

Related factors to aggression in correctional officers from Costa Rica

by

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ABSTRACT

One of the areas of intervention and study of forensic psychology is police psychology, which includes correctional officers. Some of the situations these officers are exposed to in correctional facilities (i.e., jails and prisons) include violence between inmates, working over-time, or having to attend unexpected emergencies. The exposure to these situations might lead to depression, burnout, work stress, and alcohol and drug use, which might be related to the presence of aggression towards the inmates and other officers. The purpose of this study was to establish if a sample of correctional officers from Costa Rica experienced depression, burnout, work stress, and alcohol and drug use, and if these factors were related to the presence of aggression. Participants completed different surveys measuring these relevant constructs in Spanish. The final sample consisted of 66 Costa Rican correctional officers working at prisons located all over the country. It was found that only depression and burnout were positively correlated with aggression. Work stress was only correlated with depression, and burnout was only correlated with alcohol use. Male officers presented with higher levels of alcohol use and burnout than females. Finally, females presented with higher levels of depression, work stress and aggression than males. Drug use among the sample could not be established because of the lack of responses. Since there were relationships between the presence of aggression and different psychophysiological conditions among the correctional officers, is important to keep studying these relationships so methods to prevent the use of aggression towards all members of the correctional system can be designed, and to improve the health conditions of the correctional officers to avoid turnover and job overload, and to improve the quality of the services they provide.

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CHAPTER 1 INTRODUCTION

The Costa Rican correctional system used to be a role model to other countries in the region because the respect for human rights of the inmates, given that Costa Rica has signed different international conventions regarding this topic (Carranza, 2012). The correctional system was not affected by the influence of military forces, since Costa Rica abolished their army in 1949 (Carranza, 2012), and because of the low levels of social violence in the country (Carranza, 2012). Since the 1990's, the Costa Rican correctional system has been suffering from a reduction of economic resources which led to staff cuts and infrastructure deterioration (Carranza, 2012). The Costa Rican correctional system population rates are over the acceptable standards, and the rate of criminal convictions are growing, increasing the number of inmates (Carranza, 2012). Along with these issues, there is the problem of not having enough correctional officers to attend the growing number of inmates (Carranza, 2012; Vargas, Montero, & Fernández, 2013).

According to the General Penitentiary Police Regulations (1997), the correctional officers are in charge of the custody, surveillance and maintaining order and discipline in the prisons, and of providing care all day, every day, to inmates. Because of these roles, the correctional officers are the professionals that have the most interaction with the inmates (Carranza, 2012). Their role involves being an influence on inmate's lives, making sure that the inmates do not escape or make disturbances, that all the people at the prisons are safe, and finally to maintain a humane environment (Senol, Durak & Gencoz, 2006).

The angry aggression theory (Griffin & Bernard, 2003) states that law enforcement officers, which includes correctional officers, tend to be more aggressive

than members of the general population because officers see threats more frequently, and they are more socially isolated. This leads officers to respond in a more aggressive way to threats because they have more access to weapons and can use an aggressive communication style with suspects or inmates; this aggression becomes part of the officer subculture. In the specific case of correctional officers, their subculture includes drinking alcohol in the work place, abusing their authority by attributing tasks they are not in charge of, the use of unnecessary violence against the inmates, and sexual harassment of other officers (Ross, 2013).

It is important for forensic science not only to intervene in correctional settings, but also to study the different situations that could trigger aggressive responses among correctional officers, to prevent violence and aggression against inmates and the professionals that work at correctional settings. The phenomenon of aggression among correctional officers have been studied in terms of its characteristics and consequences, not necessarily on how often it presents or how much is presented, like the studies by Herberger and Magda (2015) describing the differences between senior and junior correctional officers, and Tewksbury and Carter (2006) differentiating between male and female officers. Although the Bureau of Justice Statistics from the United States of America and the Institute of Criminology from Costa Rica have statistical information on the inmate-to-inmate aggression, similar information for aggression committed by correctional officers was not found.

By providing information about the characteristics of aggression towards inmates and other co-workers among Costa Rican correctional officers, and the different psychobiological and psychological factors that are related to its presence, including

experiencing depression, burnout, work stress, and alcohol and drug use, this study will be the first approximation to this matter among Costa Rican correctional officers. It also will provide information on different sociodemographic variables, job conditions and psychophysiological diseases that are related to aggression and to depression, burnout, work stress, and substances use.

CHAPTER 2 LITERATURE REVIEW

2.1 Aggression Among Correctional Officers

Aggression is any type of verbal or physical behavior that is done with the intention to cause emotional or physical harm to other person, who is expected to avoid that behavior (Robertson, Daffern & Bucks, 2012; Tomlinson et al., 2016; Warburton & Anderson, 2015). Aggression is usually used as a synonym of violence, but violence is a form of aggressive behavior that is done with the intention of causing extreme harm (Warburton & Anderson, 2015). Factors like personality traits, sex, beliefs, attitudes, values and long-term goals increase a person's propensity towards aggression (Robertson et al., 2012).

Aggression can be used to punish or hurt someone, to gain a desired outcome, or can be used as a self-protection mechanism (Warburton & Anderson, 2015). It is important to consider that a main trigger of aggression is being provoked by another person; also, being constantly exposed to violence will establish aggressive behavioral scripts (Warburton & Anderson, 2015). In the study by Herberger and Magda (2015), it was found that senior correctional officers show a higher level of outward aggression than junior officers towards other people, because they are more habituated to use violence or aggression as a norm to control the inmates. Given the differences among senior and junior officers, this study is an example of how the exposure to aggressive behavior could increase the probability to act aggressively.

Herberger and Magda (2015) define an aggressive act as one that has the intention to inflict suffering to another person, who will have the motivation to avoid it. If the goal is inflicting pain, then is called hostile aggression, but if it is to serve ulterior motives

then is called instrumental aggression. In correctional facilities, the most common is instrumental aggression (Herberger & Magda, 2015). Instrumental aggression could be extralegal force (a known wrongful use of force) or unnecessary force (well-meaning use of force due to the lack of problem solving skills) towards inmates (Griffin & Bernard, 2003).

Besides aggression, in the workplace, there is also the possibility of interpersonal violence, presenting itself in the form of intimidation, threats, harassment and hostile behavior towards other coworkers (Van Mierlo & Bogaerts, 2011). Workplace violence could be physical assault, and workplace aggression could be the effort to psychologically harm a coworker. There are four types of workplace related aggression: 1) an act of criminal intention from someone outside the workplace; 2) an aggressive act from a customer towards an employee (e.g., an inmate attacking a correctional officer); and 3) aggression between coworkers (Van Mierlo & Bogaerts, 2011).

In the specific case of correctional facilities, some examples of aggression and violence from the correctional officers includes the excessive control of everyday activities like the internal administration of the beds, feeding, determining who can perform sporting and recreational activities, and deciding who can receive technical or medical care regardless of the priority or severity of the situation (Vargas, Montero, & Fernández, 2013). Is important to have in mind that even though there could be excesses of aggression and violence, the correctional officers "...are trained in the use of force tactics; therefore, they are primed to anticipate violence when interacting with prisoners" (Ricciardelli & Gazso, 2013, p.105). Which means that they are expected to use force if needed, and to react towards any attack they might receive, but never in a way that could

damage the integrity of the inmates or other coworkers. Specifically to corrections, workplace aggression could be caused by: provocations by the inmates, social expectations leading to dehumanization of inmates and judging them according to stereotypes, retaliation-oriented behaviors (Herberger & Magda, 2015), physical size in comparison with the inmates or coworkers (Tewksbury & Carter, 2006), burnout, lesser awareness of social norms (Griffin & Bernard, 2003; Herberger & Magda, 2015), social isolation conditions, fears of violent inmate victimization (Griffin & Bernard, 2003; Ricciardelli & Gazso, 2013), access to weapons (Griffin & Bernard, 2003; Ricciardelli & Gazso, 2013; Tewksbury & Carter, 2006), perception of threats (Gordon & Baker, 2015; Griffin & Bernard, 2003; Herberger & Magda, 2015; Ricciardelli & Gazso, 2013), and intensification of their stress (Gordon & Baker, 2015; Griffin & Bernard, 2003; Herberger & Magda, 2015; Ricciardelli & Gazso, 2013; Tewksbury & Carter, 2006)

There are some complaints from male coworkers and inmates about women working at correctional facilities (Tewksbury & Carter, 2006). For example, male correctional officers think women are too physically weak to protect themselves in confrontations with inmates, and male inmates object to the fact that female officers remind them of their sexual deprivations (Tewksbury & Carter, 2006). On the other hand, female officers humanize the correctional facilities because they are less abusive of inmates, but still female officers act aggressively when inmates refuse to follow orders such as body searches or moving away from a certain group of inmates (Tewksbury & Carter, 2006). Men are more prone to express aggressive behaviors, but women can be as physically aggressive as men when they are strongly provoked; women usually express

aggression by indirect and relational forms, by yelling or offending other people (Warburton & Anderson, 2015).

2.2 Burnout Among Correctional Officers

Given that, as mentioned above, aggression could be caused by the presence of burnout, is important to understand what this construct implies. According to Maslach and Jackson (1981), burnout is a syndrome of emotional exhaustion and cynicism that happens frequently among people who have to work taking care of other human beings. It is composed of emotional exhaustion (feeling emotionally fatigued, drained, overextended, and used because of the job); depersonalization (a cynical attitude toward others and their motivations, which conducts to treating them as objects); and a reduced sense of personal accomplishment (impression of not being productive and wasting time working with people) (Bianchi, Schonfeld, & Laurent, 2015; Enache, 2013; Griffin, Hogan, & Lambert, 2012; Griffin, Hogan, Lambert, Tucker, & Baker, 2010; Molina & Moreno, 2012).

In a study conducted by Rhineberger-Dunn, Mack and Baker (2016) with probation/parole officers and prison correctional officers it was found that “(...) gender was a significant predictor of emotional exhaustion, but not of depersonalization or personal accomplishment” (p. 16), and age did not have a significant effect on burnout. In terms of perceptions of health, they found that perceptions were significantly related to emotional exhaustion for both probation/parole and prison officers, and to depersonalization for probation/parole officers (p. 18). Lastly, the authors found that prison officers had a more personal interaction with inmates than the other officers. It is worth mentioning that a weakness of this study is the fact that the response rate was very

low and only included officers from Iowa, so its results are not generalizable to other states or countries.

In the specific case of correctional officers, it has been found that having a vocational calling to the job can be a predictor of burnout. The presence of work conditions such as high risk situations (Harizanova & Tarnovska, 2013), having to work different shifts or even overtime, being exposed to the fear of contracting incurable diseases through contact with the inmates, and having to control and ensure the safety of people unwilling to be kept in confinement also can contribute to burnout (Griffin et al., 2010; Harizanova & Tarnovska, 2013). Burnout has been found to be related with an inability to cope with traumatic experiences, negative safety outcomes, increased in job disabilities (Finney, Stergiopoulos, Hensel, Bonato, & Dewa, 2013), decreased in physical health, increased substance abuse, decreased positive social interactions and relationships, reduced organizational commitment, increased turnover, and increased absenteeism (Finney, et al., 2013; Griffin et al., 2012). Given all the possible outcomes that are related to burnout, its presence could be related to the presence of aggression among correctional officers.

2.3 Work Stress Among Correctional Officers

Another factor related to aggression is work stress, which according to the World Health Organization (WHO; 2016), work stress is “(...) the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities, and which challenge their ability to cope” (p. 1). Work stress can be caused by the work itself, or by discrepancies between the demands of the job and the personality of the workers (Campbell & Henderson, 2016), or by a poor work

organization, poor work design, poor management, or lack of support (WHO, 2016). It is important to distinguish that work stress is a different concept from burnout. Burnout is a syndrome of emotional exhaustion and cynicism that often occurs among people who work in the care of other human beings (Blanco & Thoen, 2016; Maslach & Jackson, 1981). The main difference from burnout is that work stress is a physiological response that could happen to any person who has a job, while burnout is a syndrome, which includes different symptoms, emotions and actions that characterizes the patterns of the condition, specific of people that work with human beings.

Stressors can be classified in three categories: a) catastrophic events, b) major life changes, and c) daily hassles. In the case of work stress, stressors include quantitative demands (e.g., time pressure), cognitive demands (e.g., difficulty of the job) and emotional demands (e.g., empathy required) (Tenibiaje, 2013). According to Finney et al. (2013), there are four categories of work stressors: 1) stressors intrinsic to the job: those that causes work overload and difficulty; 2) stressors related with the role within the organization: not having the authority to exercise professionalism; 3) stressors of career development: those affecting the future of the worker in the organization; and 4) stressors from work relationships: interactions between correctional officers with their supervisors and inmates. Work stress has been related to increasing drug use, especially tobacco, and immune system deficiencies (Campbell & Henderson, 2016).

There are many factors and sources of work stress specific to correctional facilities. For example, work overload, lack of self-efficacy, security of the job, isolation from family (Senol, Durak, & Gencoz, 2006), relationships with other coworkers, problems with the inmates, negative perception of the inmates, unpredictable and

traumatizing events (Misis et al., 2013; Senol et al., 2006), and perceptions of dangerousness (from the overcrowding, prison gangs, witnessing violent incidents among inmates and locations as maximum security) (Enache, 2013; Misis et al., 2013; Senol et al., 2006), can all increase work stress. The consequences of experiencing work stress also include mental and physical problems such as depression, heart diseases, hypertension, ulcers, asthma and bronchitis (Senol et al., 2006), cynicism (Gordon & Baker, 2015), increase in alcohol consumption, reduced overall mental well-being (Senol et al., 2006; Steiner & Wooldredge, 2015), and burnout (Gordon & Baker, 2015; Senol et al., 2006; Steiner & Wooldredge, 2015). All these sources and consequences, could also be related to the presence of burnout and aggression among correctional officers.

2.4 Depression Among Correctional Officers

Since depression is related to aggression, burnout, and work stress, is important to expand on this construct to understand its relevance in correctional settings. According to the WHO (2016), “Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration” (p. 1). According to the Global Burden of Disease Study, depression is the leading cause of disability (Aguilar, Kramer, Resendez & Magana, 2008).

The consequences of depression are broad, especially when it comes to how it affects the job performance. In a study done by Gayman and Bailey (2013), it was found that depression was linked to impair cognitive functioning, including problems with learning, problem solving, judgment, and decision-making. It was found to be associated with higher organizational costs, absenteeism, and reduced job performance. Workers

from this study that presented with depression had an average of additional 4.1 hours of lost productivity per week compared to workers without it. Even when utilizing a sample of probation/parole officers, not correctional officers, it is worth mentioning that Gayman and Bailey found that emotional exhaustion and role conflict appeared to be strong predictors of depressive symptoms. Also, work stress had both a direct effect on depressive symptoms and an indirect effect on depressive symptoms through emotional exhaustion (p. 338).

As Harizanova & Tarnovska (2013) pointed out, at least 40% of correctional workers have been working for less than 5 years in their facility, and those workers experienced depressive mood related to burnout. The propensity of depression in correctional officers is related to the fact that these workers have multiple responsibilities (Liu, Hu, Wang, Sui, & Ma, 2013). Officers also are exposed to insults, threats and aggression, putting them in a high-risk position (Liu et al., 2013; Sui, Hu et al., 2014). Each of these factors can contribute to an increase in depression.

In the case of Chinese correctional officers, for example, workers tended to take this kind of job because they do not have better job prospects, and tended to have a lower social status (Sui et al., 2014). This situation has a negative impact on how they committed to their job, and those workers who have extremely high commitment to their corrections job tended to be more prone to depressive symptoms (Sui et al., 2014). Also, the job conditions, like having less time to share with their families and friends because of the different work shifts, enhanced the probability of having depression (Sui et al., 2014). Correctional officers' emotional well-being therefore could be affected not only by depression, but by burnout, work stress and aggression.

2.5 Alcohol and Drug Use Among Correctional Officers

It is important to address alcohol and drug use, given that they are related to all the other variables mentioned above. According to the University of Maryland Medical Center (2016), “Substance use is the continued use of alcohol, illegal drugs, or the misuse of prescription or over-the-counter drugs with negative consequences like problems at work or in interpersonal relationships, with the law, and physical risks when used in dangerous situations” (p. 1). According to Lavigne and Bourbonnais (2010) the prevalence of psychotropic drug use among correctional officers is 14.7%.

When it comes to alcohol consumption, it is often used because people are hoping to experience its pleasant side effects, like relaxation (Tomlinson, Brown & Hoaken, 2016). Correctional officers are at greater risk for alcoholism than the general population (Ricciardelli & Gazso, 2013). One reason for this may be because alcohol is used in response to stress or anxiety, and correctional work is a stressful occupation in a difficult environment (Ricciardelli & Gazso, 2013). In terms of alcohol consumption, 7.5% of police officers have scores consistent with a lifetime diagnosis of alcohol abuse or dependence (Ballenger et al, 2010).

In the study by Lavigne and Bourbonnais (2010), the authors worked with a sample of 1275 correctional officers from Quebec, and found that drug use is higher among correctional officers over 35 years of age. Additionally, they found that low social support outside of work also was found to be associated with drug use, and that being a part-time officer was found to have a protective effect on drug use. The association between low rewards (not receiving recognition for their job) and drug use adjusted for age and gender was statistically significant, but job strain was not associated with

psychotropic drug use. Also, when Lavigne and Bourbonnais considered interpersonal violence at work, intimidation was not associated with drug use, but psychological harassment was associated with drug use when adjusted for age and gender (p. 125-126). Therefore, the presence of alcohol and drug use, depression, work stress and burnout, is related to the presence of aggression among correctional officers.

2.6 Interactions Between the Relationships Under Study

Previous studies show the relationships between aggression, burnout, work stress, depression and alcohol and drug use. For example, burnout and stress are moderately related to aggression in senior correctional officers because of the responsibility of their position (Herberger & Magda, 2015) since they are more habituated to use aggressive behavior towards inmates. When correctional officers or police officers are exposed to job related stressors, such as inmate-to-inmate violence or work overload, they tend to use extralegal force as an aggressive way to contain their environment, for example knocking the inmates even when they are already contained (Griffin & Bernard, 2003). Burnout and role conflict appear to be predictors of depressive symptoms among correctional officers, which affects work performance and increases exhaustion (Gayman & Bradley, 2013). Finally, work stress and work harassment have been related to excessive aggressiveness and alcohol and drug abuse among correctional officers (Lavigne & Bourbonnais, 2010).

In terms of work stress and burnout, these are associated with increased substance use and a decrease in positive social interaction and relationships among correctional staff (Finney, et al., 2013). The intake of alcohol is implicated in verbal aggression and physical aggression towards partners, acquaintances, and strangers (Tomlinson et al.,

2016). Stress has also been related to the presence of depression, cynicism, excessive aggressiveness and alcohol abuse (Lambert, Kim, Keena & Cheeseman, 2015; Weir, Stewart & Morris, 2012). The stress levels that officers have to deal with have been also related to an increase of anger (Aytac, 2015). Finally, burnout has been related to depressive symptoms and depression (Bianchi, Schonfeld & Laurent, 2015).

CHAPTER 3 STATEMENT OF THE PROBLEM

Costa Rica occupies the fourth position in the Latin American region in prisoning rate, with overpopulation rates over the acceptable standards for prisons, and with incarceration rates continuing to grow (Carranza, 2012). There is also the problem of not having enough correctional officers or technical professionals to work with the growing number of inmates (Carranza, 2012). This deficit of correctional officers affects the whole correctional dynamic, because they are the members of the staff that spend more time with the inmates (Vargas, Montero, & Fernández, 2013).

The study of psychophysiological diseases and related mental health issues in Latin American correctional officers is important because of the social ignorance about these workers. Society in general is not aware of the psychological implications that working at a prison have for the correctional officers, and given that they have the important task of protecting society from crime by guarding the inmates, is important for them to be in their best physical and psychological condition to comply with this task.

It is also important to have a wider understanding of the work conditions and to reduce work stress among the correctional officers, because it can lead to depression, drug abuse, and other psychophysiological conditions like hypertension or heart diseases (Misis, et al., 2013; Rodriguez, 2014) which could increase the levels of resignations and sick leave among them, bringing a burden to the rest of the officers that are dealing with the work tasks they have assigned, increasing at the same time the aggressive responses and anger towards inmates and co-workers, and even their families (Misis, et al., 2013). Therefore, it is important to study how depression, burnout, work stress, and alcohol and drug use are related to aggression in Latin American correctional officers.

3.1 Purpose of the Study

The purpose of the present study was to establish if a sample of correctional officers in Costa Rica presented with depression, burnout, work stress, and alcohol and drug use, and if these are related to the presence of aggression. Additionally, this study sought to establish if any significant differences between male and female correctional officers exists on the measured variables. In order to explore the strength of those relations, further analyses were performed.

3.2 Hypotheses

The isolation the correctional officers are exposed to (Griffin & Bernard, 2003), the fact that female officers humanize correctional settings by being less physically aggressive and being more conciliatory (Tewksbury & Carter, 2006). The fact that men are more prone to aggression (Warburton & Anderson, 2015), the presence of risk situations like death threat (Harizanova & Tarnovska, 2013), the work overload (Senol et al., 2006), the emotional exhaustion (Gayman & Bailey, 2013), the responsibility of the position (Herberger & Magda, 2015). And the fact that in Costa Rican men have an incidence of 14.8% of alcoholism and women only 7.05%, but women have more medications usage (Institute of Alcoholism and Drug Use, 2017), among other factors previously mention, are different situations that have been previously related to aggression, depression, burnout, work stress and substances use, therefore their usual presence in correctional settings led to the following research hypotheses:

1. Depression, burnout, work stress, and alcohol and drug use will be positively correlated with aggression.

2. Depression, burnout, work stress, and alcohol and drug use will be positively correlated with each other.
3. Males are going to present higher levels of alcohol use, depression, work stress and aggression than females.
4. Females are going to present higher levels of burnout and drug use than males.

CHAPTER 4 METHODOLOGY

4.1 Research Design

The units of analysis for this study were correctional officers from Costa Rica. This study is similar to previous studies conducted in North American and European countries (Gayman & Bailey, 2013; Herberger & Magda, 2015; Lavigne & Bourbonnais, 2010; Rhineberger-Dunn, Mack & Baker, 2016; Tewksbury & Carter, 2006), with the novelty of combining different variables (i.e., aggression, burnout, work stress, depression and alcohol and drug use) that have not been previously related all together among correctional officers. Additionally, this study was quantitative, descriptive and correlational. All the data utilized was primary data.

4.2 Study Population

As of May 2015, there were 3485 people working at the Correctional Police of Costa Rica, 2909 (83%) were men and 576 (17%) were women (Blanco & Mora, 2015). The mean age was 25 years old, ranging from 18 years to 62 years, and officers tended to come from rural and coastal areas of Costa Rica (Blanco & Mora, 2015). Officers had two different schedules; they could either choose to work 7 by 7 (working 8 hours, 7 days in a row, and having 7 days free) or 5 by 2 (working 10 hours, 5 days in a row, and having 2 days free) (Blanco & Mora, 2015). Given these characteristics, an initial target of 350 officers was proposed for the data collection. Regarding the ideal sample size, the optimal sample size was estimated by using the sample size formula for estimating the population proportion, as well as the rule of thumb for selecting sample proportions and power size, mentioned by Lemeshow, Hosmer, Klar and Lwanga (1990): Using a confidence level of 95%, a margin of error of 5% and a proportion of 50% of the

population, this led to an optimal sample size of 347 participants out of the population of 3500 officers.

4.3 Recruitment

The entire population of officers working for the Correctional Police of Costa Rica was contacted through the correctional police headquarters by an institutional mailer (flyer content provided by the researcher, see Appendix A) indicating that all officers were invited to participate in this study. Participants were assessed at the National School of Penitentiary Training in Heredia, Costa Rica, since this location was neutral and central to get to, so that participants would feel comfortable to participate and complete the instruments. Participants had the option to attend the School to complete the surveys on the day and time of their choosing over a one week period. Through this method of recruitment, 25 officers agreed to participate which represented a 0.57% of the entire population. Since only 25 officers agreed to participate through this method, it was required to recruit participants via other methods to ensure the largest sample possible.

Correctional officers participating in training at the School at the time of data collection were directly contacted by the researcher to see if they were interested in participating in the study; 21 agreed to participate from this method of recruiting, which represented a 0.60% of the entire population. An additional 20 officers on duty during the period of data collection were directly contacted by the researcher visiting three prisons and agreed to participate in the research, which represented a 0.57% of the entire population. The Chief of the Correctional Police, Mr. Pablo Bertozzi-Calvo, gave the authorization to visit the prisons. The prisons visited were the Prison La Reforma, the Prison for Elderly, and the Prison of San Rafael, all of them located in the province of

Alajuela in Costa Rica, chose because of previous experience of the researcher. Via direct contact, the researcher contacted at least 70 officers though 50 of those declined because of participation requirements (i.e., answering 165 survey questions and limited time availability).

Participants needed to have availability of time to travel to the prison training school, or have time during a shift change or lunch for participation in the data collection. Inclusion criteria included having more than six months working as a correctional officer, be over 20 years old, and be working (i.e., not on vacation or sick leave) at the time of data collection. The reason to control by these criteria was to make sure current experienced stress was most likely due to the exposure to work conditions. The sample was a convenience sample since those who had participated had the availability of time to travel to the School or during shift change and lunch in the prisons. All the participants were informed through the informed consent that they could end their participation or withdraw at any time.

In order to increase likelihood of participation, each participant was informed that by completing the survey booklets, they could elect to participate in a drawing for two sets of two free movie tickets (each ticket was valued in \$11 [5.600 Costa Rican colones], the two tickets were valued in \$22 [11.200 colones]). Participants entering the drawing provided their names and place of work on a sheet that was separate from the booklets, that way confidentiality was ensured. After the data collection ended, a number was assigned to each name on the drawing list. A third party not participating in the research was asked to select two numbers between 1 and 66, and the names on the list corresponding to those numbers were the winners of the movie tickets. The researcher

then went to each prison (their noted place of work) to deliver in person the tickets to the winners.

4.4 Final Sample

The final sample consisted of 66 prison officers (53 men and 13 women) which represented 1.9% of the entire population. The age range of participants was between 21 years to 60 years with an average of 34.03 years ($SD = 11.75$). Ethnically, only one person identified as Salvadorian and 65 were Costa Rican. In terms of race, even though the entire sample is Latino, 56 officers identified themselves as White, 6 as Afro-Caribbean, and 1 as Indigenous; 3 officers did not answer the question. With regard to marital status, 22 people were married, 22 were single, 16 were cohabiting and 5 were divorced; 1 officer did not answer the question. Also, 48 people reported having children and 14 reported not having children; 4 officers did not answer the question. Those who had children had an average of 2 children ($SD = 1$ child). The academic level of the sample included 25 officers that completed high school, 32 officers had incomplete high school, 1 completed University, 5 had incomplete University, 2 completed primary school and 1 had incomplete primary school.

The sample was asked to indicate the diseases they suffer from: 14 officers reported gastritis, 10 reported insomnia, 6 reported asthma, 6 reported hypertension, 2 reported migraines, and 1 reported ulcers. Participants also were asked to report the substances they consumed: 9 officers reported consuming tobacco, 5 antidepressant medication, 1 antihistamines, 1 anxiolytic medication, 1 sedative medication, and 1 antipsychotic medication. In terms of other substance use, none of the officers endorsed other use.

The average number of months working at a prison site was 124.37 months ($SD = 111.57$). Relatedly, 33 officers had worked at the same prison since they began working in corrections, and 33 had worked at different prisons (1 officer reported to have worked at 9 different prisons). The sample included officers from prisons from all the provinces of Costa Rica, but 43 sampled officers worked at prisons located in Alajuela, the other 23 officers reported working at prisons in other provinces. Of the two different schedules at the prisons, 58 officers reported working the 7 by 7 schedule and 8 reported working the 5 by 2 schedule.

In regards to the levels of security of the prisons where the participants worked, 30 officers worked at maximum level prisons, 13 at medium security, and 23 at minimum security. In terms of monthly wages, 37 officers reported receiving between 200.000 and 400.000 colones (364 and 727 dollars), and 29 reported receiving between 500.000 and 800.000 colones (910 and 1455 dollars). Lastly, 13 officers reported having another job besides being correctional officers. The different jobs included agriculture, apiculture, gardening, construction, cattle raising, selling merchandise, and housekeeping.

4.5 Protection of Confidentiality

This study was approved by the Texas Tech University Human Research Protection Program/Institutional Review Board. Participants were required to sign informed consent documents to indicate their willfulness to participate in the study. To protect the identity of participants, all data was labelled with a randomly assigned number. To ensure confidentiality, the booklets did not include the name of the participants, and consent forms were kept separate from all other collected data at all

times. As mentioned previously, the list of names of participants interested in the drawing also was kept separate from any other study documentation.

4.6 Instrumentation

4.6.1 The Aggression Questionnaire (AQ). This instrument was developed by Buss and Perry (1992) to assess aggression. It is a Likert scale, with 29 items. In a factor analysis, the scale shows 4 subscales: physical aggression, verbal aggression, anger, and hostility. The full-scale Cronbach's alpha varies between $\alpha = .72$ and $\alpha = .89$. Perez and Brenes (2014) validated the scale, with a Spanish translation, with a sample of 395 voluntary participants from Costa Rica and obtained an alpha of $\alpha = .80$. Therefore, the Spanish translation was used for this study (see Appendix B)

4.6.2 Burnout Brief Questionnaire (BBQ). This questionnaire is used to measure the antecedents and consequences of the construct of burnout. It was developed by Moreno, Bustos, Matallana, and Miralles (1997) at the Autonomous University of Madrid, Spain, and it is meant to be used for research purposes. The authors reported good reliability and validity indexes, with alphas of Cronbach in a range of $\alpha = .75$ to $\alpha = .90$ for the global scale. It has a Likert-type structure, where 1 equals "no occasion" and 5 equals "most occasions." It is composed by the factors subscale which assesses job characteristics, tedium and organization characteristics, the syndrome subscale assesses the characteristics of burnout defined by Maslach and Jackson (1982), and the consequences subscale assesses the consequences burnout has on the physical health, family climate and job performance (Moreno et al., 1997). Though this scale has not been used with Costa Rican participants, it was selected for this study because it has been used

for research purposes and it did not involve a translation process since it is in Spanish (see Appendix C).

4.6.3 Work Stress Scale for Correctional Officers (WSSCO). This scale was developed by Senol, Durak, and Gencoz (2006). The scale assesses work stress that the authors defined as “an occupational hazard in prison environment” (p. 158). The scale is Likert-type, self-report, and consists of 35 items. It has 5 subscales: work overload, role conflict and role ambiguity, inadequacies in physical conditions of the prison, threat perception, and general problems. It was created using a sample of 119 correctional officers. For concurrent and criterion validity, the authors used the Beck Depression Inventory, the Beck Anxiety Inventory, the Beck Hopelessness Scale, and the Multidimensional Scale of Perceived Social Support; all subscales significantly correlated with these measures. The internal consistency of the total scale was found as $\alpha = .94$, and the item-total correlations ranged from $r = .31$ to $r = .75$. They also administered the scale to 71 Turkish correctional officers for test-retest coefficients and obtained $r = .77, p < .001$, index for the total scale (Senol, Durak & Gencoz, 2006). The WSSCO successfully discriminated high versus low depressive symptomatology (Senol, Durak & Gencoz, 2006). The WSSCO was selected for the present study because it was created to specifically assess correctional officers (see Appendix D).

It is important to clarify that the WSSCO was developed in Turkey, so there were only English and Turkish versions. For purposes of the present study, a Spanish translation was completed to use with the Costa Rican population of interest. The scale was translated into Spanish by this study’s researcher, and back translated into English by Paola Prada, Ph.D., (research assistant professor of the Institute of Forensic Sciences at

Texas Tech University) to ensure the accuracy of the language. This process was done to have a Spanish version of the scale that complies with a proper scientific translation process. A process that according to Wang, Lee, and Fetzer (2006) includes the following steps “(...) a forward translation from a source language to target language, a back-translation from target language to a source language, and then a comparison of the two source language translations” (p. 311)

4.6.4 Depression, Anxiety and Stress Scale (DASS-21). This scale was developed by Lovibond and Lovibond (1995) to assess three constructs: depression, anxiety, and stress. It is a Likert scale consisting of 21 items; each construct is assessed with a specific subscale that is composed of seven items. The Spanish version of the scale was used for this study. The scale was validated with a Costa Rican sample by Campos, Molina and Salazar (2014) with a sample of 329 voluntary participants. They obtained a Cronbach’s alpha of $\alpha = .75$ for the full scale. Campos, Molina and Salazar (2014) used the Mexican version of the DASS-21 that had the following Cronbach’s alphas, for the depression subscale $\alpha = .79$, the stress subscale $\alpha = .76$ and the anxiety subscale $\alpha = .86$ (Gurrola, Balcázar, Bonilla, & Viserda, 2006) (see Appendix E).

4.6.5 Michigan Alcoholism Screening Test (MAST). This test was developed by Selzer (1971) for the screening of alcoholism. It has been “criticized as being vulnerable to positive dissimulation of symptoms” (Laux, Newman, & Brown, 2004, p. 210; people not reporting their real symptoms), nevertheless some studies show the MAST has discriminative ability between non-alcoholics and alcoholics but needs to be combined with social desirability scales to control the dissimulation (Laux et al., 2004; Otto & Hall, 1988). In a study by Laux et al. (2004), the authors used the Substance

Abuse Subtle Screening Inventory (SASSI) to assess concurrent validity, which showed that both the MAST and SASSI were correlated. Laux et al. (2004) obtained an alpha of $\alpha = .88$ for the total scale. The MAST has been translated into Spanish, and has been used in Spain and Chile (Faes Farma, 2005), therefore the Spanish translation was used for the current study. This version had a reliability of $\alpha = .82$ and a validity of $r = .96$ (Faes Farma, 2005) (see Appendix F).

4.6.6 Crowne-Marlowe Social Desirability Scale (CM-SDS). This scale was developed by Crowne and Marlowe (1960) in order to assess social desirability when people responded to delicate topics and it functions as a control variable. It is composed of 33 dichotomous items, and the authors originally reported internal consistency coefficients of .88 and test-retest correlation of .89. In Costa Rica, Smith, Molina, and Castelain (2014) validated the short version of the CM-SDS of 13 items translated into Spanish with a sample of 440 voluntary participants. They obtained a Cronbach's alpha of $\alpha = .64$. Therefore, this Spanish short version of the CM-SDS was used for this current study. This scale is being used to be a control variable and in order to comply with the recommendations cited above regarding the MAST (see Appendix G).

4.6.7 Drug use information. To assess the drug use, a question regarding drug use was included, where each participant could select as many options that applied for her/his case. The question included options to endorse use of tobacco, marijuana, and medications (anxiolytics, antidepressants, anticonvulsants, sedatives, sleeping pills, antipsychotics, and antihistamines), and also giving the option to indicate if they used any other substance not indicated in the list (see Appendix H).

4.6.8 Demographic information. Sociodemographic variables of age, gender, race, marital status, the number of children, approximate yearly income, country of origin, and education level were assessed. Several questions regarding current medical conditions were included assessing for the presence of high blood pressure, insomnia, ulcers, asthma, migraines and cirrhosis, similar to the study by Senol, Durak and Gencoz (2006). Several questions regarding the number of months having worked for the correctional police, location of the correctional facility where they work, type of schedule, and population they work with (elderly, female, male, juvenile inmates) were included as well (see Appendix H).

4.7 Data Collection Procedure

All data was collected during May and June 2016 with a sample of the Correctional Police from Costa Rica. In the case of the 25 officers individually-recruited that completed the surveys at the National School of Penitentiary Training, in response to the recruiting mailer, completed the booklets individually in a classroom that had space for 20 people, where they had the chance to use any desk they wanted. For those who were participating during training, they completed the surveys in a classroom that had space for 30 people, each officer having an individual desk. In both cases the officers completed the 165-questions survey in 30 to 60 minutes. For the 20 officers that completed the surveys at the prisons, the officers completed the surveys in different spaces. Some did it at their desks, some at their vigilance station, some at the dining hall, and some in their common room. Since officers completed the surveys during their free hours, completion lasted from 45 to 70 minutes to complete the 165 questions.

The materials used included photocopies of the instruments (with previous consent of the authors of the scales and validations), and printed informed consents for all the participants. The instruments were presented in a booklet form to facilitate the collection of the data. Five different versions of the booklets were created to control the potential effect that order in which the instruments were presented might have on the responses. All the booklets presented the sociodemographic questions on the first pages. One version of the booklet was given to each participant. Along with the booklet, two copies of the informed consent were given to each participant, one to be collected by the researcher and one for the participant to retain for their records. At the moment that each participant returned their completed instruments, the researcher collected the booklet separately from the informed consent in order to assure confidentiality.

4.8 Statistical Analysis Procedures

4.8.1 Missing data. Of the 165 variables, 141 had missing information, therefore multiple imputation was required to treat the missing values. The percentage of missing information was 7.55% for the entire data set. Where the missingness seemed to be random. Multiple imputation is one of the modern methods to handle missing values (Little, Jorgensen, Lang & Moore, 2014). This method generates copies (usually 100 copies) of the original data set and replaces missing observations with estimates of what those values would have been if they had been observed (Rubin, 1987). There are several estimation methods to get the estimates (for more information see Enders, 2010; Graham, 2012; Little et al., 2014; van Buuren, 2012), however, a fully conditional specification model was implemented, where an imputation is created per variable in an iterative fashion. The Markov chain Monte Carlo (MCMC) method was utilized to estimate the

model, this calculation is a Bayesian simulation technique that samples from the conditional distributions to obtain samples from the joint distributions (van Buuren, 2012; Enders, 2010). The package Multivariate Imputation by Chained Equations (MICE) in R (van Buuren & Groothuis-Oudshoorn, 2011) was used to obtain the 100 imputed data sets.

The pool estimates in SEM were implemented to obtain the point estimate of the scores, following the equations proposed by Li, Meng, Raghunathan and Rubin (1991). The package *semTools* 0.4.14 (semTools Contributors, 2016) for R, implements the equations by Meng and Rubin (1992) and Li et al. (1991). Finally, following the recommendation by van Buuren (2012), 100 imputed data sets were generated using the package MICE 2.25 (van Buuren, 2011). All the subsequent analyses were performed using the imputed data sets, and the pooled estimates were used to present the results. The impact of the missingness will be presented in the discussion and limitations of the present study.

4.8.2 Validity and reliability. All the analyses were performed using the imputed data sets. To provide support for validity and reliability of the instruments, descriptive analyses were completed. To provide support for the first and second hypotheses, descriptive analyses, correlations, regression models between the measures, and a structural equation modeling (SEM) were completed. To provide support for the third and fourth hypotheses, *T*-tests, mean analyses and regression models were done.

4.8.3 Model estimation. The model was estimated using the imputed data sets. SEM was then implemented. One of the strengths of SEM is its flexibility, which allows examination of complex relations, use of various types of data (e.g., categorical,

dimensional, censored, count variables), and comparisons across alternative models (Hu & Bentler, 1999). The model for this study was estimated utilizing Maximum Likelihood estimation (ML). The model evaluation was performed using the guidelines from Hu and Bentler (1999). According to these authors a Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI) closer to .95 are considered models with an acceptable goodness of fit (Hu & Bentler, 1999). Likewise, the Root Mean Square Error of Approximation (RMSEA) that measures the lack of fit in a model compared to a perfect (saturated) model (Browne & Cudeck, 1992) was employed. Values of .06 or less indicate a good-fitting model relative to the model degrees of freedom (Hu & Bentler, 1999).

In order to fit a more parsimonious model, parceling was implemented to represent the depression latent factor. Parcels are constructed adding items of a scale together to preserve the parsimony and therefore reduce the number of parameters to be estimated. This strategy has shown to be a suitable approach when the hypotheses are focused on the structural relationship between latent factors (Little, Cunningham, Shahar & Keith, 2002; Little, Rhemtulla, Gibson & Schoemann, 2013). Also, due to the small sample size of the current study, it is recommended to reduce the number of parameters to be estimated, thus parceling is an effective strategy to build parsimonious SEM models. Likewise, to decrease the number of parameters; the items for the burnout, work stress and aggression factors were parceled according to the different facets of the scales. For example, the alcohol use factor was represented by one manifest variable: the total score of the MAST. The MAST is integrated by 25 dichotomous items, representing a problem since it would increase the number of parameters to be estimated, therefore the total score was included as the only manifest indicator to overcome this estimation issue.

The social desirability score was included in the model to control the effect of social desirability on the factors scores and regression paths. Also, the site of assessment and sex were used as control variables.

All the data collected was analyzed using the programs SPSS version 22 (IBM Corp, 2013) and R (R Core Team, 2015). With SPSS, all the descriptive analyses, the internal consistency analyses, the correlations, the *T*-tests, and the regression models were completed. The package *lavaan* 0.5.22 (Rosseel, 2012) for R was used to estimate the SEM model. *semTools* 0.4.14 (semTools Contributors, 2016) was employed to obtain pool estimates.

CHAPTER 5 RESULTS

5.1 Preliminary Analyses

Responses from the officers answering the survey questions at the National School of Police Training and those who completed surveys at the different prisons had several significant differences, as shown in Table 1. Specifically, officers that responded at the prisons reported higher means on the anger subscale, the hostility subscale and total score of the AQ, on the syndrome subscale and the total score of the BBQ, on the work overload subscale, the role conflict and role ambiguity subscale, the general problems subscale and the total score of the WSSCO, as well as the depression subscale and the anxiety subscale of the DASS-21, than the officers that responded at the School. All subsequent analyses were run using the site of assessment as a control variable, and results are separated accordingly. Though the method of recruitment changed during the data collection process due to poor response to the initial method, the booklets had no indication of recruitment method nor was this information recorded by the researcher. Therefore, it was not possible to control for the variable of recruitment method. This will be further explained in the Discussion.

Table 1. *T-test for Independent Samples by Site of Assessment for the Means of the Scales*

| Scales | School | | Prison | | df | Results | | |
|--------------|----------|----------|----------|----------|-------------|----------------|----------|------------|
| | <i>n</i> | <i>M</i> | <i>n</i> | <i>M</i> | | <i>t</i> | <i>d</i> | <i>fmi</i> |
| AQ-Full | 46 | 52.56 | 20 | 62.14 | 16722046.74 | -2.07* | -.67 | .002 |
| Physical | 46 | 15.79 | 20 | 18.39 | 9675127.63 | -1.47 | -.49 | .003 |
| Verbal | 46 | 10.55 | 20 | 10.77 | 5917753.07 | -.30 | -.21 | .004 |
| Anger | 46 | 10.61 | 20 | 13.03 | 665259.90 | -1.97* | -.61 | .012 |
| Hostility | 46 | 15.62 | 20 | 19.65 | 5476359.50 | -2.70** | -.83 | .004 |
| BBQ-Full | 46 | 51.28 | 20 | 65.28 | 70514200.58 | -2.23* | -.79 | .001 |
| Factors | 46 | 18.87 | 20 | 21.77 | 620914.88 | -1.84 | -.58 | .012 |
| Syndrome | 46 | 24.03 | 20 | 27.90 | 1488235.06 | -2.32* | -.71 | .008 |
| Consequences | 46 | 6.57 | 20 | 12.76 | 1.819E+10 | -1.23 | -.50 | .000 |
| WSSCO-Full | 46 | 34.12 | 20 | 53.30 | 222798550.6 | -2.05* | -.70 | .001 |
| Overload | 46 | 7.04 | 20 | 11.14 | 15324680.30 | -2.11* | -.68 | .002 |
| Role | 46 | 6.67 | 20 | 11.22 | 12579966.81 | -1.98* | -.67 | .003 |
| Phy-cond | 46 | 3.96 | 20 | 5.57 | 338571.98 | -1.53 | -.46 | .016 |
| Threat | 46 | 6.53 | 20 | 9.53 | 115273804.9 | -1.60 | -.50 | .001 |
| General | 46 | 9.29 | 20 | 14.93 | 39608814.88 | -2.32* | -.75 | .002 |
| MAST | 46 | 14.67 | 20 | 11.06 | 74633641.05 | 1.12 | .30 | .001 |
| DASS-Dep | 46 | 2.31 | 20 | 6.77 | 2546077.18 | -2.89** | -.94 | .006 |
| DASS-Anx | 46 | 2.39 | 20 | 5.07 | 310104.29 | -2.31* | -.70 | .017 |
| DASS-Stress | 46 | 3.50 | 20 | 6.26 | 6909125.98 | -1.87 | -.58 | .004 |
| CM-SDS | 46 | 7.87 | 20 | 7.70 | 1.126E+10 | .32 | .77 | .000 |

Note: AQ-Full = Aggression Questionnaire total score; Physical = AQ physical aggression subscale; Verbal = AQ verbal aggression subscale; Anger = AQ anger subscale; Hostility = AQ hostility subscale; BBQ-Full = Burnout Brief Questionnaire total score; Factors = BBQ factors subscale; Syndrome = BBQ syndrome subscale; Consequences = BBQ consequences subscale; WSSCO-Full = Work Stress Scale for Correctional Officers total score; Overload = WSSCO work overload subscale, Role = WSSCO role conflict and role ambiguity subscale; Phy-cond = WSSCO inadequacies in physical conditions of the prison subscale; Threat = WSSCO threat perception subscale; General = WSSCO general problems subscale; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale; DASS-Anx = Depression, Anxiety and Stress Scale, Anxiety Subscale; DASS-Stress = Depression, Anxiety and Stress Scale, Stress Subscale; CM-SDS = Crowne-Marlowe Social Desirability Scale.

p* < .05, *p* < .01 (Bold indicates significant values)

5.1.1 Validity and reliability. For the assessment of reliability, analyses on the Cronbach’s alphas were run. The AQ had mostly acceptable reliability ($\alpha = .89$). Its subscales also had acceptable reliability: the physical aggression subscale ($\alpha = .81$), the anger subscale ($\alpha = .82$), the hostility subscale ($\alpha = .80$), and the verbal aggression subscale ($\alpha = .52$). The verbal aggression had substantially lower reliability than the other subscales. The BBQ had low reliability ($\alpha = .42$), and so did its subscales: the factors subscale ($\alpha = .55$), the syndrome subscale ($\alpha = .53$), and the consequences

subscale ($\alpha = .09$). The WSSCO had acceptable reliability ($\alpha = .93$), so did its subscales: the work overload subscale ($\alpha = .81$), the role conflict and role ambiguity subscale ($\alpha = .89$), the inadequacies in physical conditions of the prison subscale ($\alpha = .71$), the threat perception subscale ($\alpha = .80$), and the general problems subscale ($\alpha = .87$). The depression subscale of the DASS-21 had acceptable reliability ($\alpha = .88$), as did the stress subscale ($\alpha = .87$), and the anxiety subscale ($\alpha = .81$) of the DASS-21. The MAST had an acceptable reliability ($\alpha = .91$). Finally, the CM-SDS had low reliability ($\alpha = .34$). Given the poor reliability, the mean must be considered with caution.

A Confirmatory Factor Analysis (CFA) was performed to test the validity of the scales. In this model, the stress subscale of the DASS-21 was included as a criterion for internal validity, given that the WSSCO and the BBQ are theoretically related to stress, and the effect of social desirability and site of assessment were controlled. The model showed a chi square of $\chi^2_{(164)} = 228.26$, the CFI was .93, and the TLI was .91, showing a model fit close to perfect (Hu & Bentler, 1999). The RMSEA was .08, CI 95% [.05, .10], which means the model deviated from an acceptable model fit (Browne & Cudeck, 1992). CFI and the RMSEA are not statistics that are correlated. The CFI is more affected by the chi square of the estimated model, and since it is a proportion between the null model and the estimated model it cannot be related to the RMSEA, which is calculated using the degrees of freedom (Kline, 2012). The factor loadings in the model demonstrated that all the manifest indicators were significantly explained by the latent factors.

Table 2 shows the correlations between the latent factors were as expected; aggression, depression, and work stress were positively correlated with stress. However,

burnout did not show a statically significant correlation with stress (as measured by the DASS-21), which was not expected. Burnout also did not correlate with depression or work stress. However, the scale measuring burnout did have poor internal consistency in this sample.

Table 2. *Latent Factors Correlations Confirmatory Factor Analysis Model*

| Scales | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------|---------------|--------------|---------------|-----|---------------|---|
| 1. AQ-Full | 1 | | | | | |
| 2. BBQ-Full | .44*** | 1 | | | | |
| 3. WSSCO-Full | .30* | .18 | 1 | | | |
| 4. MAST | -.05 | -.32* | .20 | 1 | | |
| 5. DASS-Dep | .51*** | .18 | .46*** | .20 | 1 | |
| 6. DASS-Stress | .58*** | .11 | .34** | .14 | .98*** | 1 |

Note: AQ-Full = Aggression Questionnaire total score; BBQ-Full = Burnout Brief Questionnaire total score; WSSCO-Full = Work Stress Scale for Correctional Officers total score; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale
 * $p < .05$, ** $p < .01$ (Bold indicates significant values)

5.2 Analyses Regarding the First and Second Hypotheses

As seen in Table 3, for the officers that completed the survey at the School, the AQ related with the BBQ and with the depression subscale of the DASS-21. Table 4 shows the relation between the AQ and the depression subscale of the DASS-21 for the officers that completed the surveys at the prisons. Table 4 also shows that the AQ did not have a significant relation with the WSSCO or the MAST. Table 5 showed that the only scales related to the AQ are the BBQ and the depression subscale of the DASS-21. Therefore, hypothesis 1 is not supported.

In the case of drug use, multiple regression models were run for the 9 participants that reported tobacco use, and for the 5 participants that reported antidepressant use. After controlling by sex, social desirability and site of assessment, tobacco use was not a predictor of aggression ($\beta = .375, p = .261$), nor was the antidepressant use ($\beta = .019, p = .970$). Given that only one person reported the use of anxiolytics, sedatives,

antipsychotics, antihistamines, no analyses were possible to run using those variables.

Therefore, the relationship between drug use and aggression is not possible to confirm.

Table 3. Correlations, Cronbach's α , and Means by Sex for the Officers that Completed the Surveys at the School ($N = 46$)

| Scales | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---------------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|-------------|------|--------------|--------------|--------------|--------------|--------------|-------|------|------|------|
| 1. AQ-Full | 1 | | | | | | | | | | | | | | | | | |
| 2. Physical | .85** | 1 | | | | | | | | | | | | | | | | |
| 3. Verbal | .67** | .51** | 1 | | | | | | | | | | | | | | | |
| 4. Anger | .85** | .59** | .51** | 1 | | | | | | | | | | | | | | |
| 5. Hostility | .86** | .62** | .38** | .68** | 1 | | | | | | | | | | | | | |
| 6. BBQ-Full | .63** | .49** | .39** | .52** | .62** | 1 | | | | | | | | | | | | |
| 7. Factors | .62** | .48** | .30* | .52** | .66** | .88** | 1 | | | | | | | | | | | |
| 8. Syndrome | .46** | .34* | .41** | .32* | .45** | .83** | .54** | 1 | | | | | | | | | | |
| 9. Consequences | .38** | .29* | .17 | .45** | .29* | .69** | .62** | .35* | 1 | | | | | | | | | |
| 10. WSSCO-Full | .09 | .10 | .10 | -.12 | .18 | .13 | .16 | .10 | .07 | 1 | | | | | | | | |
| 11. Overload | .25 | .22 | .22 | .05 | .30* | .18 | .26 | .14 | -.01 | .87** | 1 | | | | | | | |
| 12. Role | .12 | .18 | .03 | -.05 | .19 | .16 | .12 | .13 | .16 | .84** | .66** | 1 | | | | | | |
| 13. Phy-cond | .03 | -.32 | .13 | -.05 | .08 | -.02 | .03 | -.01 | -.05 | .77** | .72** | .42** | 1 | | | | | |
| 14. Threat | .06 | .11 | .06 | -.17 | .18 | .15 | .15 | .14 | .07 | .91** | .70** | .77** | .63** | 1 | | | | |
| 15. General | -.09 | -.09 | .04 | -.24 | .00 | .06 | .11 | .03 | .09 | .89** | .69** | .67** | .68** | .74** | 1 | | | |
| 16. MAST | -.07 | .03 | -.04 | -.16 | -.08 | -.17 | -.17 | -.43 | -.20 | .10 | .10 | .12 | .06 | .06 | .09 | 1 | | |
| 17. DASS-Dep | .33** | .18 | .18 | .21 | .46** | .27 | .29 | .28 | .03 | .29* | .40** | .08 | .34** | .23 | .25 | -.00 | 1 | |
| 18. CM-SDS | -.29 | -.25 | -.13 | -.13 | -.38** | -.28 | -.33* | -.15 | -.22 | -.31* | -.28 | -.27 | -.08 | -.31* | -.28 | -.19 | -.17 | 1 |
| Cronbach's α | 0.89 | 0.81 | 0.52 | 0.82 | 0.80 | 0.42 | 0.55 | 0.53 | 0.09 | 0.93 | 0.81 | 0.89 | 0.71 | 0.80 | 0.87 | 0.91 | 0.88 | 0.34 |
| Female ($n = 7$) | | | | | | | | | | | | | | | | | | |
| M | 54.12 | 14.86 | 10.55 | 12.43 | 16.28 | 52.11 | 19.55 | 23.66 | 6.78 | 39.33 | 8.85 | 7.14 | 5.14 | 5.98 | 11.91 | 5.59 | 4.93 | 8.14 |
| SD | 15.83 | 4.46 | 2.18 | 4.93 | 6.41 | 15.62 | 7.44 | 5.15 | 2.45 | 16.60 | 4.71 | 5.44 | 3.23 | 2.97 | 4.90 | 5.65 | 6.73 | .64 |
| Male ($n = 39$) | | | | | | | | | | | | | | | | | | |
| M | 52.28 | 15.95 | 10.55 | 10.28 | 15.50 | 51.12 | 18.76 | 24.09 | 6.54 | 33.17 | 6.71 | 6.59 | 3.75 | 6.62 | 8.82 | 7.32 | 1.84 | 7.82 |
| SD | 10.70 | 3.91 | 2.52 | 3.01 | 3.62 | 8.15 | 3.41 | 4.61 | 2.01 | 22.39 | 4.89 | 5.08 | 3.10 | 5.30 | 6.03 | 6.04 | 2.62 | 1.48 |

Note: AQ-Full = Aggression Questionnaire total score; Physical = AQ physical aggression subscale; Verbal = AQ verbal aggression subscale; Anger = AQ anger subscale; Hostility = AQ hostility subscale; BBQ-Full = Burnout Brief Questionnaire total score; Factors = BBQ factors subscale; Syndrome = BBQ syndrome subscale; Consequences = BBQ consequences subscale; WSSCO-Full = Work Stress Scale for Correctional Officers total score; Overload = WSSCO work overload subscale, Role = WSSCO role conflict and role ambiguity subscale; Phy-cond = WSSCO inadequacies in physical conditions of the prison subscale; Threat = WSSCO threat perception subscale; General = WSSCO general problems subscale; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale; DASS-Anx = Depression, Anxiety and Stress Scale, Anxiety Subscale; DASS-Stress = Depression, Anxiety and Stress Scale, Stress Subscale; CM-SDS = Crowne-Marlowe Social Desirability Scale.

* $p < .05$, ** $p < .01$ (Bold indicates significant values)

Table 4. *Correlations, Cronbach's α , and Means by Sex for the Officers that Completed the Surveys at the Prisons (N = 20)*

| Scales | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|--------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|---------------|------|--|
| 1. AQ-Full | 1 | | | | | | | | | | | | | | | | | | |
| 2. Physical | .92** | 1 | | | | | | | | | | | | | | | | | |
| 3. Verbal | .80** | .66** | 1 | | | | | | | | | | | | | | | | |
| 4. Anger | .91** | .74** | .61** | 1 | | | | | | | | | | | | | | | |
| 5. Hostility | .95** | .80** | .73** | .86** | 1 | | | | | | | | | | | | | | |
| 6. BBQ-Full | .31 | .29 | .26 | .29 | .36 | 1 | | | | | | | | | | | | | |
| 7. Factors | .07 | .11 | .00 | .14 | -.01 | .51* | 1 | | | | | | | | | | | | |
| 8. Syndrome | .18 | .02 | .31 | .30 | .21 | .48* | .56** | 1 | | | | | | | | | | | |
| 9. Consequences | .28 | .30 | .51* | .19 | .35 | .89** | .14 | .08 | 1 | | | | | | | | | | |
| 10. WSSCO-Full | .42 | .36 | .15 | .42 | .48* | .43 | .26 | .27 | .34 | 1 | | | | | | | | | |
| 11. Overload | .43 | .37 | .15 | .42 | .48* | .42 | .16 | .22 | .36 | .97** | 1 | | | | | | | | |
| 12. Role | .43 | .38 | .20 | .40 | .48* | .46* | .19 | .29 | .39 | .97** | .95** | 1 | | | | | | | |
| 13. Phy-cond | .25 | .19 | .05 | .31 | .28 | .30 | .38 | .19 | .18 | .88** | .86** | .80** | 1 | | | | | | |
| 14. Threat | .51* | .43 | .18 | .51* | .56** | .35 | .18 | .25 | .27 | .97** | .95** | .93** | .85** | 1 | | | | | |
| 15. General | .31 | .21 | .12 | .33 | .40 | .41 | .29 | .30 | .29 | .93** | .86** | .86** | .77** | .86** | 1 | | | | |
| 16. MAST | .19 | .14 | -.04 | .23 | .28 | .48* | -.21 | .03 | .63** | .18 | .56** | .57** | .27 | .42 | .37 | 1 | | | |
| 17. DASS-Dep | .51* | .45* | .01 | .60** | .55* | .29 | .07 | .06 | .31 | .56** | .55* | .59** | .32 | .55* | .50* | .62** | 1 | | |
| 18. CM-SDS | -.32 | -.26 | -.05 | -.35 | -.36 | -.23 | -.15 | -.09 | -.18 | -.65** | -.68** | -.68** | -.60** | -.62** | -.53* | -.45* | -.60** | 1 | |
| Cronbach's α | 0.89 | 0.81 | 0.52 | 0.82 | 0.80 | 0.42 | 0.55 | 0.53 | 0.09 | 0.93 | 0.81 | 0.89 | 0.71 | 0.80 | 0.87 | 0.91 | 0.88 | 0.34 | |
| Female (n = 6) | | | | | | | | | | | | | | | | | | | |
| M | 67.20 | 18.21 | 11.60 | 15.46 | 21.66 | 61.82 | 21.00 | 29.52 | 7.83 | 63.26 | 11.83 | 12.43 | 5.83 | 11.49 | 21.00 | 4.16 | 7.58 | 8.00 | |
| SD | 16.78 | 6.80 | 1.50 | 4.74 | 5.41 | 11.81 | 4.32 | 6.67 | 1.95 | 20.69 | 3.96 | 5.46 | 3.02 | 4.27 | 5.54 | 1.46 | 4.91 | 1.00 | |
| Male (n = 14) | | | | | | | | | | | | | | | | | | | |
| M | 59.84 | 18.44 | 10.42 | 11.98 | 18.77 | 66.67 | 22.10 | 27.21 | 14.82 | 48.93 | 10.82 | 10.68 | 5.45 | 8.67 | 12.32 | 5.83 | 6.40 | 7.57 | |
| SD | 19.05 | 7.41 | 2.82 | 4.50 | 5.89 | 30.72 | 6.87 | 6.42 | 25.67 | 42.94 | 8.98 | 10.62 | 4.43 | 8.36 | 10.11 | 5.32 | 6.71 | 2.44 | |

Note: AQ-Full = Aggression Questionnaire total score; Physical = AQ physical aggression subscale; Verbal = AQ verbal aggression subscale; Anger = AQ anger subscale; Hostility = AQ hostility subscale; BBQ-Full = Burnout Brief Questionnaire total score; Factors = BBQ factors subscale; Syndrome = BBQ syndrome subscale; Consequences = BBQ consequences subscale; WSSCO-Full = Work Stress Scale for Correctional Officers total score; Overload = WSSCO work overload subscale, Role = WSSCO role conflict and role ambiguity subscale; Phy-cond = WSSCO inadequacies in physical conditions of the prison subscale; Threat = WSSCO threat perception subscale; General = WSSCO general problems subscale; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale; DASS-Anx = Depression, Anxiety and Stress Scale, Anxiety Subscale; DASS-Stress = Depression, Anxiety and Stress Scale, Stress Subscale; CM-SDS = Crowne-Marlowe Social Desirability Scale.

* $p < .05$, ** $p < .01$ (Bold indicates significant values)

Table 5. *Regression Model of Aggression*

| Predictors | <i>B</i> | <i>SE</i> | <i>t</i> | <i>p</i> | <i>fmi</i> |
|------------|-------------|-------------|--------------|-------------|-------------|
| Intercept | .224 | .632 | .355 | .722 | .004 |
| BBQ-Full | .319 | .122 | 2.618 | .009 | .011 |
| WSSCO-Full | -.028 | .138 | -.203 | .839 | .005 |
| MAST | -.107 | .112 | -.955 | .340 | .006 |
| DASS-Dep | .312 | .138 | 2.263 | .024 | .021 |
| CM-SDS | -.155 | .128 | -1.211 | .226 | .005 |
| SITE | .067 | .266 | .253 | .800 | .005 |
| SEX | -.173 | .282 | -.614 | .540 | .003 |

Note: All variables were standardized before running the model. BBQ-Full = Burnout Brief Questionnaire total score; WSSCO-Full = Work Stress Scale for Correctional Officers total score; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale; CM-SDS = Crowne-Marlowe Social Desirability Scale; SITE: School or prison (Bold indicates significant values)

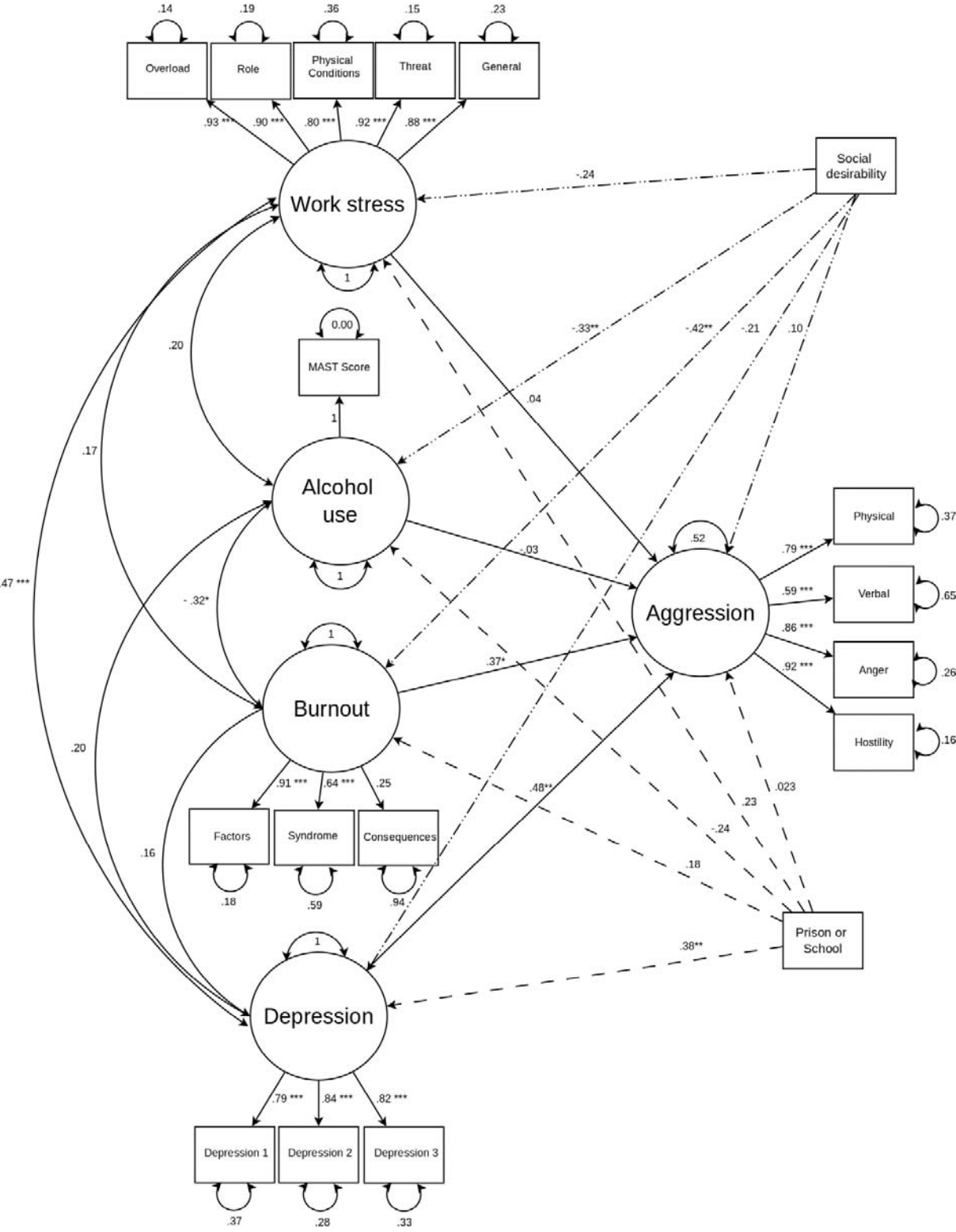
* $p < .05$, ** $p < .01$ (Bold indicates significant values)

Also, Table 3 shows the WSSCO was related with the depression subscale of the DASS-21 and the CM-SDS. And in Table 4, the BBQ was related with the MAST, the WSSCO was related with the depression subscale of the DASS-21 and the CM-SDS, and the MAST was related with the depression subscale of the DASS-21 and the CM-SDS. Therefore, hypothesis 2 not supported. In the case of drug use, logistic regression was run for the 9 participants that reported tobacco use, and for the 5 participants that reported antidepressant use. After controlling by sex, social desirability and site of assessment, drug use was not significantly related to work stress, burnout, depression or alcohol use. Therefore, the relation between drug use and the other independent variables under study is not confirmed.

5.2.1 Structural Equation Model. To achieve a higher level of explanation, a structural equation model (SEM) was created, following the path diagram presented in the introduction (see Figure 1). The SEM model fit was acceptable and close to perfect fit. The TLI was .93 which indicates the acceptable model fit; the CFI was .95 showing a model fit close to perfect fit (Hu & Bentler, 1999). The RMSEA was .07 which indicated the model deviates from an acceptable model fit (Browne & Cudeck, 1992). The factor

loadings in the model demonstrated that most of the manifest indicators (the scores) are significantly explained by the latent factors (the constructs). In order to get the statistical power of the SEM model, the RMSE fit statistic was used to get an estimation of the probability of rejecting the hypothesis of close fit according to the guidelines suggested by MacCallum et al. (1996). The result showed a statistical power of 0.34. This means, the current model has 34% probability of getting an acceptable model fit, in other words, the SEM model is underpowered therefore conclusions and results should be carefully interpreted.

As seen, Figure 2 depicts the SEM model and includes the goodness of fit and the standardized estimates. After controlling by social desirability and site of assessment, which were covariables to control the variance of those variables, depression ($\beta = .48, p < .01$) and burnout ($\beta = .37, p < .05$) were predictors of aggression, where higher levels of depression and higher levels of burnout can predict higher levels of aggression. It was found that work stress was related to depression ($r = .47, p < .001$), and alcohol use related to burnout ($r = -.32, p < .05$). It is worth mentioning that social desirability was a predictor of alcohol use ($\beta = -.33, p < .01$) and burnout ($\beta = -.42, p < .01$), which means that higher reports of social desirability indicated lower reports of alcohol use and burnout. Therefore, it could be possible that the officers were presenting higher levels of alcohol use and burnout than the ones reported. Finally, the officers that completed the surveys at the prisons report higher scores in depression ($\beta = .38, p < .01$) than the officers that completed them at the School. Therefore, hypotheses 1 and 2 are not supported.



Model fit: $\chi^2(117) = 146.18, p < .01, CFI = .95, TLI = .93, RMSEA = .07 [CI 95\% = .04, .10]$

Figure 1. Structural Equation Model

5.3 Analyses Regarding the Third and Fourth Hypotheses

As seen in Table 3, for the officers that completed the scales at the School, females had higher scores than males on the following measures: the total score of the AQ, the anger and the hostility subscales; the total score of the BBQ and the factors and the consequences subscales; the total score of the WSSCO, the work overload subscale, the role conflict and role ambiguity, the inadequacies in physical conditions of the prison, and the general problems subscales; the depression subscale of the DASS-21, and the score of the CM-SDS. The males had higher scores than females on the physical aggression subscale of the AQ, the syndrome subscale of the BBQ, the threat perception subscale of the WSSCO, and on the MAST. Therefore, hypotheses 3 and 4 are not supported.

As seen in Table 4, for the officers that completed the scales at the prisons, females had higher scores than males on the following measures: the total score of the AQ, the verbal aggression, the anger and the hostility subscales; the syndrome subscale of the BBQ; the total score of the WSSCO, and all its subscales; the depression subscale of the DASS-21, and the score of the CM-SDS. The males had higher scores than females on the physical aggression subscale of the AQ, the total score of the BBQ, the factors and the consequences subscales, and on the MAST. Therefore, hypotheses 3 and 4 are not supported.

Table 6 shows the differences between sex, where female officers reported higher scores in the anger subscale of the AQ, $t(9466187.25) = 2.00, p < .05$, and in the general subscale of the WSSCO, $t(8968694.02) = 2.83, p < .01$. Table 7 shows there are significant differences between sexes only for the depression subscale of the DASS-21. Finally, in the case of drug use, logistic regression was run for the 9 participants that

reported tobacco use, and for the 5 participants that reported antidepressant use. After controlling by social desirability and site of assessment, there were no significant differences between males and females. Therefore, hypotheses 3 and 4 are not supported.

Table 6. *T-test for Independent Samples by Sex for the Means of the Scales*

| Scales | Women | | Men | | <i>df</i> | Results | | |
|--------------|----------|----------|----------|----------|-------------|---------------|----------|------------|
| | <i>n</i> | <i>M</i> | <i>n</i> | <i>M</i> | | <i>t</i> | <i>d</i> | <i>fmi</i> |
| AQ-Full | 13 | 60.20 | 53 | 54.30 | 117519200.9 | 1.09 | .40 | .001 |
| Physical | 13 | 16.42 | 53 | 16.61 | 5770650.73 | -.11 | -.04 | .004 |
| Verbal | 13 | 10.99 | 53 | 10.52 | 5573744.71 | .67 | .23 | .004 |
| Anger | 13 | 13.83 | 53 | 10.73 | 9466187.25 | 2.00* | .78 | .003 |
| Hostility | 13 | 18.77 | 53 | 16.37 | 567206030.4 | 1.21 | .47 | .000 |
| BBQ-Full | 13 | 56.61 | 53 | 55.26 | 80786041.28 | .27 | .03 | .001 |
| Factors | 13 | 20.21 | 53 | 19.64 | 4616188.08 | .30 | .11 | .004 |
| Syndrome | 13 | 26.36 | 53 | 24.92 | 14290046.66 | .71 | .25 | .003 |
| Consequences | 13 | 7.27 | 53 | 8.74 | 28429587.29 | -.72 | -.12 | .002 |
| WSSCO-Full | 13 | 50.39 | 53 | 37.36 | 141491360.1 | 1.71 | .45 | .001 |
| Overload | 13 | 10.23 | 53 | 7.80 | 81449403.05 | 1.51 | .40 | .001 |
| Role | 13 | 9.59 | 53 | 7.67 | 7064942.562 | .95 | .27 | .004 |
| Phy-cond | 13 | 5.46 | 53 | 4.20 | 13594492.74 | 1.21 | .35 | .003 |
| Threat | 13 | 8.53 | 53 | 7.17 | 3948419.35 | .86 | .22 | .005 |
| General | 13 | 16.11 | 53 | 9.74 | 8968694.02 | 2.83** | .85 | .003 |
| MAST | 13 | 9.89 | 53 | 14.48 | 25407719.54 | -1.35 | -.35 | .002 |
| DASS-Dep | 13 | 6.17 | 53 | 3.05 | 1137068.65 | 1.66 | .62 | .009 |
| DASS-Anx | 13 | 4.87 | 53 | 2.80 | 444440.16 | 1.44 | .52 | .014 |
| DASS-Stress | 13 | 7.14 | 53 | 3.64 | 1609992.90 | 1.89 | .74 | .008 |
| CM-SDS | 13 | 8.08 | 53 | 7.75 | 9.961E+10 | .93 | .12 | .000 |

Note: AQ-Full = Aggression Questionnaire total score; Physical = AQ physical aggression subscale; Verbal = AQ verbal aggression subscale; Anger = AQ anger subscale; Hostility = AQ hostility subscale; BBQ-Full = Burnout Brief Questionnaire total score; Factors = BBQ factors subscale; Syndrome = BBQ syndrome subscale; Consequences = BBQ consequences subscale; WSSCO-Full = Work Stress Scale for Correctional Officers total score; Overload = WSSCO work overload subscale, Role = WSSCO role conflict and role ambiguity subscale; Phy-cond = WSSCO inadequacies in physical conditions of the prison subscale; Threat = WSSCO threat perception subscale; General = WSSCO general problems subscale; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale; DASS-Anx = Depression, Anxiety and Stress Scale, Anxiety Subscale; DASS-Stress = Depression, Anxiety and Stress Scale, Stress Subscale; CM-SDS = Crowne-Marlowe Social Desirability Scale.

* $p < .05$, ** $p < .01$ (Bold indicates significant values)

Table 7. *Regression Models for Sex Differences*

| Dependent variables | Predictors | <i>B</i> | <i>SE</i> | <i>t</i> | <i>p</i> | <i>fmi</i> |
|---------------------|------------|--------------|-------------|---------------|-------------|-------------|
| AG-Full | Intercept | -.109 | .674 | -.162 | .871 | .002 |
| | SEX | -.344 | .290 | -1.183 | .237 | .001 |
| | SITE | .560 | .251 | 2.230 | .026 | .002 |
| | CM-SDS | -.304 | .115 | -2.647 | .008 | .002 |
| BBQ-Full | Intercept | -1.044 | .680 | -1.537 | .124 | .001 |
| | SEX | .032 | .293 | .109 | .913 | .001 |
| | SITE | .757 | .253 | 2.992 | .003 | .002 |
| | CM-SDS | -.220 | .116 | -1.900 | .057 | .003 |
| WSSCO-Full | Intercept | .075 | .608 | .123 | .902 | .001 |
| | SEX | -.431 | .262 | -1.645 | .100 | .001 |
| | SITE | .540 | .226 | 2.384 | .017 | .001 |
| | CM-SDS | -.486 | .104 | -4.690 | .000 | .000 |
| MAST | Intercept | -.056 | .713 | -.079 | .937 | .003 |
| | SEX | .243 | .307 | .791 | .429 | .004 |
| | SITE | -.293 | .265 | -1.106 | .269 | .001 |
| | CM-SDS | -.253 | .121 | -2.084 | .037 | .000 |
| DASS-Dep | Intercept | -.015 | .613 | -.025 | .980 | .015 |
| | SEX | -.536 | .264 | -2.026 | .043 | .015 |
| | SITE | .753 | .228 | 3.308 | .001 | .008 |
| | CM-SDS | -.382 | .104 | -3.669 | .000 | .008 |

Note: All variables were standardized before running the model. AQ-Full = Aggression Questionnaire total score; BBQ-Full = Burnout Brief Questionnaire total score; WSSCO-Full = Work Stress Scale for Correctional Officers total score; MAST = Michigan Alcohol Screening Test; DASS-Dep = Depression, Anxiety and Stress Scale, Depression Subscale; CM-SDS = Crowne-Marlowe Social Desirability Scale; SITE: School or prison (Bold indicates significant values)

5.4 Exploratory Analyses

5.4.1 Differences between sociodemographic variables. Several *T*-tests and regression models were run to study possible differences between the sociodemographic variables reported. There were differences between those who have children and those who do not, where those who have children reported higher scores on the total scores of the AQ, $t(24486.50) = 2.31, p < .05$, the anger subscale, $t(57887.46) = 2.29, p < .05$, and the hostility subscale of the AQ, $t(32328.61) = 2.29, p < .05$, on the total scores of the BBQ, $t(887751.18) = 2.55, p < .05$, and the syndrome subscale of the BBQ, $t(757104.16) = 2.99, p < .01$, on the scores of the depression subscale, $t(242157.21) = 3.95, p < .001$, the anxiety subscale, $t(112424.13) = 2.23, p < .05$, and the stress subscale,

$t(98194.39) = 2.43, p < .05$, of the DASS-21. Finally, some differences were found between groups in academic level where those with a level of complete high school or superior reported higher scores on the role subscale of the WSSCO, $t(18455723.32) = -2.40, p < .05$, than those with a level inferior than high school.

The correlation analyses showed that the number of children the officers reported to have is related with the work overload subscale ($r = .46, p < .05$), the role conflict and role ambiguity subscale ($r = .40, p < .05$), the inadequacies in physical conditions of the prison subscale ($r = .49, p < .05$), the threat perception subscale ($r = .47, p < .05$), the general problems subscale ($r = .46, p < .05$), and the total score of the WSSCO ($r = .49, p < .05$). Finally, a regression model showed that sex ($\beta = -3.43, p < .05$) was a predictor of the anger subscale of the AQ.

5.4.2 Differences between job variables. There were also differences between those who have a second job and those who only work as correctional officers, where those with a second job reported higher scores on the work overload subscale, $t(28200.94) = 2.33, p < .05$, the role subscale, $t(12332.34) = 2.42, p < .05$, the threat perceptions subscale, $t(94122.16) = 2.00, p < .05$, and the total score of the WSSCO, $t(66106.03) = 2.10, p < .05$. They also reported higher scores on the anxiety subscale of the DASS-21, $t(21978.99) = 2.21, p < .05$, than those who only work as correctional officers. There were differences between those who have been working in the same prison and those who have worked in different prisons, where those who have worked in different prisons reported higher scores on the depression subscale, $t(332592.35) = -2.15, p < .05$, and on the anxiety subscale, $t(889020.79) = -2.16, p < .05$, of the DASS-21. Finally, differences were found between monthly salary where the ones that make more

than \$1000 per month reported higher scores in social desirability, $t(1.722E+10) = 2.53$, $p < .05$, than those that earned less than \$1000 per month.

Correlation analyses showed that the number of months working as correctional officers is related with the total score of the AQ ($r = .25$, $p < .05$), the physical ($r = .25$, $p < .05$) and the hostility ($r = .28$, $p < .05$) subscales of the AQ, the depression ($r = .37$, $p < .01$) and anxiety ($r = .24$, $p < .01$) subscales of the DASS-21, and with the number of children ($r = .34$, $p < .05$). A regression model showed that schedule ($\beta = 3.74$, $p < .05$), working in the maximum-security level ($\beta = 3.54$, $p < .05$), and having a second job ($\beta = -2.79$, $p < .05$) were predictors of scores on the anger subscale of the AQ. Working in a medium-security level prison was a predictor of the verbal subscale of the AQ ($\beta = 2.34$, $p < .05$). Having a second job was a predictor of the hostility subscale of the AQ ($\beta = -3.79$, $p < .05$) and of the work overload subscale of the WSSCO ($\beta = -4.17$, $p < .05$). Finally, having a second job ($\beta = -10.00$, $p < .05$) and working in a maximum-security level ($\beta = 12.08$, $p < .05$) were predictors of the total scores of the AQ.

5.4.3 Differences between reported diseases. When it comes to the presence of disease, differences were found between those who suffer from asthma in the scores of the physical conditions subscale of the WSSCO, $t(19655.03) = -2.33$, $p < .05$, and in the anger subscale of the AQ, $t(44338250.74) = -2.60$, $p < .01$, and those who do not report it. Those who suffer from gastritis had differences in the verbal subscale, $t(1829563.51) = -3.19$, $p < .01$, the hostility subscale, $t(43762666.50) = -2.89$, $p < .01$, and the total score of the AQ, $t(178686496.7) = -2.61$, $p < .01$, and those who do not report it. Between those who suffer from insomnia in the scores of the anger subscale, $t(17319899.84) = -2.54$, $p < .05$, and the total score of the AQ, $t(50549447.65) = -2.60$, $p < .01$, and on the anxiety subscale, $t(2149300.86) = -2.03$, $p < .05$, and the stress

subscale, $t(4790356.31) = -2.69, p < .01$, of the DASS-21, and those who do not report it. Finally, it was found that those who suffer from migraines reported higher scores on the role subscale of the WSSCO, $t(191381.11) = 1.99, p < .05$, than those who do not report it.

A regression model showed that suffering from asthma was a predictor of the anger subscale of the AQ ($\beta = 6.09, p < .01$), the hostility subscale of the AQ ($\beta = 5.99, p < .05$), and the total score of the AQ ($\beta = 18.56, p < .01$), of the consequences subscale ($\beta = 24.02, p < .001$) and the total scores ($\beta = 33.88, p < .001$) of the BBQ, and of the work overload subscale of the WSSCO ($\beta = 6.40, p < .05$). Suffering from migraines ($\beta = 1.92, p < .05$) was a predictor of the depression subscale of the DASS-21. Finally, the stress subscale of the DASS-21 was a predictor of the anger subscale ($\beta = 1.03, p < .01$), and the physical aggression subscale ($\beta = .84, p < .05$), of the AQ.

CHAPTER 6 DISCUSSION

6.1 Analyses Regarding the First and Second Hypotheses

In terms of the first hypotheses, only the relationships with alcohol and tobacco use were analyzed, because these were the substances that the officers reported to use; few reported the use of antidepressants and none reported the use of marijuana or other illicit drugs. It was found that neither tobacco nor alcohol use were related with any component of aggression which was unexpected, but could be because many officers underreport the use of drugs and alcohol, probably due to social desirability since officers are expected not to use drugs of any kind. The second hypothesis was not supported because alcohol use was only related to burnout, drugs use was not related with any other variable, and work stress was only related with depression and social desirability. Social desirability was found to be a predictor of alcohol use and burnout, but since the scale used to measure social desirability had low reliability and validity with the current sample, these results should be interpreted with caution.

In terms of depression, it was related to and was a predictor of aggression, as mention in previous research (Liu et al., 2013; Sui, Hu et al., 2014). It also was found that work stress was not related with aggression, which was completely unexpected since as studied by Herberger and Magda (2015), the higher the work stress level, the higher the aggression level. It is worth mentioning that only in the case of the officers surveyed at the prisons, it was found that the threat perception subscale of the WSSCO was related with the full score of the AQ, and the anger and hostility subscales of the AQ, which could be due to the fact that they were answering the questions at the prison, where they

could be exposed to possible threats dealing with the inmates, the visitors and other people at the facilities.

Despite the fact that the burnout scale did not have high internal consistency, it was found that burnout correlated with and was a predictor of aggression and its different components, as expected. What draws attention is the fact that burnout relates to aggression for the officers that completed the survey at the School but not for those who did it at the prison, especially because the mean scores were higher for burnout and aggression for the officers surveyed at the prisons. This could be because for the ones surveyed at the prisons, aggression is related to threat perception, which could mean that if the officers are surveyed at their work places threat perception gains weight, but when they are surveyed at a different place, burnout gains weight.

The SEM model was an important component related to the first and second hypotheses, because it considers multivariate information and the error measurement is corrected, contrary to the correlation analyses. The model showed that burnout and alcoholism were correlated, as expected (as in Finney et al., 2013). When social desirability and site of assessment were controlled, depression and burnout were in fact predictors of aggression among correctional officers supporting previous literature (i.e., Herberger & Magda, 2015). However, this finding should be interpreted with caution given the reliability issues of the BBQ and the CM-SDS.

But contrary to what was expected, work stress and alcohol use were not predictors of aggression. This may be because the officers underreported the use of alcohol due to social desirability. In the case of work stress, it could be due to the fact that aggression is probably related to the stress caused by working with human beings specifically, and not with other causes of work stress, which could also explain why

burnout did predict aggression. At the same time, work stress and depression were related, providing support to Senol, Durak, and Gencoz's (2006) idea that the WSSCO instrument can be used to assess not only work stress, but depression as well, with correctional police samples. The SEM provided additional information that further did not support the first and second hypotheses.

It is worth mentioning that the results from the aggression scale were not related to the social desirability scale, but depression, work stress, burnout and substance use were related to social desirability. This may be because depression, work stress, burnout and substance use are socially considered as weaknesses, especially among law enforcement officers. But aggression is an expected feature among officers. Also, the fact that burnout and work stress were not correlated may be due to the small sample size and the low internal consistency of the BBQ, therefore resulting in low statistical power and reliability. Another possible explanation could be that the BBQ and the WSSCO have not been used in Costa Rica before, therefore did not capture the constructs as desired. It is possible that the BBQ had a low internal consistency because the construct was not clear for the officers, since they had trouble understanding what burnout means.

6.2 Analyses Regarding the Third and Fourth Hypotheses

In terms of the third and fourth hypotheses, both were not support because males only had higher levels of alcohol use and physical aggression than females which were expected, but males had higher levels of burnout than females, which was not expected. These findings could be because the BBQ had low internal consistency. In terms of drug use, since only 9 officers reported the use of tobacco, only 5 officers reported the use of antidepressants, no officer reported the use of marijuana, and no officer indicated the use

of other type of illicit drugs, the lack of information was a difficulty to run proper analyses in order to provide support to the hypothesis that female officers were going to have higher drug use than males.

Also, it is important to mention the fact that females had higher total scores of aggression than males, which was completely unexpected, but confirms what Warburton and Anderson (2015) found. They found that males were more prone to express aggressive behaviors, but females could be as aggressive as men, in an indirect and relational way, when they were strongly provoked. This may explain why female officers in this current study had higher scores in anger and hostility than male officers.

Female officers also had higher levels of work stress and depression than males, which was unexpected because, as mentioned by Tewksbury and Collins (2006), females tend to be more satisfied with their job than males, but females tend to have a social permission to express their emotions more freely than males and they did so on the surveys. It may also be because in men, depression is usually manifested by “(...) irritability; anger; hostile, aggressive, abusive behavior; risk taking; substance abuse; and escaping behavior” (Ogrodniczuk & Oliffe, 2011, p. 153), therefore male officers were going to be reporting aggression, but were less probable to be reporting the symptoms of depression measured by the DASS-21.

There is an informal way of organizing the division of jobs within corrections, where men and women are seen as having different abilities, and because of that men are usually in charge of “security” tasks and women of “caring” tasks (Bruhn, 2014). It was observed during the data collection that female officers oversaw different tasks than the male officers, showing a gendered division of labor that tend to be presented among law enforcement officers (Bruhn, 2014). Given that in the present study various indicators of

sexism or police subculture were not considered, it could be argued that the possible presence of sexism in the workplace could influence how women experience aggression, depression and work stress, and further differentiate the experience of female officers than male officers.

6.3 Relevant Aspects of the Preliminary Analysis

It is worth mentioning that there were differences between the officers that answered the scales at the National School of Police Training and those who completed them at the different prisons, which was identified once the data collection started at the prisons but was not considered as part of the research hypotheses. The officers that answered the scales in the prisons had higher scores of aggression, especially anger and hostility, on burnout, work stress, and depression and anxiety, than the officers that answered them at the School. This finding could be because the ones that answered the scales at the School did it in a different environment than the prison, and also did it in the morning, where they were rested and with their minds not affected by any other stimuli. The ones that answered the scales at the prisons did it at their work places, which could be a stressful environment, they did it during the afternoons, during their break lunches or after their work shifts ended, which may have resulted in them being tired and therefore more prone to report higher levels of depression, work stress, burnout and aggression. Therefore, the results of the present study were affected by the fact that there were statistical significant differences between the officers surveyed at the School and the ones surveyed at the prisons.

6.4 Relevant Aspects of the Validity and Reliability

In the specific case of the WSSCO, it is important to mention that the Spanish version of the scale created for the purposes of the present study had comparable psychometrics to the English and Turkish validated versions. Given that the WSSCO was correlated with the depression subscale of the DASS-21 in the same manner as reported in previous literature (Senol et al., 2006), it could be argued that the WSSCO could be used to assess the presence of depression among correctional officers as well. Having a scale that can be used to measure multiple psychological conditions would be helpful for forensic and police psychologists from Costa Rica, especially for the assessment of a population that does not like to read, as the psychologists would be able to get relevant information by using as few measures as possible.

The scale used to assess burnout did not have strong internal consistency. The scale was initially validated with Spanish sample, not with Costa Rican samples, and the cultural differences could be interfering with the understanding of the questions, thus reducing internal consistency. It is also important to mention that during the data collection many officers asked questions regarding the items of this scale, which was another indication that many officers did not understand the construct behind it.

In the case of the social desirability scale, even though it has been previously validated with Costa Rican samples, the internal consistency was low for this sample. This could be due to the fact that they did not understand the questions, due to the small sample size, or it could be that they answered in a very random way, not paying attention to the items, or because, as noted in previous studies (e.g., Otarola, 2015), Costa Rican populations, especially those with lower academic levels, tend to answer instruments addressing psychological constructs in a very desirable way. In comparison with forensic

populations, the officers assessed for the present study had similar mean scores that the ones reported by Andrews and Meyer (2003) $M = 7.61$, which according to these authors are usually higher for this type of populations in comparison with non-forensic populations. Also, according to Johnson and Fendrich (2002) Latino populations tend to have higher scores ($M = 5.5$), which represent higher social desirability, than Whites ($M = 4.56$). If the sample from the present study is compared with the samples from these previous studies, it is noticeable that in previous Latino samples, scores on this measure are generally high, so the high scores from the present sample are consistent with this fact.

Similarly, Chopko, Palmieri and Adams (2013) mentioned that law enforcement officers tend to underreport mental health symptoms because of the stigma around mental illness and the possible effects it might have on their jobs. This could explain why the correctional officers assessed for the present study reported low scores on the depression, stress and anxiety subscales of the DASS-21. If the officers surveyed were afraid that the Headquarters were going to have access to the information they provided, even though the informed consent indicated only the researcher was going to see their answers, they may have underreported any conditions that might have implicated a sanction or a consequence.

6.5 Relevant Aspects of the Exploratory Analyses

Other interesting differences were found having to do with the sociodemographic aspects that were considered as control variables. First, there were differences between the officers that reported to have children and those who reported not having children, where those who have children reported higher scores in aggression, especially in anger

and hostility, and also in burnout, depression, anxiety and stress. It was also found that the number of children was related to and was a predictor of all the components of work stress. This could be because having children is an external stressor for the correctional officers, and since most of them have to stay at the prisons for an entire week during their 7 by 7 shifts, it could be possible that not seeing their children during that time increases their levels of stress, work stress and aggression. Therefore, for future research is important to assess family interactions and its impact on aggression at work.

Between the officers that reported to have a second job and those who only work as correctional officers, it was found that those with a second job reported higher levels of work stress and anxiety. Having a second job also was a predictor of anger, hostility and work overload. This finding could be because the officers that have a second job work during the week they have off from the prison, which implies that when they are supposed to be resting, they are working, reducing their chances to spend time with their families or enjoying other type of recreational activities. So, when they return to the prison they are likely tired and stressed, thus increasing their levels of symptoms reported on the DASS-21. Therefore, for future research it could be useful to assess the impact of having a second job on the aggressive behaviors shown at the correctional facilities; also, it could be useful to study if there are differences between the type of work the officers do at their second job.

The officers that only have worked at one prison reported higher levels of depression and anxiety than the ones that have worked in different prisons, probably because changing prisons could imply changing the population they have to work with, or because they have gotten habituated to the dynamic of that particular prison. The number of months working as a correctional officer was related to aggression, especially with

physical aggression and hostility, and with depression and anxiety, but curiously not with stress, work stress or burnout. And, the work schedule was a predictor of anger. What these results show is the fact that is important to train aggression and emotional management skills among Costa Rican correctional officers, so that they could deal better with the work conditions of their profession. It could also be important to think of better ways to schedule their shifts and the time they spend at a specific prison, to prevent aggressive behaviors towards the inmates and other officers.

Working in the maximum-security level prisons was a predictor of anger and physical aggression, while working in the medium-security level was a predictor of verbal aggression. It was unexpected that the security level of the prison was not a predictor of work stress, because according to Steiner and Wooldredge (2015), the correctional officers that work in maximum security prisons tend to experience more work stress, probably because they perceive more threats, such as been attacked by an inmate or a visitor, than those who work at minimum security levels.

According to Gould, Watson, Price and Valliant (2013), the workers at young offenders' prisons may be prone to stress and burnout because of multitasking and the inability to rehabilitate young offenders. Even though the prisons visited in the study attended only adult populations, there were officers assessed at the School that reported working at the juvenile prison. Also, during the data collection, it was noted that most of the officers have worked in different prisons during their careers. The officers mentioned anecdotally that the elderly inmates are easier to handle than young inmates. It was also noticeable by the researcher that in the mornings the pace is slower, especially at the prison for elderly inmates. Therefore, the officers that work at the juvenile prison could be experiencing higher levels of burnout and aggression than those who work at the

elderly prison due to the pace and energy level of the inmates. Future research could explore this possibility further.

The psychophysiological conditions that the officers reported included asthma, gastritis, insomnia and migraines. Officers that reported suffering from asthma also reported higher levels of anger and inadequacies in physical conditions of the prison, as surveyed by the WSSCO. Suffering from asthma also was a predictor of anger, hostility, work overload and the consequences component of burnout. The officers that reported suffering from gastritis also reported higher levels of aggression, especially verbal aggression and hostility. The officers that reported suffering from insomnia also reported higher levels of aggression, especially anger, as well as anxiety and stress.

The officers that reported suffering from migraines also reported higher levels of role conflict and role ambiguity than the officers that did not reported suffering any condition. Finally, suffering from migraines was a predictor of depression. What these results show is the fact that experiencing aggression has psychophysiological and physical consequences on the correctional officers, which reduces their well-being and could affect the turnover incidence among them. Therefore, is important to study more thoroughly the causes and consequences of aggression, to develop intervention strategies, such as behavioral or cognitive trainings, that could target specific triggers and conditions, to benefit not only the officers, but the organizational development as well.

6.6 Relevant Aspects of the Selected Sample

During the data collection process, several observations were made, along with informal interactions with different correctional staff members, which are important to mention for the purpose of the present research. First of all, most of the correctional officers come from areas distant from the metropolitan area, which implies that they have

to travel long distances to get to their work places. According to Marysia Grijalba, (personal communication, June 1st, 2016) from the Headquarters of the Correctional Police, most of the correctional officers come from rural areas, and given the current condition of the roads in Costa Rica and the road congestion, it is difficult to access the Metropolitan areas coming from remote areas. This may be one of the reasons why only a small number of officers went to the National School of Penitentiary Training in Heredia to participate in the present study. This factor is also relevant in the sense that people from rural areas are more likely to act in a sexist and aggressive way (Panamerican Health Organization, 2004), they also tend to have a higher use of alcohol (Panamerican Health Organization, 2004), than people from the Metropolitan Area. It was also mentioned by Marysia Grijalba (personal communication, June 1st, 2016) that the correctional officers within the Costa Rican system do not like to read, not even in trainings as part of their job, which could be due to their lower educational level. This dislike or difficulty with reading may have impacted the number of officers willing to participate in the current study.

6.7 Relevant Aspects of the Methodology

Given the fact that various questions were not answered by the officers, the data needed to be imputed using multiple imputation processes to be analyzed. Several mathematical equations were used to obtain the 100 imputed data sets and the pooled data set that was used in the different analyses that were done. It is important to take in account that the results obtained cannot be generalized to all the Costa Rican correctional police population, as these results only represent the sample that participated on the present study. But these results are valuable in terms of showing that results found in

similar studies done with North American, European and Asian samples could be replicated with Latin American samples.

6.8 General Implications of the Results

Some situations that might be part of the “code of behavior” of correctional officers include protecting all officers in danger, avoiding being friendly with inmates, and never talking behind the backs of their fellow officers (Ricciardelli & Gazso, 2013). In the case of the Costa Rican officers, this “code” includes calling each other by their last names or nicknames, and having a clear division between officers and other members of staff. This is noticeable especially in the staff common areas, where officers sit with each other, and other members of staff sit at separate tables. One member of the kitchen staff mentioned that the male officers are very “machistas” (male chauvinists) and they talk as the inmates when referring to females. The officers know that The Ministry of Justice and Peace provides bulletproof vests, guns and bludgeons; but they usually do not wear the guns while on duty, and only carry them in emergency situations or when they have to transfer the inmates outside the prison.

What these results and observations yield is that the “code of behavior” of the correctional officers from Costa Rica does not include the use of weapons to control the inmates, which reduces the possibility of certain types of physical aggression through extralegal use of force. Instead, the officers are expected to use behaviors such as yelling, pushing or threatening the inmates to impose their control, as mentioned by several officers directly to the researcher. At the same time, the officers that work with young inmates will be expected to be more aggressive than those who work with elderly inmates, because young inmates are more violent than elderly inmates. When it comes to

aggressive behaviors against each other (i.e., officer against officer), they may be expected to be verbally abusive against other co-workers, and probably sexist against female officers, as mentioned by some officers and other members of staff directly to the researcher. Therefore, the presence of depression, burnout, work stress, and alcohol and drug use, and its relation with aggression, could be also related with the specific “code of behavior” of the Costa Rican officers surveyed.

Gordon and Baker (2015) propose that the different perceptions of the correctional officers regarding the work environment depend on the inmate composition of the prison they work in, the officer routines, and how they interact with the overall prison system. In Costa Rica, the prisons are overcrowded, with the population well above the acceptable standards and facilities in marked deterioration, and the number of convicted persons is still rising (Vargas, Montero & Fernandez, 2013). Given that several correlations between aggression and different psychophysiological conditions were established, as well as with work stress and burnout, is important to continue studying the psychological and physical impact that aggression has among correctional officers, to develop better strategies that prevent not only the presence of diseases, but also to reduce the probability that these officers would use extralegal force and violence against the inmates and other coworkers.

CHAPTER 7 LIMITATIONS

7.1 Aspects Related to the Response Rate

Because the different booklets with the surveys included 165 questions, plus the sociodemographic questions, many correctional officers refused to participate, because it implied having to read and answer all those questions, as mentioned by several officers directly to the researcher. According to Marysia Grijalba (personal communication, June 1st, 2016), the psychologist of the National Headquarters of the Correctional Police of Costa Rica, the correctional officers tend to avoid reading, possibly because of their lower academic level or the fact that reading is not an activity they do in their everyday lives. Therefore, the fact that the present study involved reading and answering many questions may have influenced the number of correctional officers that decided to participate, affecting the results.

Given that only 66 correctional officers participated on the study, and some questions in the booklets were not answered, multiple imputations of the data were required to run the different statistical analysis. Both situations make the present results not generalizable to the whole population of neither correctional officers from Costa Rica nor correctional officers in general. This situation also is related to the fact that the SEM analysis had a statistical power of 0.34, which means the analyses was underpowered, and therefore its results are not generalizable.

7.2 Aspects Related to the Recruitment Procedure

It is also important to note that the sample of 66 officers might have their own reasons to participate, which may represent a selection bias affecting the results. For example, the officers might have thought that their answers were going to have an impact

on their current labor situation, or they might just have wanted to do some catharsis. Also, the fact that the prisons visited were selected by the researcher because of previous experience working on them, not following a random selection, may have biased the selection of the sample, and the expected results, because not all the correctional officers had the chance to participate. Although, is important to mention that the permissions were given to visit only five prisons, because of security reasons, thus limiting the possibility of achieving a randomized sample.

The fact that the recruitment procedure was not controlled during the analysis of the data, represents one of the major limitations of the study, because there was not an objective way of measuring how the different strategies for contacting the sample affected the results. For example, there was no way to measure if the officers contacted personally opted to participate more often than the officers contacted through the flyer, which could inform the strategy that would be more useful for future research.

The officers responded to the surveys at various places and this too is a limitation because there was limited control over the conditions of assessment. The officers that answered the surveys at the School did it individually, but the officers that answered them at the prisons did it in groups. In the group setting, officers discussed with each other their answers, which may have influenced others' answers, especially regarding the substance use questions. It is important that for future research all the data collection remain standardized, meaning that all the people surveyed answer the questions in a group setting or individually, whichever is more likely to ensure standardized administration and limited interaction among the participants. Also, since the correctional officers are not supposed to use alcohol and drugs, participants could have underreported the use of these substances to avoid possible administrative consequences,

given that they could not be absolutely sure the results were not going to be known by the Headquarters.

7.3 Aspects Related Internal Consistency of the Scales

The Work Stress Scale for Correctional Officers was developed in Turkey and only had an English translation; therefore, a Spanish translation was needed for the present study. Nevertheless, it is important to mention the WSSCO had good internal consistency with the current sample, so even though there was no previous validation with a Costa Rican sample, nor with Latin-American samples, it still was a valid measure. This indicates that the WSSCO could be used in future research with samples like the one used for the present study.

The fact that the verbal subscale of the Aggression Questionnaire had a low Cronbach's alpha might be because the questions related to it are not directly addressing yelling, screaming, offending or similar aggressive verbal behaviors, therefore the officers could have answer the questions not considering the aspects assessed as aggressive as they should have had, or simply were not honest about it. When it comes to the Crowne-Marlowe Social Desirability Scale, it might have had a low internal consistency because the officers did not understand the questions or because they answer them in an unexpected direction.

The Burnout Brief Questionnaire is an instrument that is meant to be used for research purposes only, therefore is not a diagnostic instrument, which tend to be phrased in a simpler way, so questions of the BBQ could have been phrased using a vocabulary that could be hard for samples with lower academic levels to understand. In the present study, the fact that the original version of the scale from Spain was used could have affected the comprehension of the questions by the officers, because of the variations on

the language. The fact that the BBQ did not have a previous Costa Rican validation might have had an impact on the results presented in this study, to the fact that the BBQ and all its subscales had a low internal consistency and to the fact that it did not correlated to the WSSCO.

7.4 Aspects Related to the Costa Rican Idiosyncrasy

With Costa Rican samples is important to consider the fact that the country does not have a culture of participation in research, therefore if the potential participants do not perceive a direct gain by participating, it is probable they will decline to do so. This perception of a lack of direct gain may have limited the number of participants in the present study. Also, Costa Ricans tend to answer questions regarding psychological constructs in a socially desirable way, especially constructs that are related to mental illness or with conditions that are socially perceived as signals of weakness (Otarola, 2015). This inclination to answer in a desirable way may have impacted the results by reducing the number of officers that reported substance use, and by likely changing the way they answered several other questions. For example, for the questions related to aggression, to sound less aggressive, participants may have not responded honestly, thus leading to low internal consistency on the AQ-verbal subscale. In the present study, several of measured constructs may have led to less honest responding in favor of social desirability, including the measures of work stress, burnout, and depression.

CHAPTER 8 RECOMMENDATIONS

The present study showed the importance of selecting the most appropriate methodology. It was observed that at least for Costa Rican correctional officers, conducting a quantitative study using only psychometric instruments is not the most useful way of getting the expected results. A qualitative methodology involving focus groups or interviews may facilitate the understanding of survey questions, and gathering of information more easily and thoroughly. At the same time, a qualitative strategy may be more engaging for Costa Rican samples. In case of choosing a quantitative approach, a way to prevent missing information could be through a planned missingness strategy, where the researcher planned to have missing data from the start. With this strategy, it is possible to know how many people are needed to survey in order to have high statistical power. Also, by selecting which participants are going to complete which scales, so that it could be assured that all the scales have enough responses.

Along with what was previously mentioned in the Discussion, it is important to prepare an effective recruiting strategy that can ensure that the final sample will include as many participants as possible, as this will ensure the results will be more generalizable to the study population. This strategy should include clear inclusion and exclusion criteria that should be based on enough knowledge of the population characteristics through a thorough literature research, and interviews with professionals that are in contact with the study population. It is also important that when planning the analysis strategy all variables are considered, especially those related to the recruitment method. This includes, tracking of how many participants were contacted through which recruitment strategy, and adding the recruitment method as a variable for analysis. Another useful

tool to increase participation could be by offering individual incentives to the entire expected sample, to indicate participants have a direct gain of participating. This incentive should be a gain that is significant enough to encourage participation, but conservative enough to avoid selection bias or coercion. .

Is important to select assessment tools that have been used before, preferably tools that have been previously validated or standardized, with the study population, or with similar populations. This is also important for ensuring that the theoretical constructs under study will be comprehended by the participants, which will likely ensure a higher response rate, and lead to more generalizable results. Given that not many tools have been validated with Costa Rican populations, the first step would be to run the validation studies, to use those possible scales in future research. For example, burnout could have been assessed using the Maslach Burnout Inventory that have been previously used with Costa Rican samples. This measure was not used in the current study due to its cost.

It is also important to consider alternative ways to assess for alcohol and drug use that would allow for more honest responding, or even consider asking about this issue in different settings than a work place. For example, assessing the correctional officers at neutral places like a University, or in a one-on-one interview. Also, a researcher needs to assure that only she will have access to the information obtained through these methods, so the participants will feel more compelled to answer in an honest way.

Given that Latino populations tend to be affected by patriarchal standards (Panamerican Health Organization, 2004), where females are treated differently than males, is important to include scales that assess and control for gender differences caused by sexism, gender violence and gender stereotypes, to make sure the results are not

mediated by those aspects. Especially with forensic samples, such as Latino correctional officers, is important to make sure the constructs under study are not being mediated by sexism conditions.

CHAPTER 9 CONCLUSIONS

The present study had the purpose of identifying the relationship between aggression and the presence of depression, burnout, work stress, and alcohol and drug use among a sample of Costa Rican correctional officers. It also had the purpose of showing if there were any differences on the variables under study, between female and male officers. To address the hypotheses a sample of 66 correctional officers was assessed, where 20 officers were assessed at three different prisons and 46 officers were assessed at the National School of Penitentiary Training. Since the population was reluctant to participate, because it involved reading 165 questions, the use of multiple imputation was required to complete the analysis strategies.

Even though the alternative hypotheses were not supported by the results, and that the overall results must be taken with caution because the sample size was not representative of the whole correctional police population under study, is important to mention that the study showed that studies like the ones conducted in North America, Europe and Asia could be replicated with Latin American populations. Also, aggression was predicted by burnout and depression among correctional officers. Female officers reported higher levels of aggression than male officers, especially on anger and hostility. Aggression was related to several physical and psychophysiological conditions. Finally, is important to keep studying the phenomenon of aggression among correctional officers, in order to create better intervention strategies that prevent its occurrence, and reduces the physical and psychological impact of its presence.

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APPENDIX A
FLYER INFORMATION – SPANISH VERSION

Correo para reclutar policías penitenciarios en Costa Rica

Buenas,

La Jefatura de la Policía Penitenciaria Nacional le invita a participar en la investigación a cargo de la Magistra Tatiana Blanco Alvarez, y la Dr. Megan Thoen, del Instituto de Ciencias Forenses de la Universidad Tecnológica de Texas. Dicho estudio consiste en una evaluación de una única sesión, en la que se le pedirá completar unos instrumentos sobre su día a día en el entorno laboral. Al completar los instrumentos, usted será incluido en una lista en la que tendrá la posibilidad de ganar 1 de 5 pases dobles para ir al cine.

Este estudio no fue solicitado por la jefatura de policía penitenciaria, y a pesar de que apoyan el estudio, la participación es voluntaria y sólo las investigadoras tendrán acceso a cualquier información dada por los participantes. Ningún jefe, miembros del equipo técnico o cualquier miembro del personal de la policía penitenciaria pueden preguntar a los participantes si fueron parte del estudio.

Para participar usted debe poder leer una fuente tamaño 12 en forma impresa. Además deberá de tener al menos 6 meses de trabajar en su actual puesto, así como no encontrarse en vacaciones o en incapacidad al momento de completar los instrumentos.

Si está interesado en participar, por favor acercarse a la Escuela de Capacitación Penitenciaria, Aula 12, a partir del lunes 16 de mayo y hasta el viernes 3 de junio, de 8 am a 4 pm para completar los instrumentos.

Si tuviera alguna duda con respecto a su participación en la investigación, siéntase en libertad de contactar a la Magistra Blanco.

Gracias de antemano por su tiempo

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FLYER INFORMATION - ENGLISH VERSION

Mail to recruit prison police in Costa Rica

Good,

The National Penitentiary Police Headquarters invites you to participate in the investigation by Magistrate Tatiana Blanco Alvarez and Dr. Megan Thoen of the Institute of Forensic Science at Texas Tech University. This study consists of an evaluation of a single session, in which you will be asked to complete some tools about your day-to-day work environment. When you complete the instruments, you will be included in a list where you will be able to win 1 of 5 double passes to go to the movies.

This study was not requested by the prison police headquarters, and although they support the study, participation is voluntary and only the investigators will have access to any information given by the participants. No chief, members of the technical team or any member of the prison police staff can ask the participants if they were part of the study.

To participate you must be able to read a font size 12 in printed form. You must also have at least 6 months of work in your current position, as well as not being on vacation or inability when completing the instruments.

If you are interested in participating, please go to the Penitentiary Training School, Classroom 12, from Monday, May 16 and Friday, June 3, from 8 am to 4 pm to complete the instruments. If you have any questions regarding your participation in the investigation, feel free to contact the White Magistrate.

Thanks in advance for your time

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APPENDIX B
CUESTIONARIO DE AGRESION DE BUSS Y PERRY

Por favor califique cada una de las siguientes oraciones dependiendo de qué tanto le describen.
Responda de la siguiente manera:

1= TOTALMENTE EN DESACUERDO

2= EN DESACUERDO

3= DE ACUERDO

4= TOTALMENTE DE ACUERDO

| | | | | |
|---|---|---|---|---|
| 1. Varios de mis amigos piensan que soy impulsivo(a). | 1 | 2 | 3 | 4 |
| 2. Si tengo que recurrir a la violencia para proteger mis derechos, lo haré. | 1 | 2 | 3 | 4 |
| 3. Si las personas son bastante atentas conmigo, me pregunto qué quieren. | 1 | 2 | 3 | 4 |
| 4. Yo les digo a mis amigos cuando estoy en desacuerdo con ellos. | 1 | 2 | 3 | 4 |
| 5. Me he vuelto tan loco que he quebrado cosas. | 1 | 2 | 3 | 4 |
| 6. Yo discuto con la gente que está en desacuerdo conmigo. | 1 | 2 | 3 | 4 |
| 7. A veces me pregunto por qué me siento tan amargado. | 1 | 2 | 3 | 4 |
| 8. De vez en cuando, no puedo controlar el impulso de golpear a otra persona. | 1 | 2 | 3 | 4 |
| 10. Sospecho de los desconocidos demasiado amigables. | 1 | 2 | 3 | 4 |
| 11. He amenazado a personas que conozco. | 1 | 2 | 3 | 4 |
| 12. Estallo rápidamente, pero me tranquilizo rápidamente. | 1 | 2 | 3 | 4 |
| 13. Si se me provoca lo suficiente, podría golpear a otra persona. | 1 | 2 | 3 | 4 |
| 14. Si las personas me molestan, podría decirles lo que pienso de ellas. | 1 | 2 | 3 | 4 |
| 15. A veces no puedo controlar los celos. | 1 | 2 | 3 | 4 |
| 16. No puedo pensar en una buena razón para golpear a una persona. | 1 | 2 | 3 | 4 |
| 17. A veces siento que la vida me ha tratado injustamente. | 1 | 2 | 3 | 4 |
| 18. Tengo problemas controlando mi carácter. | 1 | 2 | 3 | 4 |
| 19. Cuando me frustro, dejo ver mi irritación. | 1 | 2 | 3 | 4 |
| 20. A veces sospecho que las personas se ríen de mí a mis espaldas. | 1 | 2 | 3 | 4 |
| 21. Casi siempre estoy en desacuerdo con las personas. | 1 | 2 | 3 | 4 |
| 22. Si alguien me pega, le pego de vuelta. | 1 | 2 | 3 | 4 |
| 23. A veces me siento como un barrilito de pólvora listo para explotar. | 1 | 2 | 3 | 4 |
| 24. Las otras personas consiguen más oportunidades que yo. | 1 | 2 | 3 | 4 |
| 25. Hay personas que me han provocado a tal punto que llegamos a los golpes. | 1 | 2 | 3 | 4 |
| 26. Sé que mis amigos hablan de mí a mis espaldas. | 1 | 2 | 3 | 4 |
| 27. Mis amigos dicen que discuto mucho. | 1 | 2 | 3 | 4 |
| 28. A veces pierdo el control sin razón alguna. | 1 | 2 | 3 | 4 |
| 29. Me involucro un poco más que una persona común. | 1 | 2 | 3 | 4 |

BUSS-PERRY SCALE (AGGRESSION QUESTIONNAIRE)

Please rate each of the following items in terms of how characteristic they are of you. Use the following scale for answering these items.

| | | | | | | |
|------------------|---|---|---|---|---|----------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| extremely | | | | | | extremely |
| uncharacteristic | | | | | | characteristic |
| of me | | | | | | of me |

- 1) Once in a while I can't control the urge to strike another person.
- 2) Given enough provocation, I may hit another person.
- 3) If somebody hits me, I hit back.
- 4) I get into fights a little more than the average person.
- 5) If I have to resort to violence to protect my rights, I will.
- 6) There are people who pushed me so far that we came to blows.
- 7) I can think of no good reason for ever hitting a person.
- 8) I have threatened people I know.
- 9) I have become so mad that I have broken things.
- 10) I tell my friends openly when I disagree with them.
- 11) I often find myself disagreeing with people.
- 12) When people annoy me, I may tell them what I think of them.
- 13) I can't help getting into arguments when people disagree with me.
- 14) My friends say that I'm somewhat argumentative.
- 15) I flare up quickly but get over it quickly.
- 16) When frustrated, I let my irritation show.
- 17) I sometimes feel like a powder keg ready to explode.
- 18) I am an even-tempered person.
- 19) Some of my friends think I'm a hothead.
- 20) Sometimes I fly off the handle for no good reason.
- 21) I have trouble controlling my temper.
- 22) I am sometimes eaten up with jealousy.
- 23) At times I feel I have gotten a raw deal out of life.
- 24) Other people always seem to get the breaks.
- 25) I wonder why sometimes I feel so bitter about things.
- 26) I know that "friends" talk about me behind my back.
- 27) I am suspicious of overly friendly strangers.
- 28) I sometimes feel that people are laughing at me behind my back.
- 29) When people are especially nice, I wonder what they want.

APPENDIX C
CUESTIONARIO BREVE DE BURNOUT

Por favor, conteste a las siguientes preguntas, rodeando con un círculo la opción deseada:

1= TOTALMENTE EN DESACUERDO

2= EN DESACUERDO

3= INDECISO

4= DE ACUERDO

5= TOTALMENTE DE ACUERDO

| Pregunta | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. En general estoy más bien harto de mi trabajo | 1 | 2 | 3 | 4 | 5 |
| 2. Me siento identificado con mi trabajo | 1 | 2 | 3 | 4 | 5 |
| 3. Los usuarios de mi trabajo tienen frecuentemente exigencias excesivas y comportamientos irritantes | 1 | 2 | 3 | 4 | 5 |
| 5. Mi supervisor me apoya en las decisiones que tomo | 1 | 2 | 3 | 4 | 5 |
| 6. Mi trabajo profesional me ofrece actualmente escasos retos personales | 1 | 2 | 3 | 4 | 5 |
| 7. Mi trabajo actual carece de interés | 1 | 2 | 3 | 4 | 5 |
| 8. Cuando estoy en mi trabajo me siento de malhumor | 1 | 2 | 3 | 4 | 5 |
| 9. Los compañeros nos apoyamos en el trabajo | 1 | 2 | 3 | 4 | 5 |
| 10. Las relaciones personales que establezco en el trabajo son gratificantes para mí | 1 | 2 | 3 | 4 | 5 |
| 11. Dada la responsabilidad que tengo en mi trabajo, no conozco bien los resultados y el alcance del mismo | 1 | 2 | 3 | 4 | 5 |
| 12. Las personas a las que tengo que atender reconocen muy poco los esfuerzos que se hacen por ellos | 1 | 2 | 3 | 4 | 5 |
| 13. Mi interés por el desarrollo profesional es actualmente muy escaso. | 1 | 2 | 3 | 4 | 5 |
| 14. Considera usted que el trabajo que realiza repercute en su salud personal (Dolor de cabeza, insomnio, etc.) | 1 | 2 | 3 | 4 | 5 |
| 15. Mi trabajo es repetitivo | 1 | 2 | 3 | 4 | 5 |
| 16. Estoy quemado por mi trabajo | 1 | 2 | 3 | 4 | 5 |
| 17. Me gusta el ambiente y el clima de mi trabajo | 1 | 2 | 3 | 4 | 5 |
| 18. El trabajo está afectando a mis relaciones familiares y personales | 1 | 2 | 3 | 4 | 5 |
| 19. Procuero despersonalizar las relaciones con los usuarios de mi trabajo | 1 | 2 | 3 | 4 | 5 |
| 20. El trabajo que hago dista de ser el que yo hubiera querido | 1 | 2 | 3 | 4 | 5 |
| 21. Mi trabajo me resulta muy aburrido | 1 | 2 | 3 | 4 | 5 |
| 22. Los problemas de mi trabajo hacen que mi rendimiento sea menor | 1 | 2 | 3 | 4 | 5 |

BURNOUT BRIEF QUESTIONNAIRE

Please answer the following questions by circling the desired option

1 Totally disagree

2 Disagree

3 Undecided

4 Agree

5 Totally agree

1. Overall, I'm rather sick of my job
2. I feel identified with my work
3. Users of my work often have excessive demands and irritating behaviors
4. My supervisor supports me in the decisions I make
5. My professional work is currently offering me a few personal challenges
6. My current work lacks interest
7. When I'm at work I'm in a bad mood
8. My coworkers and I rely on each other at work
9. The personal relationships I establish at work are rewarding for me
10. Given the responsibility I have in my work, I don't know well the results and the scope thereof
11. The people who I have to serve recognize very little the efforts we have to do for them
12. My interest in the professional development is currently very little
13. Do you feel that the work affects your personal health (headache, insomnia, etc.)
14. My job is repetitive
15. I'm burned out because of my work
16. I like the atmosphere and climate of my work
17. The work is affecting my family and personal relationships
18. I try to depersonalize relations with users of my work
19. The work I do is far from the one I wanted
20. My job is very boring for me
21. The problems of my work do degrade my performance

APPENDIX D

ESCALA DE ESTRÉS LABORAL PARA OFICIALES CORRECCIONALES

Los oficiales correccionales se enfrentan a una gran cantidad de situaciones de estrés en el trabajo y en otras áreas de su vida (como la vida familiar, la salud y la vida social). Algunas de las situaciones de evocadoras de estrés se enumeran a continuación. Para estas situaciones enumeradas, marque CUANTAS DE ESTAS SITUACIONES ACTUALMENTE TIENEN UN EFECTO EN USTED marcando el número correcto. Por favor, no deje ningún elemento vacío. Las opciones son las siguientes: 0 No tiene efecto en mí 1 Tiene algo de efecto en mí 2 Tiene un efecto moderado en mí 3 Tiene bastante efecto en mí 4 Tiene mucho efecto en mí

| Pregunta | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| 1. Problemas económicos | 0 | 1 | 2 | 3 | 4 |
| 2. División del trabajo insuficiente en el lugar de trabajo | 0 | 1 | 2 | 3 | 4 |
| 3. Sobre carga laboral | 0 | 1 | 2 | 3 | 4 |
| 4. Las intenciones del personal, de las personas privadas de libertad y visitantes rompen las reglas de la prisión | 0 | 1 | 2 | 3 | 4 |
| 5. No ser capaz de participar en actividades sociales (por ejemplo, el deporte, la lectura, el cine), debido a mi trabajo | 0 | 1 | 2 | 3 | 4 |
| 6. Tener que controlar las conductas inapropiadas de las personas privadas de libertad | 0 | 1 | 2 | 3 | 4 |
| 7. Insuficiencia del entorno de trabajo para satisfacer necesidades como beber, comer, etc. | 0 | 1 | 2 | 3 | 4 |
| 8. El riesgo de ser amenazado en particular debido a mi posición | 0 | 1 | 2 | 3 | 4 |
| 9. Desconocimiento de las necesidades e ideas del personal por parte de los administradores de prisiones | 0 | 1 | 2 | 3 | 4 |
| 10. No tener suficiente tiempo de calidad con la familia debido a mi trabajo | 0 | 1 | 2 | 3 | 4 |
| 11. Ser responsable de la mala conducta de otra persona en el trabajo | 0 | 1 | 2 | 3 | 4 |
| 12. Participar en discusiones y peleas con las personas privadas de libertad | 0 | 1 | 2 | 3 | 4 |
| 13. Tener problemas de salud debido a mi trabajo | 0 | 1 | 2 | 3 | 4 |
| 14. No ser capaz de trabajar en el área en que soy competente | 0 | 1 | 2 | 3 | 4 |
| 15. Las personas privadas de libertad, visitantes y abogados no accediendo con el registro corporal por parte de los funcionarios de prisiones | 0 | 1 | 2 | 3 | 4 |
| 16. Temer un reporte criminal sobre mi persona | 0 | 1 | 2 | 3 | 4 |
| 17. Ignorar las necesidades de mi familia debido a mi trabajo | 0 | 1 | 2 | 3 | 4 |
| 18. Estar bajo la sospecha sobre una mala conducta | 0 | 1 | 2 | 3 | 4 |
| 19. Decisiones arbitrarias y frecuentes cambios de decisión | 0 | 1 | 2 | 3 | 4 |
| 20. Reflejar mis problemas de trabajo en mi familia | 0 | 1 | 2 | 3 | 4 |
| 21. Ambigüedad de las instrucciones en el trabajo | 0 | 1 | 2 | 3 | 4 |
| 22. No ser capaz de declarar mis opiniones en cualquier lugar | 0 | 1 | 2 | 3 | 4 |
| 23. Tener que ser cauteloso todo el tiempo en el trabajo | 0 | 1 | 2 | 3 | 4 |
| 24. Insuficiencia de las condiciones físicas (por ejemplo, ventilación, iluminación, calefacción) en el lugar de trabajo | 0 | 1 | 2 | 3 | 4 |
| 25. Sentirme yo como una persona privada de libertad | 0 | 1 | 2 | 3 | 4 |
| 26. Ser inspeccionado(a) por varios comités en el lugar de trabajo | 0 | 1 | 2 | 3 | 4 |
| 27. Diferencias de las jefaturas en sus actitudes y comportamientos hacia las personas privadas de libertad | 0 | 1 | 2 | 3 | 4 |
| 28. Tener problemas de transporte durante el trayecto hacia y desde mi trabajo | 0 | 1 | 2 | 3 | 4 |
| 29. Turnos de noche que conducen a la sobrecarga laboral | 0 | 1 | 2 | 3 | 4 |
| 30. En la comunidad, mi trabajo se conoce como "guardián clave" en lugar de "guardia de la prisión" (lo que implica la aplicación de una dura disciplina) | 0 | 1 | 2 | 3 | 4 |
| 31. Obstrucción de llevar a cabo mi trabajo de rutina por las órdenes de las autoridades penitenciarias | 0 | 1 | 2 | 3 | 4 |
| 32. El encuentro con eventos inusuales (por ejemplo, fugas, incendios) en el lugar de trabajo | 0 | 1 | 2 | 3 | 4 |
| 33. No tener suficiente tiempo con mis amigos y familiares debido a mi trabajo | 0 | 1 | 2 | 3 | 4 |
| 34. Medios de comunicación insuficientes (por ejemplo, televisión, radio) en el lugar de trabajo | 0 | 1 | 2 | 3 | 4 |
| 35. Responsabilidades excesivas de mi posición | 0 | 1 | 2 | 3 | 4 |

WORK STRESS SCALE FOR CORRECTIONAL OFFICERS

Correctional Officers are faced with lots of stressful situations at work and at other areas of their life (like family life, health, and social life). Some of stress-evoking situations are listed below. For these listed situations, mark HOW MUCH THESE SITUATIONS CURRENTLY HAVE AN EFFECT ON YOU by marking the correct number. Please do not leave any empty item.

0 No effect on me 1 Some effect on me 2 Moderate effect on me 3 Strong effect on me 4 Very strong effect on me
Economic problems, Insufficient division of labor in the work place, Work overload

| QUESTIONS | 0 | 1 | 2 | 3 | 4 |
|--|---|---|---|---|---|
| Intentions of the personnel's, prisoners', and visitors' breaking down the rules of prison | | | | | |
| Not being able to participate in social activities (e.g. sports, reading, cinema) due to my work | | | | | |
| Having to control prisoners' inappropriate behaviors | | | | | |
| Insufficiency of the working environment to meet such needs as drinking, eating etc. | | | | | |
| The risk of being threatened particularly due to my position | | | | | |
| The prison managers' ignorance of the needs and ideas of the personnel | | | | | |
| Not having enough quality time with family due to my work | | | | | |
| Being held responsible for someone else's misconduct at work | | | | | |
| Being involved in arguments and fights with prisoners | | | | | |
| Having health problems due to my work | | | | | |
| Not being able to work in the area that I'm proficient in | | | | | |
| Prisoners, visitors, and lawyers not agreeing with the correctional officers' body search | | | | | |
| Fearing crime report about myself | | | | | |
| Ignoring the needs of my family due to my work | | | | | |
| Being under suspicion on a misconduct | | | | | |
| Arbitrary decisions and frequent changes of decision | | | | | |
| Reflecting my work problems on my family | | | | | |
| Ambiguity of instructions at work | | | | | |
| Not being able to declare my opinions anywhere | | | | | |
| Having to be cautious all the time at work | | | | | |
| Insufficiency of the physical conditions (e.g. ventilation, lightening, heating) in the work place | | | | | |
| Feeling myself as a prisoner | | | | | |
| Being inspected by various committees in the work place | | | | | |
| Managers' differences in their attitudes and behaviors towards prisoners | | | | | |
| Transportation problems when commuting to and from my work | | | | | |
| Night shifts leading to additional workload | | | | | |
| In the community, my job is referred to as "key keeper" rather than "prison guard" (implying the applications of harsh discipline) | | | | | |
| Obstruction of performing my routine work by the commands of the prison authorities | | | | | |
| Encountering unusual events (e.g. run away, rebellion, fire) in the work place | | | | | |
| Having insufficient time with my friends and relatives due to my work | | | | | |
| Insufficient communication means (e.g. TV, radio) in the work place | | | | | |
| Excessive responsibilities of my position | | | | | |
| Not having enough quality time with family due to my work | | | | | |
| Being held responsible for someone else's misconduct at work | | | | | |

APPENDIX E
ESCALA DE DEPRESION, ANSIEDAD Y ESTRES – 21

Por favor lea las siguientes afirmaciones y coloque un círculo alrededor de un número (0, 1, 2, 3) que indica cuánto esta afirmación le aplicó a usted *durante la semana pasada*. No hay respuestas correctas o incorrectas. No tome demasiado tiempo para contestar. *La escala de calificación es la siguiente:*

- 0 No me aplicó
- 1 Me aplicó un poco, o durante parte del tiempo
- 2 Me aplicó bastante, o durante una buena parte del tiempo
- 3 Me aplicó mucho, o la mayor parte del tiempo

| Pregunta | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| 1. Me costó mucho relajarme | 0 | 1 | 2 | 3 |
| 2. Me di cuenta que tenía la boca seca | 0 | 1 | 2 | 3 |
| 3. No podía sentir ningún sentimiento positivo | 0 | 1 | 2 | 3 |
| 4. Se me hizo difícil respirar | 0 | 1 | 2 | 3 |
| 5. Se me hizo difícil tomar la iniciativa para hacer cosas | 0 | 1 | 2 | 3 |
| 6. Reaccioné exageradamente en ciertas situaciones | 0 | 1 | 2 | 3 |
| 7. Sentí que mis manos temblaban | 0 | 1 | 2 | 3 |
| 8. Sentí que tenía muchos nervios | 0 | 1 | 2 | 3 |
| 9. Estaba preocupado por situaciones en las cuales podía tener pánico o en las que podría hacer el ridículo | 0 | 1 | 2 | 3 |
| 10. Sentí que no tenía nada por que vivir | 0 | 1 | 2 | 3 |
| 11. Noté que me agitaba | 0 | 1 | 2 | 3 |
| 12. Se me hizo difícil relajarme | 0 | 1 | 2 | 3 |
| 13. Me sentí triste y deprimido | 0 | 1 | 2 | 3 |
| 14. No toleré nada que no me permitiera continuar con lo que estaba haciendo | 0 | 1 | 2 | 3 |
| 15. Sentí que estaba al punto de pánico | 0 | 1 | 2 | 3 |
| 16. No me pude entusiasmar por nada | 0 | 1 | 2 | 3 |
| 17. Sentí que valía muy poco como persona | 0 | 1 | 2 | 3 |
| 18. Sentí que estaba muy irritable | 0 | 1 | 2 | 3 |
| 19. Sentí los latidos de mi corazón a pesar de no haber hecho ningún esfuerzo físico | 0 | 1 | 2 | 3 |
| 20. Tuve miedo sin razón | 0 | 1 | 2 | 3 |
| 21. Sentí que la vida no tenía ningún sentido | 0 | 1 | 2 | 3 |

DEPRESSION, ANXIETY AND STRESS SCALE DASS-21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all - NEVER

1 Applied to me to some degree, or some of the time - SOMETIMES

2 Applied to me to a considerable degree, or a good part of time - OFTEN

3 Applied to me very much, or most of the time - ALMOST ALWAYS

| | | | | |
|--|---|---|---|---|
| 1. I found it hard to wind down | 0 | 1 | 2 | 3 |
| 2. I was aware of dryness of my mouth | 0 | 1 | 2 | 3 |
| 3. I couldn't seem to experience any positive feeling at all | 0 | 1 | 2 | 3 |
| 4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion) | 0 | 1 | 2 | 3 |
| 5. I found it difficult to work up the initiative to do things | 0 | 1 | 2 | 3 |
| 6. I tended to over-react to situations | 0 | 1 | 2 | 3 |
| 7. I experienced trembling (eg, in the hands) | 0 | 1 | 2 | 3 |
| 8. I felt that I was using a lot of nervous energy | 0 | 1 | 2 | 3 |
| 9. I was worried about situations in which I might panic and make a fool of myself | 0 | 1 | 2 | 3 |
| 10. I felt that I had nothing to look forward to | 0 | 1 | 2 | 3 |
| 11. I found myself getting agitated | 0 | 1 | 2 | 3 |
| 12. I found it difficult to relax | 0 | 1 | 2 | 3 |
| 13. I felt down-hearted and blue | 0 | 1 | 2 | 3 |
| 14. I was intolerant of anything that kept me from getting on with what I was doing | 0 | 1 | 2 | 3 |
| 15. I felt I was close to panic | 0 | 1 | 2 | 3 |
| 16. I was unable to become enthusiastic about anything | 0 | 1 | 2 | 3 |
| 17. I felt I wasn't worth much as a person | 0 | 1 | 2 | 3 |
| 18. I felt that I was rather touchy | 0 | 1 | 2 | 3 |
| 19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat) | 0 | 1 | 2 | 3 |
| 20. I felt scared without any good reason | 0 | 1 | 2 | 3 |
| 21. I felt that life was meaningless | 0 | 1 | 2 | 3 |

APPENDIX F
ESCALA DE CRIBADO DE ALCOHOL DE MICHIGAN (MAST)

Responda las siguientes afirmaciones de acuerdo a su experiencia personal

| Pregunta | Si | No |
|---|----|----|
| 1. ¿Cree que es un bebedor normal? | Si | No |
| 2. ¿Se ha despertado alguna mañana tras haber bebido la noche anterior y ha descubierto que no podía recordar parte de lo sucedido? | Si | No |
| 3. ¿Se queja su familia o sus amigos de lo que bebe? | Si | No |
| 4. ¿Puede parar de beber sin problemas después de una o dos copas? | Si | No |
| 5. ¿Tiene alguna vez sentimientos de culpabilidad por beber? | Si | No |
| 6. ¿Creen sus amigos o familiares que es un bebedor normal? | Si | No |
| 7. ¿Intenta alguna vez limitar sus copas o beber a ciertas horas del día o en ciertos lugares? | Si | No |
| 8. ¿Siempre puede dejar de beber cuando quiere? | Si | No |
| 9. ¿Ha asistido alguna vez a una reunión de Alcohólicos Anónimos? | Si | No |
| 10. ¿Se ha mezclado en peleas estando bebido? | Si | No |
| 11. ¿Su afición a la bebida le ha creado problemas alguna vez con sus amigos o su familia? | Si | No |
| 12. ¿Han acudido sus amigos o miembros de su familia alguna vez a alguien en busca de ayuda a causa de su afición a la bebida? | Si | No |
| 13. ¿Ha perdido amigos o esposa/o a causa del alcohol? | Si | No |
| 14. ¿Se ha metido en problemas en el colegio o en el trabajo a causa de su afición a la bebida? | Si | No |
| 15. ¿Ha perdido alguna vez su trabajo por su afición al alcohol? | Si | No |
| 16. ¿Ha dejado de atender a sus obligaciones familiares o escolares durante dos o más días seguidos porque estaba bebiendo? | Si | No |
| 17. ¿Bebe alguna vez antes del mediodía? | Si | No |
| 18. ¿Le han dicho alguna vez que tiene problemas hepáticos? | Si | No |
| 19. Después de beber en exceso, ¿ha tenido alguna vez convulsiones, ha oído voces o visto cosas que no estaban allí? | Si | No |
| 20. ¿Ha acudido alguna vez a alguien en busca de ayuda a causa de su afición a la bebida? | Si | No |
| 21. ¿Ha estado alguna vez en un hospital por culpa de la bebida? | Si | No |
| 22. ¿Ha sido alguna vez paciente de un hospital psiquiátrico o de un departamento psiquiátrico de un hospital general en el que la bebida fuera parte del problema? | Si | No |
| 23. ¿Le han visitado alguna vez en una clínica psiquiátrica o de salud mental, o ha acudido a un médico, asistente social o sacerdote para pedir ayuda por un problema emocional en el que la bebida tenía un papel importante? | Si | No |
| 24. ¿Ha sido arrestado alguna vez, aunque fuera por pocas horas, por embriaguez? | Si | No |
| 25. ¿Ha sido detenido alguna vez por conducir en estado de embriaguez o por conducir después de haber bebido? | Si | No |

MICHIGAN ALCOHOL SCREENING TEST (MAST)

This test is nationally recognized by alcoholism and drug dependence professionals. You may substitute the words “drug use” in place of “drinking”.

1. Do you feel you are a normal drinker? ("normal" - drink as much or less than most other people)
Circle Answer: YES NO
2. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?
Circle Answer: YES NO
3. Does any near relative or close friend ever worry or complain about your drinking?
Circle Answer: YES NO
4. Can you stop drinking without difficulty after one or two drinks?
Circle Answer: YES NO
5. Do you ever feel guilty about your drinking?
Circle Answer: YES NO
6. Have you ever attended a meeting of Alcoholics Anonymous (AA)?
Circle Answer: YES NO
7. Have you ever gotten into physical fights when drinking?
Circle Answer: YES NO
8. Has drinking ever created problems between you and a near relative or close friend?
Circle Answer: YES NO
9. Has any family member or close friend gone to anyone for help about your drinking?
Circle Answer: YES NO
10. Have you ever lost friends because of your drinking?
Circle Answer: YES NO
11. Have you ever gotten into trouble at work because of drinking?
Circle Answer: YES NO
12. Have you ever lost a job because of drinking?
Circle Answer: YES NO
13. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?
Circle Answer: YES NO
14. Do you drink before noon fairly often?
Circle Answer: YES NO
15. Have you ever been told you have liver trouble such as cirrhosis?
Circle Answer: YES NO
16. After heavy drinking have you ever had delirium tremens (D.T.'s), severe shaking, visual or auditory (hearing) hallucinations?
Circle Answer: YES NO
17. Have you ever gone to anyone for help about your drinking?
Circle Answer: YES NO
18. Have you ever been hospitalized because of drinking?
Circle Answer: YES NO
19. Has your drinking ever resulted in your being hospitalized in a psychiatric ward?
Circle Answer: YES NO
20. Have you ever gone to any doctor, social worker, clergyman or mental health clinic for help with any emotional problem in which drinking was part of the problem?
Circle Answer: YES NO
21. Have you been arrested more than once for driving under the influence of alcohol?
Circle Answer: YES NO
22. Have you ever been arrested, even for a few hours because of other behavior while drinking?
(If Yes, how many times _____)
Circle Answer: YES NO

APPENDIX G
ESCALA DE DESEABILIDAD SOCIAL DE MARLOWE Y CROWNE

A continuación se le presenta un listado de situaciones que tienen que ver con actitudes y características personales. Lea cada oración y decida si la afirmación es falsa o verdadera según su personalidad

| | Falso | Verdadero |
|--|-------|-----------|
| 1. A veces es difícil para mí continuar con mi trabajo si no estoy motivado. | | |
| 2. A veces me resiento cuando las cosas no salen como yo hubiese querido. | | |
| 3. En algunas ocasiones me he rendido ante una tarea porque pienso que no soy lo suficientemente hábil. | | |
| 4. Han habido momentos en los que he querido revelarme contra figuras de autoridad, a pesar de que sé que ellos tienen la razón. | | |
| 5. Sin importar con quién hable, yo siempre sé escuchar a los demás. | | |
| 6. Han habido momentos en los que me he aprovechado de otros. | | |
| 7. Siempre acepto cuando me equivoco. Siempre acepto mis errores. | | |
| 8. Algunas veces intento desquitarme en lugar de perdonar y olvidar. | | |
| 9. Siempre soy cortés, incluso con personas que son desagradables. | | |
| 10. Me he molestado cuando personas han expresado ideas diferentes a las mías. | | |
| 11. Han habido ocasiones en las que siento envidia por la buena suerte que otros tienen. | | |
| 12. En algunas ocasiones me he molestado con personas porque me han pedido un favor. | | |
| 13. Nunca he dicho nada con la intención de herir los sentimientos de otros. | | |

MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE

Listed below are a number of statements concerning personal attitudes and traits. Read each item and put an X through the “T” if the statement is True for you, or put an X through the “F” if the statement is False for you.

1. It is sometimes hard for me to go on with my work if I am not encouraged. T F
2. I sometimes feel resentful when I don't get my way. T F
3. On a few occasions, I have given up doing something because I thought too little of my ability. T F
4. There have been times when I felt like rebelling against people in authority even though I knew they were right. T F
5. No matter who I'm talk to, I'm always a good listener. T F
6. There have been occasions when I took advantage of someone. T F
7. I'm always willing to admit it when I make a mistake. T F
8. I sometimes try to get even rather than forgive and forget. T F
9. I am always courteous, even to people who are disagreeable. T F
10. I have never been irked when people expressed ideas very different from my own. T F
11. There have been times when I was quite jealous of the good fortunes of others. T F
12. I am sometimes irritated by people who ask favors of me. T F
13. I have never deliberately said something that hurt someone's feelings. T F

APPENDIX H
INFORMACION SOCIO DEMOGRAFICA

Edad:

Sexo: () Femenino () Masculino

País de origen: () Costa Rica () Nicaragua () Colombia Otro:

Raza: () Blanco () Afro caribeño () Indígena () Asiático

Estado civil: () Soltero () Casado () Divorciado () Unión libre () Viudo

Tiene hijos o hijas: si no Cuántos:

Nivel académico:

() Primaria incompleta () Primaria completa () Secundaria incompleta () Secundaria completa () Universitaria incompleta () Universitaria completa () Parauniversitaria () Ninguno

Padece alguna de las siguientes enfermedades:

() Asma () Gastritis () Cirrosis () Hipertensión () Ulceras gástricas () Insomnio () Migraña

Cuántos meses o años lleva trabajando como policía penitenciario:

Ha trabajado todo este tiempo en el mismo Centro: si no

En cuántos Centros diferentes ha trabajado:

Actualmente usted se encuentra en condición de: () Interino () Propiedad

En este momento cuál es su horario: () 7 por 7 () 5 por 2

En qué provincia se ubica el Centro en el que trabaja actualmente:

() Guanacaste () Alajuela () San José () Heredia () Cartago () Puntarenas () Limón

Con que tipo de población trabaja:

() Hombres adolescentes () Hombres adultos jóvenes () Hombres adultos () Hombres adultos mayores
() Mujeres adolescentes () Mujeres adultas jóvenes () Mujeres adultas () Mujeres adultas mayores

El Centro en el que trabaja es de: () Mínima seguridad () Mediana seguridad () Máxima seguridad

Usted gana actualmente como policía penitenciario una cantidad entre:

() Menos de 200 000 () 200 000 y 400 000 () 500 000 y 800 000 () Más de 800 000

Además de trabajar como policía penitenciario, tiene otro trabajo: si no

Cuál es su segundo trabajo?

Consume alguna de las siguientes sustancias:

() Ansiolíticos () Antidepresivos () Anticonvulsivantes () Sedantes () Somníferos
() Antipsicóticos () Antihistamínicos () Cigarrillos de tabaco () Marihuana () Otras:

**SOCIODEMOGRAFIC INFORMATION
(RESEARCHER GENERATED)**

1. Age
2. Sex: Female Male Other
3. Country of origin: Costa Rica Nicaragua Colombia Other:
4. Race: White African Caribbean Indigenous Other:
5. Civil status: Single Married Divorced Common Law Widow(er)
6. Do you have children?: yes no How many?
7. Highest education level completed: Elementary High school University
8. Circle any of the following that you've been diagnosed with:
Asthma Gastritis Cirrhosis Hypertension Gastric ulcers Insomnia Migraines
9. How many months have you been working as correctional officer?
10. Have you worked your entire career as a correctional officer at the same prison? Yes no
- 10 b. If no, in how many different Prisons have you worked?
11. What is your current status as a correctional officer: Provisional Regular
12. In which province is the prison you currently work at?
Guanacaste Alajuela San José Heredia Cartago Puntarenas Limón
13. Which schedule do you currently have? 7 x 7 5 x 2
14. What population do you currently work with:
Adolescent male Young adult male Adult male Elderly male
Adolescent female Young adult female Adult female Elderly female
15. The Prison where you work is: Minimum security Medium security Maximum security
16. Your current annual salary as a correctional officer is (in Costa Rican currency):
Less than 200 000 200 000 and 400 000 500 000 and 800 000 More than 800 000
17. Besides working as a correctional officer, do you have another job?: yes no
- 17b. If yes, what do you do:
18. Do you currently use any of the following substances?
Anxiolytics/Sedatives Antidepressants Anticonvulsants Sleeping pills Antipsychotics
Antihistamines Tobacco products Marihuana
Other: