and practices in the field, analysing programmes and interventions that were/are being implemented in the different partner countries; and Chapter III presents a methodological framework that combines the stress and leadership literature and practices, providing the needed steps for the following project outputs to be implemented.

1. Chapter I - State of the art analysis

1.1. Stress and job stress: definition and theoretical developments

In general, stress can be defined as "physiological and/or psychological arousal that occurs when an individual perceives a threat to something of value to them and that threat taxes or exhausts the resources they have available to confront it" (Harms et al., 2017, p. 179).

Despite the idea that stress represents a negative experience, with adverse consequences for both physical, psychological and social health, research has shown that a certain level of stress can be beneficial to appropriately face environmental demands. This is an important aspect when we think about work stress, considering that employees will be facing certain levels of stress (related with the job demands) that do not necessarily leave them in exhaustion and can be beneficial for optimal performance. However, when employees lack resources to face job demands, "bad" stress (i.e., distress) happens as well as its consequences (Ardid & Zarco, 2001).

Focusing on stress in organisational contexts, several definitions can be found in the literature for work/job/occupational stress, namely:

- The National Institute for Occupational Safety and Health (NIOSH) defines stress as "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker";
- "Job stress comes from the nature of the task itself (e.g. complexity, difficulty level) and the conditions the individual is operating under (e.g. time pressure, working conditions)" (Harms et al., 2017, p. 179);

Following the definitions that were presented, the next section will review theoretical developments on job stress literature.

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Contemporary theories of job stress

Current definitions of job stress are influenced by the transactional model of stress and coping – developed by Lazarus and Folkman in 1984 – which considers that an individual will experience stress in a situation in which individual resources do not match nor exceed environmental demands (Ardid & Zarco, 2001). That is, when facing a (potentially) stressful event, the psycho-physiological reactions that may happen will be mediated by the cognitive appraisal and the coping strategies one has/employs (Goh et al., 2010).

A revised **transactional model of stress and coping** was developed by Goh et al. (2010) and empirically compared with the original model. The original transaction model by Lazarus and Folkman considers the following three paths:

1) From primary appraisal (initial appraisal of a stressful event as being benign, challenging and threatening) to secondary appraisal (cognitive appraisal regarding what one can do about the stressful event – evaluation of coping resources);

2) From the secondary appraisal to the coping strategies (initiation of coping strategies);

3) From the coping strategies to the psycho-physiological reactions to the stressful experience.

The revised model considers the following six paths:

1) From primary appraisal to secondary appraisal;

2) A direct path from primary appraisal to stress (at time 1) – meaning that the first cognitive appraisal will immediately affect occupational stress levels;

3) From secondary appraisal to stress (at time 1);

4) From stress (at time 1) to the employment of coping strategies – that is, coping strategies are triggered by the increase in occupational stress levels;

5) From the use of coping strategies to stress (at time 2);

6) A direct path from stress (at time 1) to stress (at time 2) – since individuals experience stress arousals across time, the stress experienced at time 1 will predict the levels experienced at time 2.

Empirically, comparing the two models with a sample of 156 participants, the authors found that the revised model provides a better fit. Therefore, the authors argue that a first psycho-physiological stage of stress happens even before one implements coping strategies.

Other contemporary theories of work stress include the demand-control model, effort-reward imbalance and the job demands-resource model (Bakker & Demerouti, 2007; Cox & Griffiths, 2010).

The **demand-control model** considers the balance between the control one has over its job (low vs high job control) and the job demands as a predictor of job strain. The interaction between job demand and job control allows the creation of the following four quadrants (Cox & Griffiths, 2010):

- High strain jobs: these jobs are marked by low control while facing high demands and therefore put employees at a higher risk level;

- Active jobs: these occupations present both high demands and high control, therefore professionals are expected to display average levels of job strain;

- Low strain jobs: characterised by a combination of low demands and high control, a below average stress level is expected as a result of this combination;

- Passive jobs: when employees face low demands and have low control over their jobs. Considering the lack of motivation this may raise, average levels of job strain are expected.

Trying to broaden the scope of this theory, a third factor to be considered was introduced, resulting in the demand-control-support theory, or Iso-Strain model, therefore considering the potential moderator/mediator effect that social support has on health outcomes. This reformulation considers that a high strain job will be characterised by high demands, low control, and low social support. Therefore, high social support is expected to decrease job strain levels, while the lack of social support worsens the situation.

Another theory of job stress is the **effort-reward imbalance**. This model sees job strain as a result of the imbalance between effort (encompasses extrinsic job demands and employees´ intrinsic motivation to meet those demands) and rewards (this includes salary, esteem reward and status control). Therefore, the effort-reward concept is based on the psychological contract and norms of social reciprocity literature, meaning that effort is spent based on an expectation of gains in the form of money, esteem or career opportunities, among others. Therefore, situations marked by high costs for the employee (such as high job demands) and low gain (such as a non-competitive salary) may be associated with stress responses (Cox & Griffiths, 2010).

The previously mentioned theories set the ground to the success of the **job demands-resources** theory that was presented back in 2011, expanding the scope of the demand-control and effort-reward models (Schaufeli & Taris, 2014). Aiming at providing a theory that can be applied to any job position, Demerouti et al. (2001) developed the job demands-resources model. Considering the limitations identified in the demands-control and effort-reward models, this new model assumes that every occupation has its own set of demands and resources, initially considered as risk factors that can be related with job stress. However, the current model considers both positive and negative organisational outcomes. More specifically, the authors postulate that besides the interaction between demands and resources, both led to separated psychological

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processes. Job demands can lead to burnout and negative outcomes (such as absenteeism) in the health impairment process as the authors call it. On the other hand, job resources led to engagement, producing positive outcomes (such as increased productivity) in the motivational process (Bakker & Demerouti, 2007; Schaufeli & Taris, 2014). Empirical research has provided evidence for the dual processes triggered by demands and resources and also for a buffer effect of job resources. The later means that an increase in resources will prevent burnout (additionally to the already mentioned positive impact on engagement) (Schaufeli, 2017). These findings are extremely important in order to be able to prepare successful interventions. As said before, job demands may increase employees stress levels which can be beneficial to a certain point. Moreover, some job demands may be difficult to eliminate in certain occupations (such as risk and hazards, emotional dissonance and work pressure in the case of prison staff). Therefore, increasing job resources may be a strategy to attenuate the impact of job demands. Schaufeli and Taris (2014) have listed several job resources, including social support from colleagues and supervisor, skill utilisation, autonomy, goal clarity, job challenge, professional development opportunities, procedural fairness and leadership.

Sources of job stress

Multiple sources of job stress (from diverse theoretical backgrounds) have been identified and organised in different groups, such as (Ardid & Zarco, 2001; Camara et al., 2013; Guez & Delhommeau, 2009):

(1) physical environment – includes, among others, working conditions and factors such as temperature, noise, toxicity, vibration, lighting, hygiene, ergonomics;

(2) individual – such as the absence of career plans, work overload, role conflict and ambiguity, interpersonal relations related to the tasks;

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(3) group/relational/psychosocial - such as lack of group cohesion, inadequate group climate, lack of communication, lack of social support;

(4) organisational – organisational structure, organisational climate, job design (autonomy, feedback, monotony, repetition), new technologies; and

(5) extra-organisational – work-family conflict, family crisis, parental/marital roles, grieving, stressors from other activities (legal problems, substance use, financial problems, etc).

Additional sources of job stress can also be considered such as the ones related with time, that is, shift work, changes in time zone, and urgent tasks or tasks with very short deadlines (Camara et al., 2013).

Job stress and prison staff: previous literature reviews

Prison presents several stressors that put those working in this environment at a higher risk of experiencing stress. Two decades already passed since Schaufeli and Peeters (2000) identified ten psychosocial risk factors related to stress reactions in correctional officers literature:

1) High workload;

2) Lack of autonomy;

3) Underutilisation of knowledge and skills;

4) Lack of variety;

5) Role problems;

6) Demanding social contacts;

7) Uncertainty;

8) Health and safety risks;

9) Inadequate pay;

10) Poor social status.

For the current report, authors started by reviewing more recent work (systematic reviews and meta-analysis) published on the topic of stress and prison staff. The following papers were found:

1) Dowden and Tellier (2004) aimed at predicting work-related stress in correctional officers. The authors found that negative work attitudes (turnover intention), specific role problems (perceived dangerousness of the job), and a professional punitive orientation predicted higher levels of job stress. In turn, positive work attitudes (participation in decision-making, being satisfied with the job, and being committed) and a human-oriented professional orientation were found to be predictors of low levels of job stress.

2) Finney, Stergiopoulos, Hensel, Bonato, and Dewa (2013) systematically reviewed 8 papers and found that stressors related with organisational structure and climate were the ones who predicted correctional officers' job stress more consistently. Therefore, "unclear goals and policies, lack of decision making ability, lack of support from the organisation and lack of organisational justice" (p.10) appear to be related with higher levels of job stress.

3) In their analysis of 40 papers published between 2000 and 2014, Bezerra, de Assis, and Constantino (2016), provide valuable information regarding the instruments used to measure work stress, as well as life stress and psychological distress. Authors also explored risk, protective factors and coping strategies. Themes usually explored in staff stress studies such as "work satisfaction, social support, psychosocial risks,

organisational commitment, psychological well-being, and violence" (p. 2143) were recognised. Also, identified risk/protective factors like "overwork, lack of material and human resources, degree of contact and perceptions about the prisoners, overcrowding, perceptions of fear or danger, the paradox of punishment/re-education, and the stress of shift changes" (p. 2143) were identified.

4) Butler, Tasca, Zhang, and Carpenter (2019), when reviewing 172 articles published between 1980 and 2017, found that female correctional officers tend to report higher levels of job stress that male officers, that stress is higher in correctional officers with more years of experience on the job, and that support from both supervisors and peers decreases levels of job stress.

1.2. Leadership: contemporary theories

Leadership is of vital importance for organisations and groups functioning. Current leadership theories focus on leaders' behaviour, more than on personality characteristics, and can therefore be considered behavioural theories (Sánchez, 2001).

Situational Leadership Theory

The situational leadership theory originally considers that an optimal leadership (achieved by a combination of relationship-focus and leader task-focus) can be applied to subordinates with different maturity (i.e., commitment and competence) levels (Thompson & Vecchio, 2009). The combination between a more directive behaviour (i.e., with a stronger focus on tasks) and a more supportive behaviour (i.e., with a stronger focus on relationships) creates four leadership styles (Blanchard et al., 1993; Sánchez, 2001):

1) Directing (high directive – low supportive): the leader gives specific instructions and closely supervises the development of the tasks;

2) Coaching (high directive – high supportive): the leader applies a combination of directive and supportive behaviours to promote skills, motivation and confidence of followers;

3) Supporting (low directive – high supportive): the leader shares and dialogues with the subordinates in order to conjoint consensual decisions;

4) Delegating (low directive – low supportive): the leader delegates on the subordinate decisions regarding the needed behaviours to ensure the occupation/function and organisation goals are achieved.

Transformational Leadership

Transformational leadership has been usually presented following a differentiation with transactional leadership. The latter refers to the daily/routinely interactions such as assigning tasks, taking decisions or evaluating employees performance, while transformational leadership is related with leadership skills that allow leaders to recognise the need to change, plan it and execute needed changes effectively (Sánchez, 2001).

According to Bass (1999), "Transformational leadership refers to the leader moving the follower beyond immediate self-interests" (p. 11), considering the following mechanisms:

- Idealised influence /inspirational leadership: achieved when the leader envisions a desirable future (and how to reach it), setting an example to be followed and performance standards, while showing determination and confidence;

- Intellectual stimulation: the leader helps followers increasing their creativity and innovation;

- Individualised consideration: as the name implies, through this mechanism the leader considers the idiosyncratic nature of followers, coaching their development (because they understand their development needs) and providing growth opportunities.

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Leader-Member Exchange (LMX)

While theories of leadership usually consider a configuration where a leader has several followers/subordinates, studying the leader/subordinates behaviour and traits, the leader-member exchange theory focuses on the quality of a dyadic working relationship between the leader and a specific member of the unit, team, department, or organisation as the main determinant of organisational outcomes (Breukelen et al., 2006).

LMX theory can be considered a transactional leadership theory since both the leader and subordinate have an active role in an ongoing process of mutual influence, meaning that not only the leader but both the leader and subordinate contribute the exchange, being interdependent (Breukelen et al., 2006). The increase in LMX theory popularity can be seen in several publications on the topic. A recent meta-analysis, including 195 publications, focused on the relationship between LMX quality and work performance. Conclusions were that LMX predicts task performance, objective task performance, and citizenship performance, being negatively associated with counterproductive performance (Martin et al., 2016).

Abusive Supervision

The concept of abusive supervision was introduced by Tepper (2000), that defined it as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviours, excluding physical contact" (p. 178). In his study, the cited author found that higher levels of abusive supervision were related to greater psychological distress. Other consequences of abusive supervision include greater Work-Family Conflict (WFC), withdraw from the organisation and compromised well-being (Tepper, 2000; Tepper et al., 2017).

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On a recent meta-analytic study Mackey, Frieder, Brees, and Martinko (2017) found that abusive supervision is strongly positively associated with authoritarian leadership and negatively related to ethical leadership and leader member-exchange. Moreover, a moderate to strong (negative) association was found between abusive supervision and dimension of organisational justice, meaning that abusive supervision may be related to perceptions of unfair treatment.

The antecedents of abusive supervision have also been explored more recently. Tepper, Simon, and Park (2017) present three mechanisms to explain abusive supervision:

1) Social learning: according to a social learning view of abusive supervision, leaders will engage in abusive supervision because they learned to do so, with role models they identify with such as family members, upper management in the organisation they work or even through organisational norms and country culture;

2) Identity threat: leaders appear to be more likely to engage in abusive supervision when they feel threatened by their subordinates' (provocative) behaviour, when they are threatened from hierarchical superiors (and therefore use subordinates as safe targets to express their frustration) and when they display some characteristics such as psychological entitlement[1] and Machiavellianism; and

3) Self-regulation impairment: supervisors are more abusive when they face time-based work stress, exceedingly difficult goals, need to display emotions that are inconsistent with the ones they felt and behave ethically (both acts that drain self-resources), have poor sleep quality, and conflict between work and family.

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[1] Defined as "a stable and pervasive sense that one deserves more and is entitled to more than others" (Campbell et al., 2004, p. 31).

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1.3. Stress and Leadership: theoretical links

Leaders' behaviour and leadership have been considered as an important job resource (Schaufeli & Taris, 2014). As mentioned by Peiró and Rodríguez (2008) good leaders have the potential to increase employees well-being, through the improvement of the working environment, the organisation of work and the social context, considering employees unique characteristic. However, the same employees with formal leadership roles can have a negative impact on organisations, increasing employees stress by excessive workload and role ambiguity, as well as discretionary practices in terms of performance assessment, recognition and rewards (Peiró & Rodríguez, 2008).

In challenging work environments, it is expected that autocratic leadership behaviours are outdated and therefore not consonant with employees needs and expectations. Thus, transformational leadership, characterised by "idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration" (Bass & Avolio, 1993, p. 112) was conceptualised and has been studied since it appears to generate new/or to improve existing resources that leverage followers' well-being (Peiró & Rodríguez, 2008).

1.4. Systematic Literature Review

Method

A systematic literature search was performed in two scientific databases (SCOPUS and WebOfScience) in order to develop this state of the art report. Using relevant keywords for the topic (chosen by the research team after an exploratory search stage – scoping study), 66 papers were retrieved from the databases, of which 34 are included in this intellectual output (after analysis of title and abstract and application of inclusion/exclusion criteria). Only papers

published in 2015 and after were considered. However, due to the lack of research linking leadership and prison staff job stress, other references were further included (e.g., Atkin-Plunk & Armstrong, 2013; Diebig et al., 2017). In annexe I, the authors present a flow diagram deciphering the steps undertaken to reach the final sample of papers included in the review.

Results

Studies were organised based on three criteria: (1) the sample population, namely if the studies considered prison officers or other prison staff; (2) the underlying job stress theoretical model – when mentioned by the authors; and (3) themes that emerged from the qualitative analysis of the papers. Additionally, a subsection focusing on the consequents of job stress in prison staff was developed. Considering the relevance of leadership for the present work, a subsection is devoted to an analysis of the leadership-stress link.

Studies with prison wardens

Schiff and Leip (2019) studied 313 prison wardens in the U.S. and found that both conflicting job expectations and unmanageable workload were positively related to work-related stress levels. Job autonomy was negatively related to work-related stress. Size of the institution was positively related to work-related stress levels of prison wardens.

Studies with prison officers

In their analysis of 1,802 prison officers from 45 prisons across Ohio and Kentucky, Steiner and Wooldredge (2015) examined the applicability of **the job demand-control (-support) model** of stress and found that experiencing victimisation and greater job demands were related to higher levels of perceived stress while perceived control over inmates and support from co-workers and supervisors were associated with less stress. Facility violence was linked to higher levels of officer stress across prisons. Exploring the demand-control model of job stress with a sample of

171 prison staff workers in Iran, Akbari, Akbari, Shakerian, and Mahaki (2017) found that higher levels of job stress were reported by lieutenants, followed by security officers and rehabilitation professionals.

Job demands such as emotional demands appear to be related with burnout of correctional officers (Shepherd et al., 2019) which, in turn, is positively associated with negative outcomes such as officers drinking behaviour. In a study in Colombia with 219 correctional officers, alcohol consumption was also studied, and negative correlations were found with burnout dimensions (professional efficacy, emotional exhaustion and cynicism) and psychological disturbance. Negative correlations were also found between emotional exhaustion/cynicism and frequency of physical exercise, meaning that the higher the burnout levels, the lower the frequency of physical exercise (Useche et al., 2019).

Exploring the **job demands-resources model** of work stress with a representative sample of prison officers in South Korea, Cho et al. (2020) found that while job demands directly influence burnout, job resources (lack of resources such as social support) has an indirect relationship with burnout through basic psychological needs. This means that the lack of resources hinders the satisfaction of basic psychological needs (such as autonomy and competence), which can lead to burnout of prison officers. Exploring the same model with 1474 officers in the UK, Kinman, Clements, and Hart (2017) found that workload, intensity and working hours (job demands) had powerful negative effects on mental health status (worsening officers mental health).

On the resources side, positive working relationships and role clarity appear as protective factors for officers' mental health. Job resources such as input into decision-making and the quality of supervision had a (negative) significant impact on job stress, meaning that job stress will decrease in the presence of perceived quality supervision and involvement into decision-

making. On the other hand, job demands - namely work overload and fear of victimisation - were also significant predictors of job stress (Lambert et al., 2020).

Role clarity, instrumental communication and training views (all considered job resources) showed no significant relation with job stress (Lambert et al., 2020), With a sample of 501 correctional officers working in Texas, Lambert, Worley, and Worley (2018) found that job demands, namely the fear of workplace victimisation, role strain, and boundary violations (i.e., the perception that a professional relationship with a client is being violated), were significant predictor of work stress. On the other hand, studied job resources, namely if staff sees inmates as manageable and supervisory support had a significant negative impact on job stress. However, some job resources also contributed to increasing job stress, namely following prison rules (i.e., obeying organisational policies and regulations) and viewing inmates as amiable.

In Nigeria Otu, Lambert and Elechi (2018) explored the demands-resource model with a sample of 120 Nigerian prison staff. Perceived dangerous of the job, followed by role overload were significant predictors of job stress. On other resources side, support from supervision was related to low levels of perceived job stress. However, instrumental communication and job variety showed no significant relationship with job stress.

Role ambiguity was associated with stress, meaning that the higher the ambiguity the higher the reported stress levels. However, this relation was only significant for female jail officers (Paoline et al., 2015). On the other hand, role conflict appears to increase job stress but only for male jail staff (Paoline et al., 2015).

Despite a general theoretical and empirical relation between higher job resources and low job stress, job resources such as job autonomy showed no relation with job stress in some research (Jin et al., 2018; Otu et al., 2018).

With a focus on the **effort-reward imbalance** model, a study with 2185 prison officers from a north-east China province, gathered some evidence regarding the effect of high efforts and high rewards on job burnout dimension. Namely, officers with high job effort showed 5.56-fold higher emotional exhaustion and 3.05-fold higher cynicism than staff with low job effort; On the other hand, in the presence of high rewards, prison staff professional efficacy appears to be increased (Hu et al., 2015).

Emerging themes

Considering the prison officer role, negative job characteristics such as **job dangerousness**, described as "the risk and harm associated with one's immediate work environment" (Jin et al., 2018b, p. 39), can also represent a potential stressor. In fact, a study with 225 prison officers from a province in China found that job dangerousness was the only consistent antecedent of job stress. In a similar fashion, a greater threat of harm was associated with higher levels of stress in both probation/parole officers and residential officers (Mack & Rhineberger-Dunn, 2019).

The dangerousness of the function was also a relevant determinant of job stress in Lambert, Kim, Keena, and Cheeseman's (2017) study, contributing for both male and female officers' levels of job stress. Similar results were found by Paoline et al.'s (2015) research.

Extra-organisational sources of stress such as **work-family conflict** (WFC) were also examined by research, shedding some light on the predictive power of strain-based WFC on job stress of correctional officers (Vickovic & Morrow, 2020). Doing a distinction between strain, time and behaviour WFC, a study with 441 prison officers found that both strain and behaviour dimensions of WFC were significantly related to job stress, meaning that officers' incompatible

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role at work and home (behaviour WFC) and negative impact of job demands on home life quality (strain WFC) increase job stress (Armstrong et al., 2015). Similar results were found in a study with correctional staff in China (Liu et al., 2017). Job related demands and experiences of aggression at work were also positively associated with time, strain, and behaviour-based work-life conflict in a study with 1682 UK prison officers (Kinman et al., 2017b). In turn, in the same study, work-life conflict dimensions, as well as job demands, and experiences of aggression were strong predictors of emotional exhaustion (burnout dimension). The negative impact of work-family conflict on job stress was also observed among probation/parole officers, but not in residential officers, considering the context of community-based corrections (Mack & Rhineberger-Dunn, 2019).

Searching the other side of the coin (family-on-work conflict), authors found no association between this type of WFC and job stress (Liu et al., 2017)

Stress levels of prison officers tend to increase during the work shift, according to Wagenfeld et al.'s (2018) research. The authors also found prison officers tend to favour talking with family and friends, engaging in hobbies and/or recreational activities, exercising, sleeping, and spending time outside as the main coping strategies to deal with work stress.

Aspects of **organisational justice** were also researched on its relationship with job stress (cf. Lambert, Keena, et al., 2019) and work-family strain (cf. May et al., 2020). Both transactional (i.e., interpersonal justice, the feeling about how one is treated by hierarchical superiors) and distributive justice (i.e., the perception that pay, promotion, job evaluation, among other aspects, are fair) showed a negative relation on a study with 322 correctional officers in U.S. (Lambert, Keena, et al., 2019). Higher perceived levels of procedural justice were associated with

significantly lower levels of work-family strain in May et al.'s (2020) paper. However, results are not consistent since other papers report a non-significant relationship between distributive and/or procedural justice with levels of job stress/burnout (Boateng & Hsieh, 2019; Jin et al., 2018a). The interactional component of organisational justice (i.e., level of communication between officers and the organisation) was the only significant organisational justice dimension that predicted job stress (higher levels of interactional justice were related with low levels of job stress).

Input into decision-making has also been studied related to staff stress. Results from a study with staff from community-based corrections showed that less input into decision-making was associated with higher levels of stress than their counterparts (Mack & Rhineberger-Dunn, 2019). A comparable result was found in a study exploring gendered effects in job stress, however input into decision making was only significantly related with job stress (more input – less job stress) in female jail staff (Paoline et al., 2015).

Supervisor support appears to be a protective factor for prison officers, significantly decreasing reported values of job stress (Armstrong et al., 2015; Lambert, Worley, et al., 2018) of both male and female officers (Lambert et al., 2017; Paoline et al., 2015). However, some research findings found no relationship between support from supervision and job stress (Jin et al., 2018b) as well as a non-significant relation between support from manager and co-workers with improved health status among U.K. prison officers (Kinman et al., 2017a).

Increasing job resources such as supportive mentoring and effective socialisation also seems to be protective against burnout in a sample of 117 correctional officer newcomers that had a formal mentor at the institution (Farnese et al., 2017). However, research is not unanimous in

this topic, since co-worker integration showed no relation with job stress in Jin's et al. (2018) study.

Adequate educational **training** can also be a protective factor for staff stress levels, considering that less adequate training was a predictor of community correctional staff higher stress levels (Mack & Rhineberger-Dunn, 2019). In fact, opportunities for professional development are recognised as a valuable job resource (Schaufeli & Taris, 2014).

Other variables were also studied on the sample papers included in this review. *Remuneration*, that can be considered a job demand (cf. Schaufeli & Taris, 2014) showed no effect with both male/female jail staff. The same happened for *instrumental communication* and *job variety* (Paoline et al., 2015).

As a potential extension of the job demands-resources model, not only the job but also **personal resources** can be considered and studied as antecedents of employees' well-being and organisational outcomes. In the current sample of papers, the protective nature of hope (encompassing factors such as goals, pathway, and agency) on job stress was studied with a sample of 133 correctional officers in Taiwan. Law and Guo (2016) found that higher levels of hope were associated with lower levels of job stress. Personality characteristics were also evaluated considering the impact they may have in prison officers' burnout. Neuroticism seems to significantly predict emotional exhaustion (Harizanova et al., 2018; Lovell & Brown, 2017), depersonalisation (Harizanova et al., 2018) and personal accomplishment (Lovell & Brown, 2017), meaning that officers with high neuroticism tend to feel more emotionally exhausted, depersonalised and less personal accomplishment. Psychoticism is also related to higher levels

of burnout (depersonalisation), while extroversion appears to be protective, reducing both emotional exhaustion and depersonalisation (Harizanova et al., 2018).

Job stress in prison staff – consequents

Research has focused not only in the factors that help us understand and explain the job stress of prison staff but also on consequences of stress.

Namely, a study in Taiwan with 676 custody staff employees found that job stress (as well as job dangerousness) has a significant impact on turnover intention (Lai, 2017). Job stress also has a negative correlation with other workplace factors such as job involvement and job satisfaction, being a (negative) predictor of correctional staff's life satisfaction in different contexts such as China and Nigeria (Lambert, Elechi, et al., 2019; Lambert, Jiang, et al., 2018). A very clear relation (established in theoretical models and supported from empirical research) is the one between job stress and burnout. In fact, in the sample of studies we analysed, job stress appears as a strong predictor of job burnout (Jin et al., 2018a).

Leadership and job stress

Leadership and leadership styles have been studied considering their relationship with stress. Considering the prison environment, the relationship between transformational leadership and job stress was explored with 103 prison wardens. Results show that wardens that perceived their leadership skills as transformational reported lower levels of job stress (Atkin-Plunk & Armstrong, 2013).

Due to the lack of published studies in the prison context, our search was broadened to include papers that can give us information regarding this relationship between the variables, although

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the sample/participants were not prison staff. Therefore, a review by Harms et al. (2017) provides a meta-analytic study considering three leadership constructs (transformational, leader-member exchange, and abusive supervision) relationship with stress and burnout. Results from an analysis of 157 independent samples that represent 49,635 employees from 25 different countries showed that "leader stress influences leader behaviour and that leadership behaviours and leader-follower relationships are significant determinants of stress and burnout in subordinates" (Harms et al., 2017, p. 178). Namely, transformational leadership and leader-member exchange were negatively associated with subordinated stress, meaning that they tend to reduce followers stress levels. On the other hand, abusive supervision increases subordinates' level of stress.

On a study in Germany, Diebig, Bormann, and Rowold (2017) explored the relationship between transformational leaders behaviour and followers stress levels on a day-to-day basis. Two hundred twenty-seven employees participated in the study, filling in a survey at the end of each working day during a week. Results show that transformational leadership predicts lower followers' stress levels. Moreover, this relationship is mediated by daily team cooperation, meaning that leaders behaviour impact on followers' stress occurs through team cooperation. In other words, transformational leadership behaviours will increase team cooperation which, in turn, contribute to lower levels of job stress. Transformational leadership was also (negatively) related to role conflict, meaning that higher levels of transformational leadership were associated in this sample with lower levels of role conflict.

In the U.S., Wheeler, Halbesleben, and Whitman (2013) also collected data during a week, and 132 employees reported daily levels of abusive supervision and emotional exhaustion (among other variables). Results show that abusive supervision increases emotional exhaustion. Moreover, there is an indirect (mediated) relationship between abusive supervision and co-

worker abuse (through emotional exhaustion) and this indirect relation is moderated by respondents' psychological entitlement.

Despite the generally positive relation that has been studied between leadership, and particularly transformational leadership and (decreased) job stress, results should be read with cautious, since in some occupations and cultural context, results can vary. As an example, a study in Saudi Arabia found that transformational leadership increased subordinates job stress in employees in the banking industry. Authors of the study argue that a transformational leadership style, while challenging employees' creativity and innovation at work might increase their stress levels (Parveen & Adeinat, 2019).

1.5. Discussion

As the results made clear, much of the research in the field of prison staff was done in the USA and with prison officers. Since our focus was on the last 5 years, it was also clear the prominence of the demand-resources model of job stress.

Despite the several studies that tested the appropriateness of theoretical job stress models, therefore mentioning the role of job demands, resources, rewards, among others, some studies did not explicitly test a theoretical model. Therefore, those studies were aggregated considering common themes that were addressed. Namely, in current job stress research with prison staff, the work-family conflict appears to be a topic that gathers the interest of researchers, with 5 papers contributing to its study, in relation with prison officers job stress. The same happens with aspects of the work environment such as job dangerousness (with 4 studies highlighting its importance) and organisational justice (also with 4 papers exploring its relationship with job stress). Support from different sources was considered by 6 papers, most of which focused on support from supervisors, managers, and peers/co-workers. However, the results were not

unanimous on the protective role of support on job stress. Therefore, it appears that the presence of others can be beneficial to reduce job stress, but not in all circumstances and contexts. Personal resources such as hope and personality characteristics were also studied by three papers.

A consistent finding is related to the consequences of job stress. The reviewed papers highlight the impact that job stress may have on turnover, job satisfaction, job involvement, burnout, and even life satisfaction.

Our results regarding the antecedents of job stress in prison staff can also be framed in a triad of stressors considered in the Corrections Fatigue Process Model (Denhof et al., 2014). In fact, organisational stressors in this model encompass stressors such as role conflict and insufficient education and training, both identified in reviewed papers (Mack & Rhineberger-Dunn, 2019; Paoline et al., 2015); operational stressors include the high workload and low decision authority, also stressors considered in the reviewed studies (Kinman et al., 2017a; Lambert et al., 2020; Schiff & Leip, 2019); and traumatic stressors encompasses (direct or indirect) exposure to violence (Jin et al., 2018b; Lambert et al., 2017). The mentioned model considers that these three occupational stressors lead to corrections fatigue, that is characterised by the interacting components of dysfunctional workplace ideology/behaviour, negative personality changes, and declined health and functioning.

Despite the negative consequences of job stress, theoretical models such as the demands-resources model of job stress reinforce the positive role that increasing job resources may have on both contributing to employees' well-being while attenuating negative outcomes. In this study, considering the goals of LEADCOR project we focused on the impact of leadership on job stress.

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In general, the literature corroborates the idea that strengthening leaderships and favouring transformational leadership and quality leader-member exchanges is helpful in decreasing subordinates/followers stress levels. However, as shown by Parveen and Adeinat (2019) results, transformational leadership should not be used as a panacea to job stress. As mentioned by Bass (1999), it is important to understand the conditions under which intellectual stimulation may have negative consequences, such as when employees are under high stress and therefore this stimulation can result in role overload instead of increasing creativity and innovative behaviours. This is particularly important to be taken into account for LEADCOR project, considering that prison staff report high levels of job stress.

2. Chapter II - Collection of approaches, lessons learned and practices in the field

This section of the report aims at collecting approaches, lessons learned and practices/programmes in the field considering the partner countries as well as other countries for which information may be publicly available. Generic information on this field can be found in World Health Organisation reports such as the Prisons and Health report (cf. Fraser, 2014). Recommendations of the WHO include, among others: setting up health promotion groups and health information centres; implementation of interview surveys regarding staff health status; organise health days; organise stress management seminars; provide healthy food at the workplace; organise sports activities; and provide support to quit smoking. In a previous Prisons and Health WHO report, the author presents an health promotion programme that started to be implemented in German prisons back in 1997 (Bögemann, 2007), which is mentioned as the first programme of this nature in prisons (with the involvement of the WHO).

The WHO recommendations previously mentioned have been applied in the partner countries. For instance, the Portuguese Prison and Probation system reports the setup of a health promotion group (quality circle); providing assistance in health target and service agreements; preparing and carrying out an interview survey for staff about their health status; and the promotion of get-together activities (such as team parties or hiking).

Therefore, acknowledging that prisons are a stressful environment, which brings consequences for the health of those working in prisons carries additional responsibilities for prison governors and, at a national level, for prison administrations. In the next sub-sections, we present current practices/programmes being implemented in partner countries addressing this issue.

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2.1. Belgium

- **IDPB**

The Federal Public Service of Justice has its own department for prevention and protection at work, called the IDPB *(= Dutch abbreviation)*. The IDPB manages all welfare and well-being domains, except health care. The mission of the psychosocial cell of the IDPB is to assist the employer, the members of the hierarchical line and all employees regarding psychosocial risks at work. The tasks of this cell were defined by the law of August 4, 1996 and the codex on well-being at work.

Specifically:

In this context, the confidential counsellors are the point of contact for all employees within the organization. Confidential counsellors offer support and guide employees to find possible solutions when they experience psychosocial unwellness at work, which can manifest itself in a conflict with another employee or in unwanted behaviour at the workplace. It may also concern job content, conditions of employment, working conditions, work organization or professional relationships. If necessary and in a non-formal manner, the confidential counsellors help find a solution.

In addition to the duties determined by law and the tasks of confidential counsellors and intermediary confidential advisers, the prevention counsellors specialized in psychosocial matters have the task of receiving and examining requests for formal psychosocial intervention. They advise the employer and propose appropriate preventive measures.

Harassment as well as violent or unwanted sexual behaviour at the workplace can be reported to the IDPB via a specific register.

- **Staff Service Personnel and Organization**

  o <u>Training programme "Just Leadership"</u>

Target group: this workshop is aimed at the middle management of the FPS Justice. The workshop is therefore intended for all level A staff members of the central administration and of the prisons who lead a team (both functional heads and hierarchical superiors).

The training programme covers the following themes:

1. The 4 roles of the Just Leadership model (leader, manager, coach and entrepreneur)

What skills and qualities are (in particular) required to fulfil each of the 4 roles?

What are the consequences of my profile:

— for my well-being as a leader?

— for the well-being of my team?

— for our performances?

— for our users/clients?

Which of my current qualities/skills can I develop in order to become more "Just Leader"?

2. The 3 values of the Just Leadership model (authenticity, trust and value)

What skills do I need to express the 3 values in my leadership and in my team?

What strategies/methods/means can I use to develop the expression of these 3 values?

o   <u>Team coaching</u>

The Federal Public Service Justice wants to teach teams to work better together in order to increase the satisfaction and motivation of each individual team member. In the long run, this is expected to have a positive effect on the organizational culture, on the performances, on absenteeism and therefore on the image of our FPS.

Team coaching encourages the exchange of ideas between employees and managers. Employees and managers learn to understand each other better and gain insight in each other's needs. Employees are also involved in decisions, which results in greater commitment, more solidarity and more flexibility. They also learn to cope better with change. In addition, team coaching promotes team spirit.

The <u>facilitators</u> play an important role in team coaching. In order to support the managers and their team in the way they work together and to be able to offer these workshops, it is important that we can call upon high-quality facilitators who supervise and facilitate the workshops. Characteristics of this group include:

Collaborators of the central and external services of the Belgian Prison Service

▶ Facilitators can create and maintain an environment in which participants actively participate in the process;

▶ are skilled in the field of participation and interpersonal communication;

▶ know how to guide a group to an end product by means of clear methods and processes.

o   <u>Training centre for prison staff</u>

Training and educational courses offered by the training centre of the Belgian Prison Service.

       o   <u>Non-profit organizations</u>

During a conversation with a prison governor, I understood that each year an initiative can be taken to arrange for on-site training organized by, for example, a non-profit organization such as VZW Zinloos Geweld (meaningless violence). ICOBA is another organization that focusses on aggression control.

2.2.   Germany (Bremen)

Prison Occupational Health Management Measures Evaluation

Since 2019, the Bremen Ministry of Justice is implementing a Prison Occupational Health Management Measures Evaluation.

Implementation of the occupational health procedure: The implementation status of the *BEM* procedures for overcoming incapacity for work, for reintegration into the work process and for prevention varies from country to country. Aims at staff retention.

Ministry-led staff survey which among other things also addressed these questions and focused here on the possible needs. The results are currently being worked on in working groups on various subject areas. The results of the employee survey and the results of the working groups have not yet been published. However, they should serve as instructions for HR managers.

This is the first Bremen Ministry project outline using prospective longitudinal analysis in the context of occupational health case management.

Bremen Prison *Betrieblichen Gesundheitsmanagement (BEM)*/ Occupational Health Management Programme

An ongoing intervention programme that is a "linking" process whereby the three pillars of occupational health management become central to system function and employee role, aiming at reducing absenteeism, but also to the recruitment and selection and retainment of prison staff. This intervention programme targets all staff, with middle management benefitting from additional supervisory training.

The programme ensures that the pillars of occupational health (1. primary prevention such as structural requirements for healthy working, e.g. new shift systems, a good working environment, a corresponding management culture, preventative approaches, etc., secondary prevention and aftercare issues (tertiary prevention).

Then the *BEM* makes sure the link is made between what employees and leaders need, and suitable services that take over the actual support in the sense of an implementation plan.

Programme outcomes: The link between need and implementation is the main outcome.

Other components of health prevention are: team days, team supervision, qualification of the middle management level, etc.

The interface to the official medical assessment in the BEM procedure is also important.

The topic of health and well-being is also a central topic in employee reviews, thus a part of leadership training.

Participants' feedback: positive feedback on appointment and advanced training of occupational health officers, using the case studies of real successes or failures has been well received.

2.3. Romania

SNPP implemented in 2018-2019 the DialLogos project in partnership with the Romanian National Institute for Scientific Research in Labor and Social Protection which aimed to address

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the following issues: measuring workplace pressure (synthetic indicator between resources and requirements), analysing the factors that influence the content of the occupation, the knowledge and skills needed to perform the tasks, the career path in the penitentiary system, as well as a system for monitoring staff flow and deficits. The objectives of the study and implicitly of the sociological survey aimed at, on the one hand, to investigate the balance between the requirements and resources of the workplace, and on the other hand to investigate the influence of workplace pressure on the health and burnout of staff.

DialLogos programme focused on job strain, workplace pressure, burnout, leadership and occupational stress. The programme had the following goals:

1) to measure workplace pressure (synthetic indicator between resources and requirements);

2) to analyse the factors that influence the content of the occupation, the knowledge and skills needed to perform the tasks;

3) the career path in the penitentiary system as well as a system for monitoring staff flow and deficits.

The target group of the intervention was security staff of detention and penitentiary regime, social reintegration staff, medical assistance, economic-administrative activity staff and intervention team.

Main results of the programme:

In Romania, the main causes of occupational stress in the prison system were identified:

Bullying at work: Bullying and harassment / Threatening and humiliating / Verbal abuse. From bosses and colleagues, situations are rare.

Aggression of staff by detainees (who work in direct contact with the detainees) is manifested by: insults, threats, attempt to hit, hit, bite, sharpen, push.

Regarding the number of cases there is an upward trend in recent years, but compared to other European systems (France, UK) the number is low.

The most relevant results in the case of Romania regarding the sources of occupational stress are the following:

1. The demands and resources of the workplace in the penitentiary system

The most common demands of the job are the time pressure and the physical risk factors - the resources of the job are based mainly on the managerial practices of the management personnel (of medium level), while the indicators related to the learning opportunities and the relationships to workplaces have a rather low level.

There is an imbalance between the number of demands versus the number of resources: the vast majority of jobs are characterized by three (23.9%) and two demands (33.2%). However, the vast majority of jobs in the penitentiary system make available to employees only one resource (49.0%) or none (33.2%).

The jobs with the most demands characterize the categories of personnel from the security of detention and the penitentiary regime (62.1% have 2 and 3 demands), Medical staff (54,2% have 2 and 3 demands), and Intervention team (50.0% have 2 and 3 requirements). Those jobs are called jobs with excessive requirements.

Workplaces with "excessive requirements/demands" are defined as those places that have two or three requirements/demands; thus 57.1% of the jobs in the prison system are characterized by excessive demands. The analysis of the incidence of jobs with "excessive demands" according to the professional category shows that the most affected are the jobs in the security of detention and prison regime (62.1%) and those in medical care (54.2%).

Regarding the age of the staff, the extreme - age groups 20-29 years (60.0%) and 40+ years (60.8%) are characterised by excessive demands.

2. Pressure at work

The combination of the indexes "excessive requirements/demands" and "insufficient resources" generates "pressure in the workplace": 50.9% of the jobs in the penitentiary system are characterized by the pressure in the workplace. The most affected are the jobs in the security of detention and penitentiary regime and medical assistance. The intervention team is slightly below the sample average for this index (44.8%, compared to an average of 50.9%). The least affected by the pressure are the jobs from the economic-administrative activity - only 21.6%.

Regarding working conditions:

a) In about 30% of the situations, the key occupations are characterized by very frequent additional work, a situation that is more often encountered in the security detention sector;

b) For a quarter of those working in key occupations, the volume of assigned tasks exceeds the capacity of the job;

c) Professional exhaustion is significantly higher for those who work in positions with excessive demands.

Participants' feedback:

There is a low share of workers who participated in vocational training courses (11.4%);

The reduced access of the personnel to the professional training adapted to the needs was considered an important problem of the penitentiary system by 41% of the representatives of the social partners participating in the regional workshops organized by the SNPP.

In 2019, for a number of 29 penitentiary prison police officers, newly appointed, job shadowing training courses were organized based on the identified needs.

At the end of the training courses, the staff involved were asked to provide feedback on the efficiency and expectations, meaning that the general opinion was that the training program had achieved its objectives, especially since the exchange of experience was actually carried out at the supervisor's workplace, and the theoretical exposition was doubled by the implementation of those presented.

The feedback of the participants was positive, the program is beneficial, considering that good practice models were disseminated and efficient solutions were identified that could be adapted in the activity carried out by mentee.

2.4. Portugal

In Portugal, the General Directorate of Prison and Probation created a multidisciplinary team of Occupational Health for all its professionals in 2018. This structure, implemented in a pilot project, aims to prevent professional risks, protect and promote the health of workers and involves several areas of specialization. The main objectives of the "Occupational Health Multidisciplinary Team" are:

a) The promotion and maintenance of high levels of health and physical, mental and social well-being of all workers;

b) The prevention of adverse effects on workers' health, namely through continuous health surveillance;

c) The protection of workers from occupational exposures that could compromise their health;

d) The integration and maintenance of workers in a work environment adjusted to their physical and mental needs (adaptation of work to man).

The work of the Occupational Health team is divided into two main areas:

"Occupational Health"

"Workplace safety"

In terms of specialties, the Occupational Health sector at DGRSP develops the following activities: (1) Occupational Medicine; (2) Workplace safety; (3) Nursing; and (4) Psychology.

Finally, this holistic approach, integrated in the process of diagnosis, assessment and risk management, adapted to each situation and to the employee allows the team to make a positive contribution to the productivity and sustainable development of the organization.

3. Chapter III - Methodological Framework

In order to frame how we will study the link between leadership and stress in prison staff, the current section develops a methodological framework that will guide the following intellectual outputs of LEADCOR project.

Built on the literature review done in Chapter I, the following three statements appear to be factual:

- Stress and burnout are current challenging issues for our target population (i.e., prison staff);

- Among other variables, leadership appears to have significant relations with stress and burnout;

- There is a research gap that this project will address regarding the study of leadership's influence on stress levels and burnout among prison staff.

Therefore, following a systematic literature review, a conceptual model of stress and burnout in prison staff was created as presented in Figure 1:
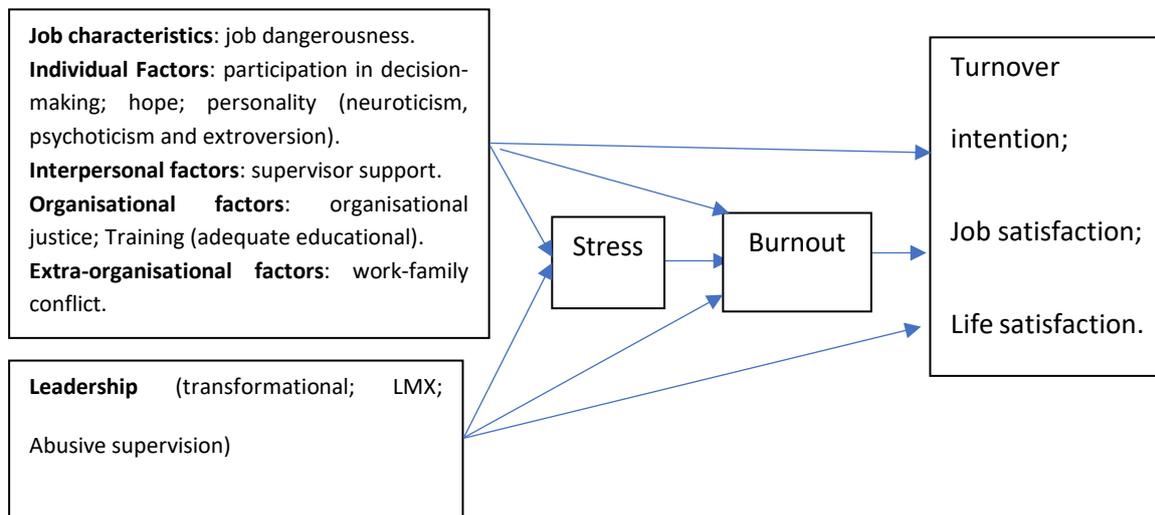
This conceptual model focuses on the determinants of prison staff stress and burnout but also on its consequences. Considering the developed conceptual model, the project partnership will follow the following steps in order to fulfil the foreseen project goals:

- Develop an **innovative assessment tool** (IO2) to assess stress/burnout among prison staff: the tool will be developed based on both academic knowledge and practical experience from partners and experts in the field;

- Pre-test the tool: during this stage, a minimum of 25 participants in each country will answer to the tool, providing qualitative feedback based on their experience as respondents and as members of prison staff;

- Testing the conceptual model and validating the tool:

  o in order to understand how the different variables interact, partners will choose a set of variables to be incorporated in a quasi-experimental study;

  o Both experimental and control groups (with minimum of 25 prison staff members in each) will answer to the research questionnaire before the intervention (training);

  o Experimental group will be part of LEADCOR's training activities, while control group will not;

  o At the end of the training events, both groups will be evaluated again, allowing the measurement of any changes in leadership skills and stress levels, among other variables;

  o The conceptual model will then be tested. Changes in leadership skills among participants might be attributed to the intervention (training programme);

  o Pre- and post-intervention data collection will also allow us to gather additional data to validate the assessment tool developed in IO2.

In what concerns the relation with IO3 – "Leadership training curriculum and programme", the review presented in chapter I of the present report can provide some valuable insights. Namely, as previously presented, transformational leadership seems to, in general, be beneficial (i.e., reduces stress/burnout levels of subordinates). The same happens with a quality leader-member exchange. On the contrary, hostile verbal and non-verbal behaviour (i.e., abusive supervision) increases subordinates stress levels.

Taking into account that a training on the topic of leadership will be able to develop leadership skills, but not necessarily change leadership styles, IO3 should then focus, according to the current results, in the identification of staff's leadership-related skills that can be trained. Those might include dimensions of transformational leadership (e.g., Individualised consideration and support; capacity to articulate a vision), aspects that can increase the quality of leader-member exchange (e.g., understanding human motivation; psychological contract), and an understanding of (abusive) leadership aspects that can be detrimental to followers' well-being (e.g., hostile verbal and non-verbal behaviour). Additionally, other aspects that are related with the role of the leader, should also be taken in consideration, such as, emotional intelligence, communication and active listening, conflict resolution, time management, and team management. Leadership coaching, as well as mentoring (a dyadic relationship between a more skilled with a less skilled professional), considering their benefits to well-being in organisations, should also be considered as important training topics in IO4 – "E-learning training course". Lastly, a set of soft skills that are key to the development of leaders should be not be neglected (cf. Crosbie, 2005).

4. Conclusion

The current output presents an up-to-date literature review on prison staff stress research, a collection of approaches, lessons learned and practices in the field, and a methodological framework.

The literature review highlights the importance of the topic of stress in this group of professionals working in prisons, considering the amount of publications found only in high-quality, peer-reviewed international journals. The analysis of the papers included in the review allowed the authors to map the most important antecedents and consequents of job stress and burnout as displayed visually in Figure 1.

The relevance of job stress and burnout for prison staff and its consequences, with high costs to the organisations, is reflected not only in the literature but in current practices in the partner countries. However, considering the already mentioned consequences (i.e., increase in turnover intentions, and negative impact on job and life satisfaction), these practices should be systematic, materialised in the availability of occupational health services for prison staff. Considering the partners countries involved in Leadcor, Belgium (with the department for prevention and protection at work), Germany/Bremen (with the Occupational Health Management Programme), and Portugal (with the "Occupational Health Multidisciplinary Team") already have such a department/programme. In Romania, research and intervention in this realm seems to be dependent on projects and therefore are not institutionalised practices.

The methodological framework presented in Chapter III of the current Intellectual Output represents an attempt of the LEADCOR project to shed light on the topic of stress and burnout of prison staff. Addressing an identified research gap, the partnership will contribute to the understanding of the relations between leadership and work stress in prison staff, aiming to improve, at the same time, staff skills in leadership and soft skills that are aimed at decreasing

occupational stress level, therefore increasing life and job satisfaction of these professionals. This methodological framework is, simultaneously, a starting point to the future activities that will be developed in LEADCOR project.

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5. Annexes

Annexe I

In figure I we display a flow diagram detailing the search steps undertaken by the authors to reach the references included in the systematic literature review.
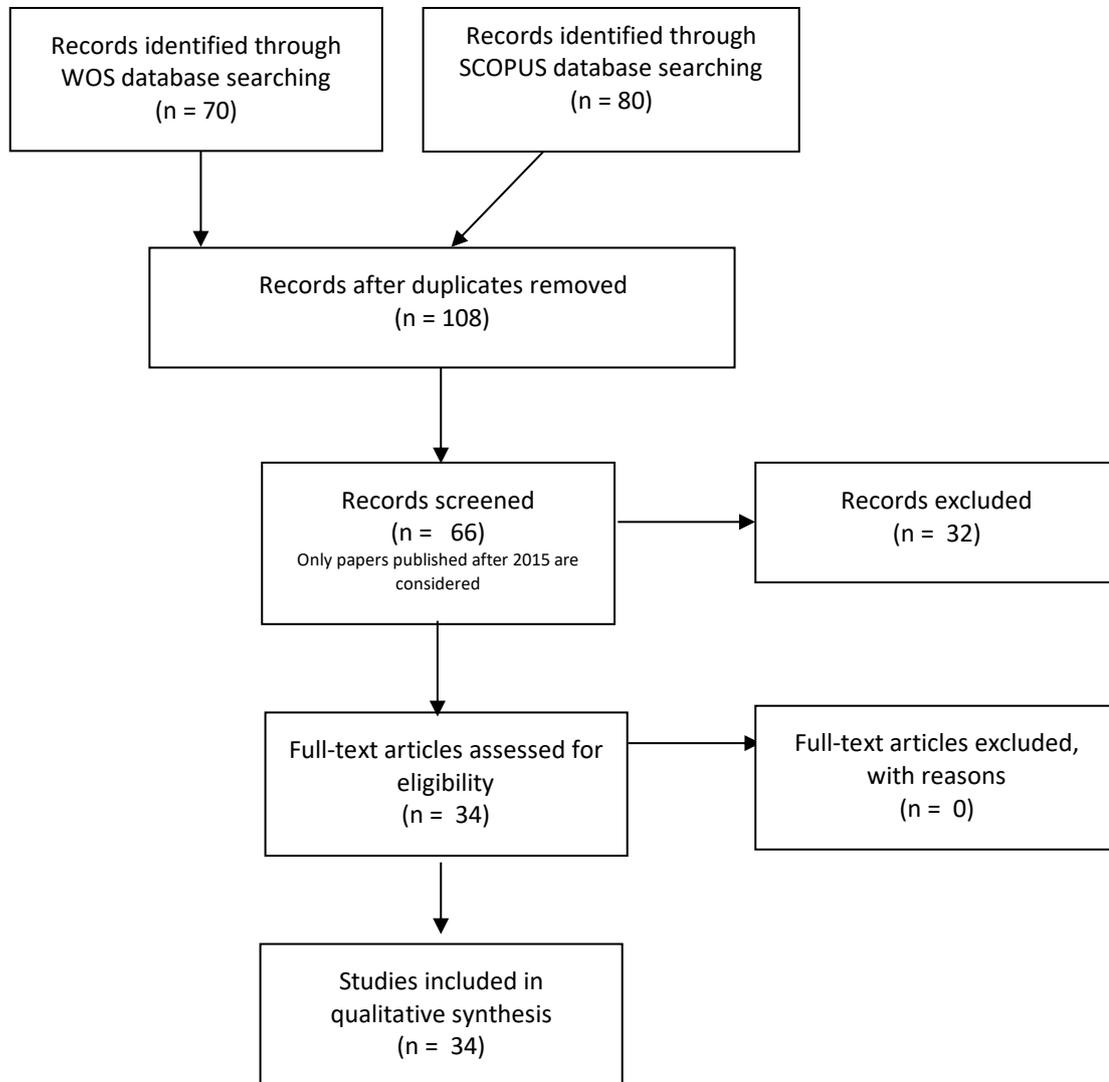
Search string used in the Web of Science database:

TS=("occupational stress" OR "stress management" OR "job stress" OR "job-related stress" OR "work-related stress" OR "workplace stress" OR "work stress") AND TS=("prison staff" OR "correctional officer" OR "correctional staff" OR "prison officer" OR "prison system" OR "jail")

Search string used in the SCOPUS database.

TITLE-ABS-KEY ("occupational stress" OR "stress management" OR "job stress" OR "job-related stress" OR "work-related stress" OR "workplace stress" OR "work stress") AND TITLE-ABS-KEY ("prison staff" OR "correctional officer" OR "correctional staff" OR "prison officer" OR "prison system" OR "jail") AND PUBYEAR > 2009 AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))

Figure I- Systematic Literature Review Flow Diagram

Records identified through WOS database searching (n = 70)

Records identified through SCOPUS database searching (n = 80)

Records after duplicates removed (n = 108)

Records screened (n = 66)
Only papers published after 2015 are considered

Records excluded (n = 32)

Full-text articles assessed for eligibility (n = 34)

Full-text articles excluded, with reasons (n = 0)

Studies included in qualitative synthesis (n = 34)

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