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# Correctional Officer Burnout, Absenteeism, and Physical Health through a Salutogenic Lens: Understanding the Roles of Coworker Interactions and Individual Resilience

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# Correctional Officer Burnout, Absenteeism, and Physical Health through a Salutogenic Lens:

## Understanding the Roles of Coworker Interactions and Individual Resilience

David William Reeves II, PhD

University of Connecticut, 2014

Past research aimed at understanding what contributes to burnout, absenteeism, and poor physical health in correctional officers has had what can be referred to as a pathogenic focus because it attempted to identify what factors increased these negative outcomes. Researchers have recently suggested that to fully understand where individuals end up on the ease/disease continuum it is pertinent to understand not only the harmful factors but also factors that lead to positive outcomes through a process known as a salutogenesis. The current research addresses this shortcoming by developing a salutogenic model of burnout, absenteeism and physical health in correctional officers by focusing on the positive relationships correctional officers have with their coworkers, namely coworker instrumental support and civility climate, as well as their own sense of coherence, which can be considered a form of individual resilience. In addition to building a salutogenic model of burnout, absenteeism, and physical health in correctional officers, the current research also explored the possible interactive effects of coworker instrumental support and civility climate on these same outcomes. Survey data from 328 correctional employees were analyzed with structural equation modeling to examine the relationships among coworker instrumental support, civility climate, sense of coherence, and burnout, absenteeism and physical health. Results suggest that increases in coworker instrumental support, civility climate and sense of coherence are all related to decreased burnout

David William Reeves II – University of Connecticut, 2014

in correctional officers. In addition, the results suggest that coworker instrumental support and civility climate interact and impact experiences of burnout. Correctional officers with the highest burnout had high civility climate but low coworker instrumental support, whereas correctional officers with the lowest burnout had both high civility climate and high coworker instrumental support. The current findings emphasize the importance of addressing coworker instrumental support in conjunction with civility climate while also focusing on individual resilience. Implications for recruitment, job design and training possibilities, as well as study limitations and future research directions are discussed.

Correctional Officer Burnout, Absenteeism, and Physical Health through a Salutogenic Lens:  
Understanding the Roles of Coworker Interactions and Individual Resilience

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## APPROVAL PAGE

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Correctional Officer Burnout, Absenteeism, and Physical Health through a Salutogenic Lens:

Understanding the Roles of Coworker Interactions and Individual Resilience

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## Correctional Officer Burnout, Absenteeism, and Physical Health through a Salutogenic Lens: Understanding the Roles of Coworker Interactions and Individual Resilience

### Introduction

The majority of researchers studying burnout, health and absenteeism in both correctional settings and other work sectors have applied what can be termed a pathogenic lens, in that they seek to identify or examine what negative factors lead to these outcomes. For example, in a study of prison personnel Keinan and Malach-Pines (2007) examined the effects of task stressors (e.g., workload), organizational stressors (e.g., inadequate pay), external stressors (e.g., negative attitude from the community) and personal stressors (e.g., home-work conflict) on burnout. In addition to this focus on the harmful factors that are related to negative outcomes (pathogenic), it is possible to also focus on the positive factors that help an individual remain on the health side of the health/disease continuum, an approach termed salutogenic (Antonovsky, 1979). In his studies of Holocaust survivors, sociologist Aaron Antonovsky realized that the negative factors that were experienced by these individuals did not fully explain where they would end up on the continuum from being healthy or being diseased. Instead, he determined that a focus on the positives of the individuals' lives (e.g., strong relationships, seeing reason in the world, finding meaning in life) could help explain why these individuals remained healthy in the face of great adversity.

When thinking of a correctional setting it may be hard to imagine what could be positive about it. However, in reviewing the literature on correctional officer stress and burnout, one of the most cited aspects of the working environment that is related to stress has been the presence or the lack of coworker support. For example, in a review of 43 articles on correctional officer stress and burnout by Schaufelli and Peters (2000), 15 articles examined the role of the coworker

in stress outcomes. This abundance of research on coworker relationships connects well with what was seen in holocaust survivors by Antonovsky, in that individuals who were able to build strong social support networks were able to remain on the healthy side of the health/disease continuum (Antonovsky, 1979).

In addition to the contribution of workplace factors to stress, workers bring their own individual characteristics (e.g., attitudes, personality, individual resilience) that also may play a role in reactions to work stress. Although these individual characteristics have been seen to play a major role in burnout, health and absenteeism in the broader literature (Judge, Martocchio & Thoresen, 1997; Ones, Viswesvaran & Schmidt, 2003; Van der Colff, & Rothmann, 2009), individual characteristics have received relatively little attention in the correctional officer literature on burnout, health and absenteeism. In fact, of the 43 articles identified by Schafeli and Peeters (2000), none had looked at individual personality characteristics. To fill in these existing gaps in the research and follow the recommendations made by Antonovsky that to fully understand health we must use a salutogenic lens, the current study looks to examine the role that positive coworker interactions as well as individual characteristics play in reducing experiences of burnout and absenteeism as well as improving physical health in correctional officers.

### *Burnout in Correctional Staff*

Burnout is the result of prolonged exposure to excessive workplace demands and lack of available resources to meet these demands (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). Burnout is made up of two distinct constructs which are exhaustion and disengagement. Excessive demands and lack of resources result in individuals feeling exhausted, and then as a consequence, disengaging from their work. Prolonged burnout has been found to result in

counter-productive work behaviors, poor physical health, absenteeism, intentions to turnover, and leaving the workforce (Demerouti et al., 2001; Leiter & Maslach, 1988). Burnout, and subsequently health problems and absenteeism, have been found to be costly to both organizations and the workforce. The costs to the organization of burnout, health and absenteeism include diminished production, turnover, sick pay, benefits, overtime and administrative costs of the absence program (Leiter & Maslach, 1988; Lambert, 2001). The costs to the workforce include loss of expertise, increased mandatory overtime, and low morale (Leiter & Maslach, 1988; Lambert, 2001). These effects of burnout, health problems and absenteeism are amplified in the corrections environment where any individual post within a prison cannot be left unstaffed. Due to this, employees are sometimes forced to work a double shift and be paid overtime, costing the organization more than just the absence of a single employee.

#### *Role of Coworkers in Correctional Officer Burnout and Absenteeism*

To understand the role that coworkers play in whether a correctional officer becomes burned out or takes extensive absenteeism days, we must first review the multiple types of interactions an individual can have with coworkers and how these have been operationalized and used in both the correctional and broader literature. Karasek, Triantis and Chaudhry (1982) in their expansion of the job-demands-control model, identified two types of support stemming from coworkers, and labeled these “coworker socio-emotional support” and “coworker instrumental support.” These separately validated constructs of coworker support showed that coworker support could serve multiple purposes, a social friendliness aspect (socio-emotional) and a job-directed assistance aspect (instrumental). The authors also found that these two types of support functioned differently in predicting depressed mood, job satisfaction, and

absenteeism. For example, coworker socio-emotional support was a significant predictor of depressed mood and job satisfaction, but not absenteeism. In contrast, coworker instrumental support was a significant predictor of all three variables.

Subsequently, researchers have followed similar patterns in separating out job-directed support (instrumental), and individual-based support (emotional). In their work focusing on burnout in social workers, Himle, Jayaratne, and Thyness (1991) examined the four types of coworker social support identified by House (1981; i.e., emotional, approval, informational and instrumental), and made the argument that, emotional support is generally measured in the research literature. The authors found in their sample that instrumental support and informational support buffered the relationship between job stress and burnout, such that individuals who experienced both high instrumental support and informational support were less likely to experience burnout as a result of work stressors such as high workload and role conflict.

Beyond measuring supportive behaviors of coworkers, researchers have also examined less supportive forms of coworker interactions, those being the day-to-day interactions that go on between employees, and whether the associated perceptions of these interactions are fair, civil, and respectful. For example, Donovan, Drasgow and Munson (1998) examined the effects that fair interpersonal treatment had on job satisfaction and work withdrawal behaviors. They found that as perceptions of fair interpersonal treatment dropped, individuals had lower levels of job satisfaction, higher work withdrawal behaviors such as being tardy, and had more intentions of leaving their jobs. In a parallel vein, Andersson and Pearson (1999) introduced the concept of workplace incivility, which explored even deeper the day-to-day relationships between coworkers. They examined behaviors that were seen as violating norms for workplace treatment. Subsequently, other authors found that violations of these workplace norms for respectful

treatment result in increases in burnout, job dissatisfaction, intentions to quit and poor psychological health (Laschinger, Leiter, Day, & Gilin, 2009; Lim, Cortina, & Magley, 2008; Penney, & Spector, 2005).

As seen above, the literature on coworker interactions is extensive and covers multiple forms and intensity levels of interactions. Although these distinctly different constructs of coworker interactions exist in the broader literature, in the correctional literature they have been for the most part ignored for more broad measures of coworker interactions, or simply labeled as “coworker support” when, in fact, the measure used appears to be examining specific aspects of coworker interactions such as coworker emotional support. For example, in a recent study examining the effects of coworker support on burnout in correctional officers, Lambert, Altheimer and Hogan (2010) used a six-item measure of coworker support that seems to be limited to measuring levels of coworker emotional support as well as “friendly” interpersonal relationships with coworkers, similar to civility, with example items such as “I am able to discuss problems with my coworkers,” “My coworkers provide me support in solving personal problems,” and “The people I work with are friendly.” Similar uses of coworker emotional support measures which also utilize an item asking about the friendliness of coworkers can be seen in Paoline, Lambert and Hogan (2006), Neveu (2007), and Dial and Johnson (2008). Some authors have also combined multiple constructs of coworker interactions such as coworker and supervisor support. For example, Dignam, Barrera and West (1986) used scales to measure coworker and supervisor directive and nondirective support, however they then went on to combine all of these scales for an overall measure of “workplace social support.” In a more recent study, Brough and Williams (2007) used a four-item measure of coworker support with items that covered both coworker emotional support and coworker instrumental support (e.g.,

“How much do each of these people provide help to you in relation to work matters?” and “How much is each of the following people willing to listen to your personal problems?”).

From the examples described above, it appears that the correctional literature in particular is lacking in providing a key understanding of how differing types of coworker interactions can function independently to help relieve the negative outcomes of this stressful work environment. Due to the deficiency in the corrections literature regarding examination of multiple specific types of coworker interactions, more specifically instrumental coworker support and coworker civility, it is necessary to turn to the broader literature to draw hypotheses about how these two forms of social interaction will be related to burnout in the corrections workforce.

### *Effects of Coworker Civility*

Incivility was defined by Andersson and Pearson (1999, pg. 457) as “low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect.” In this definition we can see that incivility is less concrete than the more commonly thought of forms of negative interpersonal relationships in the workplace, such as sexual, or race-based harassment, and bullying. Although a fairly new concept, incivility has garnered much attention in the research literature due to its insidious nature, and its ability to harm an individual or workgroup without being legally punishable. Due to the current study’s focus on the salutogenic model of health, the focus here is on the positive counterpart to workplace incivility: civility climate, which is the promotion of workplace norms for respectful interpersonal treatment. Unfortunately, civility has received even less attention in the research literature, therefore when necessary, research findings on incivility are used to develop hypotheses.

As was mentioned earlier, multiple studies in the correctional literature have used measures of “coworker support” which ask about friendliness of coworkers, and can be construed as an aspect of civility. These measures, although not clear measures of civil behaviors between correctional officers, can be helpful in determining the role that civility might play in a correctional setting. Lambert et al. (2010) found that their measure of coworker support, which included an item asking about friendliness, was negatively related to incidences of burnout. In a similar vein, Neveu (2007) using a measure that asked about friendliness and solidarity found negative relationships between this measure and level of burnout of correctional officers. Harassment, although related but more intense of an interpersonal interaction than incivility, has also been examined in a correctional setting. For example, Savicki, Cooley, and Gjesvold (2003) found that levels of harassment experienced by correctional officers were positively related to experiences of burnout, however this relationship was seen only for female officers.

In the non-corrections literature, similar relationships have been found between both civility and lack of incivility with burnout. In a sample of employees of a property management company, Miner-Rubino and Reed (2010) found that increases in workgroup incivility was related to increases in burnout. In a recent study examining the effects of a civility intervention, Leiter, Laschinger, Day and Oore (2011) found that the intervention to increase civility among coworkers had significant negative effects on incidences of burnout, and that this relationship was mediated by the increases in civility. From these findings from both the correctional and non-correctional literatures, the following hypothesis can be drawn:

*Hypothesis 1: Coworker civility in correctional employees will be negatively related to burnout.*

Although it has received less attention in the published literature, the effect of civility on absenteeism has also been examined. Unfortunately no research could be found in the correctional literature that has examined the relationship between either civility or incivility and absenteeism, therefore we must turn exclusively to the non-corrections literature. Penney and Spector (2005) examined the effects of incivility and job stress on counterproductive work behaviors in a sample of employed undergraduate students and their coworkers. Counterproductive work behaviors encompass a multitude of behaviors which includes withdrawal behaviors, such as being tardy or absent, which makes them pertinent to understanding the relationship between civility and absenteeism. The authors found that incivility, reported from both the self and coworker, were significant predictors of counterproductive work behaviors. Similar results were found by Cortina, Magley, Williams, and Langhout (2001) in their study of the effects of incivility on job withdrawal, a construct which is similar to counterproductive work behaviors and encompasses tardiness and absenteeism. The authors found in their sample of 1167 federal court employees, that the experience of incivility was a significant predictor of job withdrawal behaviors. From these studies we can draw the following hypothesis:

*Hypothesis 2: Coworker civility in correctional employees will be negatively related to absenteeism.*

Similar to civility, it is necessary to turn to the broader literature to decipher the effects that coworker instrumental support has on burnout and absenteeism. For example in a study of Norwegian social workers, Himle, Jayaratne and Thyness (1991) found that instrumental support



from coworkers was a significant buffer against developing burnout. Similar results were found by Greenglass, Fiksenbaum, and Burke (1996) in their study of burnout in a sample of school teachers. From these findings the following hypothesis is drawn:

*Hypothesis 3: Coworker instrumental support in correctional employees will be negatively related to burnout.*

Equivalent to the situation above regarding research on civility and absenteeism, it is difficult to uncover research that has specifically examined the relationships between coworker instrumental support and absenteeism. Although it has not received a large amount of attention in the published literature, a relationship between instrumental coworker support and absenteeism has been reported. For example Bacharach, Bamberger and Biron (2010), found that coworker instrumental support was a significant buffer between alcohol consumption and absenteeism in a sample of transportation authority employees. From these findings specific to coworker instrumental support the following hypothesis is proposed:

*Hypothesis 4: Coworker instrumental support in correctional employees will be negatively related to absenteeism.*

#### *Interactive Effects of Coworker Instrumental and Civility*

For the most part the research that has examined multiple aspects of coworker support has examined the main effects that the separate forms of coworker support have on outcomes, or the buffering effect the separate forms of coworker support have on stressor-strain relationships.

However, it can be proposed, and has been called for at times in the literature, that these multiple aspects of coworker exchanges could introduce interactive affects. For example in their study of coworker support and antagonism, Chiaburu and Harrison (2008, pg. 1094) suggested that their results “suggests simultaneous relationships and, therefore, future joint examination between positive (support) and negative (antagonism) coworker predictors and outcomes.” In the current framework examining coworker instrumental support and coworker civility, this disconnect between these two aspects of coworker interactions could be realized in a situation where coworkers are helpful in getting the job done successfully but do not provide a friendly, civil work environment for fellow employees (high coworker instrumental and low coworker civility), or where coworkers do not help each other get the job done but do provide a pleasant and civil work environment (low coworker instrumental support and high coworker civility).

In a review of the published literature on coworker civility and coworker instrumental support, no research could be found that has specifically examined this possible interactive relationship and its impact on any outcome variables. In the only study that could be found that empirically examined the interactive effects of positive and negative coworker interactions, Duffy, Ganster and Pagon (2002) examined the interactive effects of coworker support and undermining behaviors which were defined as behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and a favorable reputation. The authors found that, in support of their hypotheses, there was an interactive effect of coworker undermining and coworker support on self-efficacy, such that individuals who experienced both high coworker undermining and high coworker support had the lowest self-efficacy. These interactive relationships between multiple aspects of coworker interactions could help explain the inconsistent relationships that have been reported in studies

that have examined the effect of coworker support on stress outcomes in the correctional literature (Schaufeli & Peeters, 2000).

### *Theoretical Understanding and Synthesis*

The deleterious effects of inconsistent coworker interactions can be better understood through cognitive dissonance theory (Festinger, 1957) and the within-domain exacerbation hypothesis (Major, Zubek, Cooper, Cozzarelli, & Richards, 1997). Cognitive dissonance theory posits that human beings strive to maintain consistency in their interactions, and when these interactions are not consistent they produce dissonance, which we then try to correct. In situations where this dissonance cannot be corrected, such as in a workplace where you cannot remove yourself from your fellow coworkers, strain is experienced. The within-domain exacerbation hypothesis, which has been used to explain inconsistent buffering effects of social support in the workplace, posits that when support and stressors are indeed from the same source, increased social support can have negative effects on the individual. Taken in conjunction with the interactive relationship that was reported by Duffy et al. (2002), the inconsistent use of specific coworker support measures, and the inconsistent effects of coworker support in the correctional officer literature, these theoretical frameworks lead to the following hypotheses of the interactive effects of coworker civility and coworker instrumental support on burnout and absenteeism (See also Figure 1):

*Hypothesis 5: Coworker civility and coworker instrumental support in correctional employees will interact such that correctional employees with low coworker civility and high coworker instrumental support, or correctional employees with high coworker civility and low coworker*

*instrumental support, will have higher levels of burnout than correctional employees with both low coworker civility and low coworker instrumental support; conversely, correctional employees with high coworker civility and high coworker instrumental support will have the lowest levels of burnout.*

*Hypothesis 6: Coworker civility and coworker instrumental support in correctional employees will interact such that correctional employees with low coworker civility and high coworker instrumental support, or correctional employees with high coworker civility and low coworker instrumental support, will have higher levels of absenteeism than correctional employees with both low coworker civility and low coworker instrumental support; conversely, correctional employees with both high coworker civility and high coworker instrumental support will have the lowest levels of absenteeism.*

### *The Role of Individual Resilience and Sense of Coherence*

Besides simply reacting to the salutogenic factors the workplace may or may not provide, an individual employee can also bring with them certain positive characteristics that will be labeled here with the generic term of resiliencies. Resiliency refers to psychological constructs which fortify an individual to resist and cope with stress. Of particular interest to the present research is “sense of coherence” (SOC), which is the core concept in Antonovsky’s salutogenic model of health. SOC refers to an individual’s enduring yet dynamic thinking that events are comprehensible, meaningful and manageable (Antonovsky, 1979). That is, that the things that happen in the world follow a relatively ordered pattern (comprehensible), that they are worth engaging with to resolve and are motivationally relevant (meaningful), and that an

individual has the ability and resources to handle them (manageable). In multiple studies SOC has been seen to be a strong buffer against developing burnout. For example, Tselebis, Moulou and Ilias (2001) found in a study of Greek nurses that SOC was significantly negatively related to burnout. Similar relationships have been found across a diverse range of samples (Baker, North & Smith, 1997; Feldt, 1997; Levert, Lucas & Ortlepp, 2000). Despite the large number of published articles examining the relationship between SOC and burnout, there were no articles discovered that examined the relationship within a sample of correctional officers. Due to the strong effects that have been seen in the broader literature, the following hypothesis can be made:

*Hypothesis 7: Sense of coherence in correctional employees will be negatively related to burnout.*

Unlike the research examining the relationships between socio-emotional and instrumental coworker support and absenteeism, SOC has received much more attention in the published literature on absenteeism. Kivimaki et al. (2002) carried out a prospective study examining the effects of hostility at work and SOC on sickness absence in a sample of 433 women working for the municipality of a small town in Finland. They found that the employee's SOC, measured in 1993, was a significant predictor of sickness absence measured during the subsequent two year period from 1994 until 1996. Similar results have been reported in other multi-wave and cross-sectional studies (Engstrom & Janson, 2009; Kivimaki et al., 2000; Vahtera, Pentti & Uutela, 1996). Similar to the lack of research examining the relationship between SOC and burnout in correctional officers, no research could be found that used a sample

of correctional officers when examining the relationship between SOC and absenteeism. However, based upon the significant relationship between SOC and absenteeism found in multiple studies of other work sectors, the following hypothesis is drawn:

*Hypothesis 8: Sense of coherence in correctional employees will be negatively related to absenteeism.*

It is also of some importance to examine the relationship between the work environment and SOC. Although Antonovsky (1979) theorized that SOC is relatively stable after the age of 30, he also acknowledged that as a key feature of most individual's lives the first experiences in the working environment could help in shaping an individual's SOC. Therefore, the experience of strong coworker relationships could have a positive impact on SOC. Several researchers have examined the relationship between the positive work environment, specifically coworker support, and SOC. In a cross-sectional study of the Danish working population, Albertsen, Nielsen and Borg (2001) found that support from coworkers was significantly related to SOC. In addition to the main effects that were seen, the authors also found that SOC partially mediated the relationship between coworker support and levels of stress. A similar mediating role of SOC was seen in a sample of 219 Finnish employees in a two-wave cross-lagged study with a one year follow-up time between data collections (Feldt, Kinnunen, & Mauno, 2000). In a sample of Finnish working adults the authors found that SOC functioned as a mediator between what the authors labeled as organizational climate (a measure that included measures of coworker interactions) and burnout and psychosomatic symptoms. Due to the theoretical reasoning put

forth by Antonovsky that the workplace can produce changes in SOC, and the empirical findings of the mediating role of SOC by Feldt et al., (2000), the following hypothesis is drawn:

*Hypothesis 9: Sense of coherence in correctional employees will partially mediate the relationship between coworker instrumental support and coworker civility and burnout.*

#### *Burnout's Effect on Absenteeism*

I would be remiss without reviewing the role that burnout plays in increasing absenteeism in working populations. Burnout is defined as the result of prolonged exposure to an imbalance in demands and resources. Outcomes of burnout that have been theorized and reported in the published literature are first withdrawal from the job in the form of absenteeism, and then ultimately leaving the job (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). For example, in a large 6-year prospective study of five different Danish human services sectors, including a psychiatric prison, Borritz et al. (2010) found that levels of burnout were one of the strongest predictors of long-term sickness absence. Of particular interest to the current research is that the authors found that burnout partially mediated the relationship between factors of work environment such as emotional demands and role conflict, and subsequent sickness absence. In response to the paucity of literature examining the effects of burnout in a correctional setting, Lambert, Hogan and Altheimer (2010) examined the effect that burnout has on self-reported absenteeism in a maximum security facility in the United States. Their results showed that burnout had a significant and positive relationship with absenteeism. This recent article is of particular relevance to the current research as it illustrates the first examination of the

relationship between burnout and absenteeism in the correctional literature. Taken together, this previous literature leads to the following hypothesis:

*Hypothesis 10: Burnout will fully mediate the relationship between coworker civility, coworker instrumental support, sense of coherence and absenteeism in correctional employees.*

### *Burnout and Physical Health*

Some often overlooked outcomes of prolonged burnout are the detrimental effects on an individual's physical health. Although the majority of work stress research has focused on self-report measures of strain responses, it is important to also examine objective physical reactions to work stress. In the published literature, burnout has been found repeatedly to be a significant predictor of risk for cardio-vascular disease. In a recent literature review carried out by Melamed, Shirom, Toker, Berliner, and Shapira (2006, pg. 339), the authors conclude that "burnout may pose a risk to physical health through wear and tear on body tissues and organs resulting from chronic overactivity or dysregulated activity of the stress system." Take for an example the harmful effects of burnout on physical health reported in the Finnish population study by Honkonen et al. (2006). In their study, which involved both a burnout questionnaire and a physician's medical examination, the authors found that individuals who had high levels of burnout had significantly higher levels of cardiovascular disease.

In the current study, resting heart rate was used as a proxy for physical health. Resting heart rate has been found to be related to cardio-vascular disease in multiple studies (Diaz, Bourassa, Guertin & Tardif, 2005; Kannel, Kannel, Paffenbarger & Cupples, 1987). In the Framingham long-term population study, Kannel et al. (1987) found that resting heart rate,



measured 30 years prior, is a significant predictor of both overall death rate and death from cardiovascular disease. Due to the relationships found between burnout and cardio-vascular health, and the relationship between resting heart rate and cardio-vascular disease, the following hypothesis is put forth:

*Hypothesis 11: Burnout in correctional employees will be positively related to an increased resting heart rate.*

### *Summary*

Defined above is a salutogenic model of burnout, absenteeism and physical health in a correctional setting (See Figure 2 for full model and hypothesized paths). This model offers the first empirical examination of a salutogenic model in a correctional setting and answers the call by Antonovsky and others that, in order to fully understand how an individual's health develops over time, we must examine not only the negatives but also the positives that lead to an individual's position on the health/disease continuum. The current model offers three important extensions to the existing research literature. First, this model is the first to test for a possible interactive relationship between coworker instrumental support and coworker civility. Second, the current research expands the literature on salutogenesis and SOC in particular, in examining the role it plays in reducing experiences of burnout and absenteeism in a stressful work environment such as corrections. Finally, the current model looks beyond self-report measures by examining the outcome of resting heart rate as a proxy for physical health.

## Method

### *Participants*

Employees at two correctional facilities in the Northeast United States were surveyed prior to the beginning of a multi-year study that was designed to assess and improve the health and well-being of the workforce. The program, which was in its initial start-up phase during this survey process, used a participatory grass-roots process to design workplace interventions to improve worker health protection and health promotion at one facility, and a top-down conventional health promotion program at the other facility. The survey was open to all employees working within the correctional facility and was offered during working hours across all three shifts. There was no incentive given to the individual participants, but incentive was provided at the facility level in the form of a competition with a monetary reward going to the facility with the greatest survey response rate. A secondary physical assessment was carried out by trained assessors following the survey process. Individuals who took part in the survey were contacted during working hours and asked to take part in the physical assessment that measured their resting heart rate, as well as several other physical attributes of the participants. These participants received individualized feedback reports in the form of a health risk assessment.

Usable survey data was received from 328 respondents, and usable physical assessment data was received by 146 of those individuals. The majority of the sample was correctional officers (67%), who were male (74%) and worked first shift (58%). Mean tenure for the sample was 13 years in corrections, and mean age was 42 years old. Full demographic information for the sample can be seen in Table 1.

### *Measures*

Measures used to test the proposed model included both self-report survey data and one measure of resting heart rate as a proxy for physical well-being. All scale items are listed in Table 2. Scale descriptive statistics, alpha reliabilities and correlation matrix are provided in Table 3.

*Coworker instrumental support* was measured with three items from the Job Content Questionnaire (Karasek, Pieper, & Schwartz, 1997) which focus specifically on the extent to which your coworkers are helpful in getting the job done (e.g., “People I work with are helpful in getting the job done.”). The items are scored on a four-point Likert-type scale from “strongly disagree” to “strongly agree,” with higher scores indicating higher levels of instrumental coworker support. In a large scale review of the extensive use of this measure Karasek et al. (1998) found that their coworker instrumental support measure showed acceptable reliabilities (Nunnally & Bernstein, 1994) across multiple studies in multiple countries and showed expected negative relationships with measures of physical and psychological job demands.

*Civility climate* was measured with the four item Civility Norms Questionnaire-Brief (Walsh et al., 2012), which measures the extent to which there is a shared norm within the work group that individuals are treated with respect (e.g., “Respectful treatment is the norm in your unit/workgroup.”). These items are scored on a seven-point Likert-type scale from “strongly disagree” to “strongly agree,” with higher scores indicating higher levels of norms for civility in the workgroup. In their initial development and validation of this measure of civility climate Walsh et al. (2012) found that their measure showed strong internal consistency across four samples ranging from .78 to .87 and showed strong positive relationships with measures of interactional justice and negative relationships with experiences of incivility.

*Individual resilience* was measured with the three-item measure of sense of coherence, developed by Lundberg and Peck (1995), which measures the extent that an individual feels the stimuli in their world is meaningful, manageable, and comprehensible (e.g., “Please indicate how frequently you see a solution to problems and difficulties others find hopeless.”). These items are scored on a five-point scale from “never” to “most of the time,” with higher scores indicating higher resilience. Following the development of this simplified three item measure of SOC the measure has been used in multiple studies and has shown strong negative relationships with diabetes, psychological distress and mortality (Agardh et al., 2003; Lundberg, 1997; Surtees, Wainwright, & Khaw, 2006). Although the simplified measure of SOC has shown a single factor structure (Lundberg & Peck, 1995) studies have found that it lacks a strong internal consistency (Surtees et al., 2006) which could partially be due to the three items measuring three separate aspects of SOC, that being the meaningfulness, manageability, and comprehensibility of experiences.

*Burnout* was measured using the six-item measure used by Demerouti et al. (2001), which measures exhaustion (e.g., “After work, I usually feel worn out and weary.”) and disengagement (e.g., “More and more often I talk about my work in a negative way.”). The three items for each sub-scale are scored on a five-point Likert-type scale from “strongly disagree” to “strongly agree,” with higher levels indicating higher levels of burnout. This measure of burnout has been shown to be significantly negatively related to experiences of resources on the job and positively related to experiences of excessive job demands (Demerouti et al., 2001). The authors also found that the sub-scales of exhaustion and disengagement had strong internal consistency, with Cronbach’s alphas at .82 and .83 respectively.

For the present research there were no differential relationships predicted for the two sub-dimensions of burnout, therefore burnout was modeled as a second-order factor of exhaustion and disengagement, with items for each sub-dimension functioning as indicators.

*Absenteeism* was measured with a single self-report item, which measures the number of days the individual has missed in the last four weeks (up to 28 days). Finally, to assess *physical well-being*, resting heart-rate was used. Resting heart rate for this study was collected from individual respondents during a physical assessment that was carried out by trained assessors.

### *Control Variables*

Despite the current focus on positive factors within the correctional environment, it is appropriate to acknowledge that work stress is inherent in the working environment within corrections. Therefore work stress was included into the proposed model as a control variable. To measure *work stress*, six items from two subscales (pressure and threat) of the Stress in General Scale (SIG) were used (Stanton, Balzer, Smith, Parra, & Ironson, 2001) which measures the degree to which individuals find their jobs to be stressful (e.g., In general, I think my job is hectic.) The response scale for these items is yes, no, and “?”, scored as 3, 0, and 1.5 respectively, with higher scores indicating higher levels of job stress. The subscales of the SIG have been shown to have strong internal consistency ranging in Cronbach’s alphas from .82 for the pressured subscale to .88 for the threat subscale. The scale has also been shown to have a strong relationship with intentions to quit and physical health measures such as blood pressure reactivity (Stanton et al., 2001). Although theorized to function as two separate subscales of work stress exploratory factor analysis in the current sample shows that the six items loaded together on a single factor.

### *Analyses Strategy*

The proposed model was tested using the structural equation modeling software AMOS 20 using latent variables to represent pertinent constructs with scale items as indicators, with the exception of absenteeism and resting heart rate which are represented as observed variables. Using latent factors allows for the initial testing of the measurement model followed by testing of the structural model. Raw data were input initially into the LISREL software package and missing data were imputed using the Expectation-Maximization (EM) algorithm (Dempster, Laird, & Rubin, 1977; Joreskog, & Sorbom, 2005). This method has been recommended by researchers as a data imputation method as it maximizes the use of all of the information in the observed data, and treats missing data as a source of variation as opposed to a nuisance (Sinharay, Stern, & Russell, 2001). EM has also been seen to be superior to other forms of handling missing data (i.e., pairwise deletion, listwise deletion) in producing unbiased estimates of parameters (Sinharay, et al., 2001).

The fit of the model with the data was assessed by multiple indicators including  $\chi^2$ , and the  $\chi^2/df$  ratio, comparative fit index (CFI), standardized root-mean-square residual (SRMR), and root-mean-square error of approximation (RMSEA). Each of these measures use different methods to assess model fit, therefore it is appropriate to use multiple measures when assessing model fit. For  $\chi^2$ , a non-significant score indicates good fit with the data. In regards to the  $\chi^2/df$  ratio,  $<3$  was considered a good fitting model (Klein, 1998). For CFI, a score above .90 shows acceptable fit, and greater than .95 indicates good fit. A RMSEA score of less than .06 and a SRMR value of .08 or lower indicates good fit with the data (Hu & Bentler, 1999). All hypothesized paths were tested for significance using one-tailed or two-tailed significance testing. One-tailed significance testing was only utilized for those hypothesized paths where an

abundance of published research literature support a unidirectional relationship. Based on this reasoning three of the current hypotheses were tested using one-tailed significance testing, which were the relationships between civility climate, instrumental coworker support, and sense of coherence with burnout (i.e., Hypotheses 1, 3, and 7). The indirect effects were tested for significance using bias-corrected bootstrapping (Cheung & Lau, 2008) drawing 2,000 bootstrapped samples to estimate the indirect effect. The interaction hypothesis was tested following the method laid out by Ping (1995). The initial measurement model was tested excluding the interaction term. Then the interaction term is entered using summed product terms of the centered indicators as the single indicator for the interaction term. The factor loading and error variances for the interaction term were all set according to the equations put forth by Ping (1995, 1996) and Cortina, Chen, and Dunlap (2001).

Prior to testing the structural model, multiple competing measurement models were tested to be sure of discriminant validity among constructs. This was especially important in instances where constructs could be theoretically similar (i.e., coworker support and civility) and where prior research has shown different factor structures to proposed constructs (i.e., single factor structure of burnout). Using these considerations, to test multiple measurement models resulted in the testing of three models, (1) the hypothesized model, (2) a model with civility and coworker support consisting of one factor (single coworker factor), and (3) a model with burnout consisting of one factor (single burnout factor).

## Results

### *Measurement Model*

All models tested provided adequate fit to the data, and fit statistics for all three models can be seen in Table 4. However, comparisons of the model chi-squares indicated that the hypothesized measurement model fit the data significantly better than the single coworker factor model ( $\Delta\chi^2(4) = 73.18, p < .01$ ), as well as the single burnout factor model ( $\Delta\chi^2(2) = 79.00, p < .01$ ), indicating that coworker instrumental support and coworker civility truly are two unique constructs, and that burnout consists of two unique sub-dimensions, thus justifying the testing of the structural model.

### *Structural Model*

Before proceeding with structural model testing, it was necessary to build the interaction term based off of Ping's (1995) equations to calculate indicator loadings, and error variance (see Ping, 1995; Cortina, Chen, & Dunlap, 2001). All indicators from each of the latent factors were first summed, and a product was created from these summed terms which acted as the indicator for the latent interaction term. Utilizing the factor loadings and error variances captured from the measurement model, the factor loading for the interaction indicator and its associated error variance were then calculated. Following the inclusion of the interaction term, the hypothesized model was run and assessed for fit and effects of hypothesized paths. Results for the hypothesized paths can be seen in Figure 3.

The fully saturated model proved to be a better fit to the data than the hypothesized model ( $\Delta\chi^2(12) = 48.02, p < .01$ ). A constrained model was developed based on the saturated model, removing all non-significant and non-hypothesized relationships. This constrained model



(Figure 4) showed a non-significant chi-square difference test as compared to the fully-saturated model ( $\Delta\chi^2(8) = 6.03, p > .05$ ), and therefore was retained as the more parsimonious and final model to test the hypotheses. The Indirect effects in the current model and the effects of the control variable, work stress, can be seen in Tables 5 and 6, respectively.

As can be seen in Figure 4, Hypothesis 1 & 3, which posited that civility climate and coworker instrumental support would be negatively related to burnout, were both supported. Hypothesis 2 and Hypothesis 4 which stated that civility climate and coworker instrumental support would be negatively related to absenteeism were not supported. In regards to the interaction of civility climate and coworker instrumental support, Hypothesis 5 was partially supported as can be seen in Figure 5, in that employees who had high levels of civility yet low levels of instrumental support had the highest levels of burnout, and employees with high levels of both had the lowest levels of burnout. However, Hypothesis 6 was not supported in that there was not a significant relationship between the interaction and absenteeism as hypothesized. Hypothesis 7 which posited an individual's SOC would be negatively related to burnout was supported as can be seen in Figure 4. Hypothesis 8 and Hypothesis 9 which posited that SOC would be negatively related to absenteeism and that SOC would partially mediate the relationship between civility, instrumental support, and the interaction and burnout were not supported. Support was also not found for Hypothesis 10, which was used to test if burnout would fully mediate the relationships between civility, instrumental support, the interaction of the two, SOC and absenteeism. Hypothesis 11 was also not supported in that there was no significant relationship observed between burnout and resting heart rate. A review of all hypotheses and whether the current research supported them can be seen in Table 7.

## Discussion

The current study examined the possible interactive relationships between coworker instrumental support and civility climate, and their effects on SOC, burnout, physical health and absenteeism in correctional employees. There are several important conclusions that can be drawn from the current findings as well as some limitations that will be useful in guiding future research. There are also several population characteristics that could have impacted the current study's hypothesized relationships that are worth mentioning.

### *Effects of Coworker Relationships*

Similar to previously reported research results (Greenglass, Fiksenbaum, & Burke, 1996; Himle et al., 1991; Leiter et al., 2011; Miner-Rubino & Reed, 2010), it was found that civility climate and coworker instrumental support were negatively related to employee burnout. In addition to this main effect on burnout, and building on previous research on the interactive effects of multiple types of coworker interactions (Duffy, et al., 2002), it was found that civility climate and instrumental coworker support interacted. Individuals who had high levels of civility climate but low levels of coworker instrumental support had the highest levels of burnout, and individuals with both high civility climate and high coworker instrumental support had the lowest levels of burnout ( $\beta = -.313$ ).

The ability of coworker instrumental support to reduce the deleterious effects of work stress has led to the development of intervention research that has sought to develop, institute, and assess programs that aim to increase coworker instrumental support. Some of these types of empirically-supported interventions could be instituted within a correctional setting with the aim of increasing coworker instrumental support. Heaney, Price and Rafferty (1995) developed and

tested one such program that is feasible to implement in a correctional setting. Heaney, et al. (1995) developed a train-the-trainer support program for caregivers working in group homes which had one primary goal: “teaching employees about the helping potential of support systems and to build skills in mobilizing available support from others at work” (Heaney et al., 1995, p.-337). This type of training, which emphasizes seeking out and building support networks, could be instituted during the initial training at the correctional academies so as to train the incoming officers on how to best build these supportive relationships with their coworkers, and how to utilize these new support networks to obtain support when necessary. This training could also be reviewed during subsequent training periods when officers receive refresher training courses.

The current research extends both the correctional literature and the broader literature in several ways. First, in the broader literature this is the first research study to examine explicitly the interactive relationship between coworker instrumental support and civility climate. This interactive relationship, which parallels a similar relationship between social support and social undermining that was reported by Duffy, et al. (2002), has implications for how interventions aimed at improving coworker relationships in CO populations should be designed. Coworker instrumental support was already known to be a positive factor in corrections work because it has been shown to mitigate the harmful effects of this stressful work environment (Lambert, Altheimer & Hogan, 2010; Lambert, et al., 2010; Neveu, 2007). The current findings point to a need to not only address work-directed instrumental support from coworkers, but also to address the lower intensity day-to-day interactions of coworkers to create a more civil working environment. Current expansion of interventions into the realm of civility, as demonstrated in the Civility, Respect, Engagement in the Workforce (CREW) study (Osatuke, Moore, Ward, Dyrenforth, & Belton, 2009), has shown promising results in reducing work stress and increasing

employee engagement. CREW training consists of weekly meetings carried out over a 6 month period with groups of 10 to 15 employees during in which a trained facilitator uses structured exercises that move participants outside of their “comfort zone” of typical social interactions to help them initiate more civil interactions with colleagues. In addition to working with employees, CREW also requires that leaders within the organization support the mission to increase civility by signing a statement and making it clear that the CREW process is inclusive and important for all employees to take part in. Using the CREW toolkit and processes, Leiter et al. (2011) were able to see improvements in coworker and supervisor civility in workgroups of health care workers. More so, Leiter, et al., (2011) found that in comparison to control groups, the intervention groups greatly improved on measures of civility.

The current findings of an interactive relationship between coworker instrumental support and civility climate, and coupled with earlier findings that interventions aimed at improving instrumental coworker support had found conflicting results as to the impact of increased instrumental coworker support on employee well-being (Van der Heck & Plomp, 1997), points to the need to combine these two types of interventions in an integrated program. Pulling from the tested interventions that improved coworker instrumental support (Heaney, et al., 1995) and civility (Osatuke, et al., 2009), an intervention can be proposed which would be feasible to implement within a correctional setting. For instance, building on the small group dynamic and scenarios that are instituted in the CREW method by adding in additional training and scenarios that demonstrate the positive benefits of coworker instrumental support, would combine these two important aspects of coworker interactions into one training program. In addition, training around both aspects of coworker interactions simultaneously, instead of going about this in a piecemeal manner in which they are trained separately, could offer further benefits by allowing

the trainer to explicitly point out the important ways that coworker civility and instrumental support can interact. The trainer can also point out the ways that a disconnect between the two types of interactions can result in negative emotional outcomes. Thus, one can expect synergistic benefits from combining these two intervention approaches.

### *Effects of SOC*

In addition to being the first to examine the interactive relationship between instrumental coworker support and civility climate, the current study is also one of the first to examine a fully salutogenic model of health in a correctional setting. The current research also marks one of the first times that the effect of Antonovsky's central tenet of health, SOC (Antonovsky, 1987), which is the ability of an individual to find the world around them and the things that happen as meaningful, manageable, and comprehensible, was tested in a correctional setting. The current research hypothesized that high levels of SOC would positively impact COs in several ways, and be negatively related to burnout, and absenteeism. Although the current research did not find a negative relationship between SOC and absenteeism, a negative relationship between a CO's SOC and burnout was supported. This is important to note because it verifies that beyond what the working environment can provide for the employee (e.g., coworker support, a civil working environment), the employee may also bring with them certain ingrained resiliencies. These resiliencies can be expected to act as buffers against the harmful effects of a negative work environment, and enable COs to pull together resources to handle their difficult working environment.

SOC was also hypothesized to act as a mediator between coworker interactions (i.e., civility climate, instrumental coworker support and their interaction) and burnout, however this

relationship was not supported in the present research. Although previous researchers have found that SOC can act as a mediator between workplace characteristics and health outcomes (Albertsen et al., 2001; Feldt et al., 2000), the current lack of a significant mediation in the present study does, in fact, fall into line with Antonovsky's theory of SOC. Antonovsky posited that SOC developed throughout early life and became relatively stable, although still dynamic and susceptible to change, after the age of 30. In the current sample the average age was 42 years old, with only 22 out of 317 COs 30 years old or younger, which supports the possibility that SOC would already be established and therefore act as an antecedent of positive health as opposed to a mediator in this population. Another possible explanation for the lack of a mediation effect is that the antecedents measured were not specific enough. In the current research, the focus was on coworker interactions; however, supervisor interactions could also have an impact on SOC. Prior research has found that a healthy relationship with a supervisor has a positive effect on an employee's SOC (Albertsen et al., 2001; Fedlt at al., 2000). It is possible that due to the hierarchical structure of the correctional system, supervisory instrumental support and civility would have a much greater positive impact on an employee's SOC than coworker instrumental support and civility.

Taken in context, the lack of effects of SOC on burnout as a mediating effect leads to several possible implications. Resiliency is considered to be of great importance in a stressful work environment such as corrections where an individual's own resilience can assist in reducing the harmful effects of an environment which are not likely to improve. These findings taken together with the findings of the only other study that has examined SOC in COs (Oginska-Bulik, 2005), which also found that SOC is a strong buffer against the stressful work environment of the uniformed professions (e.g., COs), lends support to the idea that the selection

process for COs and others who work in such environments should include, at least in part, an emphasis on individual resilience. Alternatively, or in addition to recruiting individuals with high levels of resiliency, the DOC can also work to create an environment that fosters a strong SOC among incoming COs, who also tend to be younger and can be expected to greatly benefit from this. For instance, supervisor relationships have been found to be both negatively related to tenure and positively related to SOC in CO populations. Lambert, Hogan and Barton (2002) and Lambert, Hogan and Griffin (2007) found that as COs' tenure increased, the quality of their parallel relationship with their supervisor decreased. This may be in part to individuals needing a supervisor to lead them through their initial acclimation of employment within a correctional setting, but then following this initial period these individuals have less and less frequent direct interactions with their supervisors. In addition to declines in supervisor-employee relationships as tenure increases, research on SOC has shown that individuals who have a more supportive relationship with their supervisor have a stronger SOC (Albertsen, et al. 2001; Fedlt, at al. 2000). Therefore, the DOC management should focus on building strong supervisor-subordinate relationships that can last throughout a CO's career, and not just during the initial years of employment.

Although improving the relationship between supervisors and subordinates could offer numerous positive outcomes such as improving employee's SOC, there are several issues and opportunities that also must be addressed. The biggest issue that is likely to arise is cynicism around the training itself and a view that it is simply something that has to be done and not something that will help improve their workforce and therefore would not have a great impact. To counteract this issue it is necessary to build the understanding that this sort of supervisor-subordinate relationship is warranted, and would be welcomed by subordinates and would help

improve employee performance. This can be accomplished through 360-degree feedback or focus groups that gather information around supervisor-subordinate relationships, both where they are currently and ideal supervisor-subordinate relationships. Without sufficient evidence that subordinates are in need of meaningful relationships with their supervisors, any training to improve this relationship is likely to fail.

### *The Effects of Population Characteristics*

There are several population characteristics that deserve specific attention that could have affected the hypothesized relationships. First, there are the self-selection effects of choosing to become a CO. Individuals who pursue a high-risk career such as working in corrections may already have a higher than normal SOC. In their study of COs, Oginska-Bulik (2005) did find that COs had a higher SOC than other non-high-risk professions like bank-tellers and bus drivers, although this was not tested for statistical significance. In the present study, a possible survivor effect also could have played a role in some cases for the lack of support for the hypothesized relationships. Turnover is a large issue in corrections, especially during the first few years of employment as the new employees try to adjust to this difficult work. It is possible that most individuals who left could not foster healthy coworker relationships, did not develop their SOC, or came in with a lower SOC and therefore were not able to cope with the stressful work environment. In their study of juvenile correctional staff, Minor, Wells, Angel, and Matz (2011) found that of the seven demographic and nine work-related predictors they had examined only satisfaction with coworkers significantly predicted turnover in the first year of employment. These findings lend support to the argument that the lack of support for the relationship between coworker instrumental support, coworker civility and SOC may have been due to restriction of



range of SOC and also possibly ratings of coworker civility and instrumental coworker support. Coworker instrumental support and SOC both showed relatively small amounts of variability in the current sample with a standard deviation of .68 and .53 for SOC and coworker instrumental support respectively, lending support for a survivor effect in the current sample. Minor et al., (2011) did not examine any psychological measures but it is reasonable to expect that those individuals with a lower SOC would be less likely to survive in the stressful work environment of corrections, and would leave the organization shortly into their tenure, resulting in a restriction in range for SOC.

#### *Research-to-Practice Considerations*

Due to the uniqueness of the corrections setting, researchers and practitioners looking to apply the current research findings and develop interventions based upon them should remain mindful of several issues and opportunities within corrections. First, the hierarchical nature of corrections offers both positives and negatives to the possible application of the current research. As was stated earlier, part of the CREW intervention strategy for improving workplace civility is the requirement of leadership backing. In the hierarchical structure of corrections, gaining this should garner more support for the project throughout the ranks due to the fact that in corrections, “what the warden says, goes.” However, this structure may also perturb the process of the interventions. The hierarchical structure also causes orders to go through many supervisory layers before it reaches the floor of a facility where individual COs can be released off of their posts. This may hamper any meeting processes that are planned for the interventions because the structure of correctional buildings is intended to reduce communication among inmates, and it also reduces the ability of COs to communicate about who is in need of relief at

their position to attend meetings or training sessions. An additional aspect of corrections that may impact any intervention strategies is the 24-hour nature of corrections. Obviously in a setting where inmates need to be constantly monitored it is imperative that there always be COs there to carry out the work. This does not necessarily cause an issue in designing an intervention, but anyone developing an intervention for a correctional setting should be prepared for several late-night working sessions to benefit all shifts of COs working in a facility. One final consideration for implementing these interventions is one can expect to encounter high levels of cynicism from COs in regard to anything that requires change. This is also tied with the hierarchical structure of corrections. However, one advantage of the interventions discussed earlier is that they require little to no change in the day-to-day functions of the facility. Therefore, it is possible to reassure the COs that while it may seem like nothing changes at a facility, the current intervention is not looking to change the functioning of the facility but rather the interactions that COs have with each other, and therefore this intervention can be effective even in the rigid environment that is corrections.

#### *Additional Theoretical Understanding*

Prior to reviewing the limitations of the current research, it is pertinent to review an additional theoretical understanding that may help to better explain the current model. Due to the inclusion of work stress as a control variable and its significant positive relationship to burnout (as seen in table 6), the job demands resources model (JD-R) could work as an complementary framework through which the current model and relationships could be understood. Indeed the current model fits well with the theory of the relationship between job demands and resources and burnout put forth by Demerouti et al. (2001). The authors proposed that burnout based upon

the JD-R developed through two specific and independent processes: lack of resources and excessive job demands. The authors also theorized that due to the limited empirical support for an interactive relationship between job demands and support as has been proposed in other research literature the independent functioning of demands and support should be examined. Based upon this rationale, the current model could have also been examined as a JD-R model of burnout in that it examines, independently, job demands (e.g., how much an individual feels their job is hectic, irritating, stressful) and levels of support (e.g., respectful treatment being the norm in a work group, coworkers being helpful in getting the job done). The addition of a JD-R theoretical framework would also compliment the current model as Antonovsky (1979) strongly advocated for the examination of how both negative and positive factors can impact one's health.

### *Limitations and Future Research*

As with any research the current study has several limitations that lend themselves to guiding future research designs and analyses. The first limitation and direction for future research comes from the use of a self-report measure for absenteeism. The use of a self-report measure of absenteeism introduced several issues into the current research. First, individuals may have a difficult time accurately recalling how many days they had missed work in the past 28 days. Second, individuals may falsely report the number of days they had been absent due to social desirability considerations. The use of actual absenteeism would help address this issue, and therefore future research would benefit from making every effort to obtain these data from the facility management.

The second limitation of the current research is the use of resting heart rate as a proxy for physical health. Although the current study did utilize an actual measure of physical health

(resting heart rate), there are several additional measures that could supply a more comprehensive assessment of the participants' physical health. Future researchers should consider taking advantage of other available measures of physical health, for instance, heart rate recovery could be used in addition to resting heart rate because it has been found to be a strong predictor of mortality in longitudinal studies (Cole, Blackstone, Pashkow, Snader & Lauer, 1999).

An additional limitation of the current research involves the measure used to assess the construct of SOC. The current research used a shortened version of the Orientation to Life Questionnaire developed by Antonovsky (1996) which was constructed and tested by Lundberg and Peck (1996). This measure, although useful due to its brevity, has not been used extensively in working populations. However it has been shown to be related to physical health outcomes in public health studies (e.g., Agardh, et al., 2003; Lundberg, 1997; Surtees, Wainwright & Khaw, 2006). In addition to its lack of prior use in working populations, the development of the SOC scale developed by Lundberg and Peck (1996) was based on the original Orientation to Life Questionnaire, and therefore assesses what can be referred to as global SOC. In recent years, and still consistent with the theoretical construction of SOC (Antonovsky, 1987), researchers have begun to separate out more situational aspects of SOC. Antonovsky (1987) theorized that global SOC was affected by several competing and interacting spheres of influence, which included work, family, and personal resources. This has lead researchers to develop more specific measures of SOC to investigate how changes in a specific realm (e.g., the workplace) could impact a person's SOC. Vogt, Jenny, and Bauer (2013) have carried out work on validating a work specific measure of SOC, named Work-SoC. Vogt et al. found that their 9-item scale of Work-SoC showed a strong internal consistency ( $\alpha=.83$ ), and also a three factor structure

consisting of SOC sub-dimensions for: meaningful, manageable, and comprehensible. In addition to strong psychometrics, the Work-SoC functioned as a strong mediator between work social support, a measure that includes aspects of coworker instrumental support, and employee burnout. Future research exploring the relationships between work characteristics and SOC should take advantage of this more targeted measure of Work-SoC developed and tested by Vogt et al., (2013).

### Conclusions

The results of the current study show that although instrumental support from workers and a climate of civility may impact a CO's level of burnout, it is important that both be studied in conjunction with each other rather than separately based on the significant interaction effect that was shown. This finding is also important when thinking of implementing interventions because an intervention that focuses only on improving civility climate while not also addressing low levels of instrumental coworker support may in fact have a negative impact on an employee's psychological health. In addition to the interaction between instrumental coworker support and civility climate, the current study also provides some evidence that within a dangerous and stressful work environment such as corrections it is important to focus on individual resiliencies and the aspects of the work environment that may bolster an employee's resilience.

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**TABLE 1: Demographics of Sample**

<i>Demographic</i>		<i>Percentage</i>
Gender	Male	74%
	Female	26%
Job Description	Correctional Officer	67%
	Lieutenant	5%
	Captain, Deputy Warden, Warden	4%
	Correctional Treatment Officer	2%
	Counselor	6%
	Counselor Supervisor	1%
	Support Staff	13%
	Maintenance/Food Service Supervisor	2%
	Medical Staff	1%
Shift	First	58%
	Second	30%
	Third	13%



**TABLE 2: Constructs and Items**

<i>Construct</i>	<i>Items</i>
Sense of Coherence	See a solution to problems and difficulties others find hopeless
	Find what happens to you in your daily life is difficult to understand *
	See your daily life as a source of personal satisfaction
Instrumental Coworker Support	People I work with are helpful in getting the job done
	My supervisor understands and supports my family and other personal responsibilities
	People I work with are competent in doing their jobs
Civility Climate	Rude behavior is not accepted by your coworkers
	Angry outbursts are not tolerated by anyone in your unit/workgroup
	Respectful treatment is the norm in your unit/workgroup
	Your coworkers make sure everyone in your unit/workgroup is treated with respect
Burnout (Disengagement)	More and more often I talk about my work in a negative way
	Sometimes I feel really disgusted with my work
	I get more and more engaged in my work *
Burnout (Exhaustion)	After work, I have enough energy for leisure activities *
	At work, I often feel emotionally drained
	After work, I usually feel worn out and weary
Work Stress; In general, I think my job is...	Irritating
	Pressured
	Hectic
	More stressful than I'd like
	Hassled
	Many things stressful
Absenteeism	During the past 4 weeks, how many days have you missed or been absent for any medical problem?

\* reversed scored item

**TABLE 3: Correlation Matrix, Alphas in Diagonal**

	Mean	SD	Sense of Coherence	Ins. Support	Civility Climate	Burnout (Disengage.)	Burnout (Exhaustion)	Heart Rate	Absenteeism	Work Stress
Sense of Coherence	3.7	0.69	.58							
Ins. Support	2.72	0.53	.08	.67						
Civility Climate	4.06	1.34	.10	.50**	.82					
Burnout (Disengage.)	4.13	1.33	-.33**	-.35**	-.42**	.64				
Burnout (Exhaustion)	3.67	1.48	-.43**	-.28**	-.29**	.55**	.78			
Heart Rate	84.6	10.8	.06	-.03	-.06	.05	.02	N/A		
Absenteeism	1.4	3.04	-.10	-.07	-.04	.13*	.19**	.13	N/A	
Work Stress	1.64	1.03	-.33**	-.25**	-.27**	.52**	.54**	.01	.19**	.80

Note: \*. $p < .05$ , \*\*. $p < .01$

**TABLE 4: Fit Indices for Measurement and Structural Models**

<i>Model</i>	$\chi^2(df)$	<i>p</i>	$\chi^2/df$	<i>CFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Hypothesized Measurement Model	424.53(197)	<.001	2.155	.92	.06	.061
One Coworker Factor Measurement Model	497.71(201)	<.001	2.45	.90	.07	.062
One Burnout Factor Measurement Model	503.53(199)	<.001	2.53	.89	.07	.063
Hypothesized Structural Model	601.41(260)	<.001	2.313	.88	.06	.07
Fully Saturated Structural Model	553.39(248)	<.001	2.231	.90	.06	.06
Respecified Structural Model	559.42(256)	<.001	2.18	.90	.06	.06

*Note:* CFI=Comparative Fit Index, RMSEA=Root Mean Square Error of Approximation, SRMR=Square Root Mean Residual

**TABLE 5: Paths for Indirect Effects**

Path	Standardized Effect	
	Size	p
Resilience --> Physical Well-Being	.008	>.05
Resilience --> Absenteeism	-.020	>.05
Civility Climate --> Physical Well-Being	.006	>.05
Civility Climate --> Absenteeism	-.016	>.05
Ins. Coworker Support --> Physical Well-Being	.015	>.05
Ins. Coworker Support --> Absenteeism	-.041	>.05
Ins. Support X Civility --> Physical Well-Being	.001	>.05
Ins. Support X Civility --> Absenteeism	-.002	>.05

**TABLE 6: Paths for Effects of Stress**

Path	Standardized Effect	
	Size	p
Work Stress --> Burnout	.511	<.001
Work Stress --> Physical Well-Being	.073	>.05
Work Stress --> Absenteeism	.123	>.05

**TABLE 7: Hypotheses and Support**

<i>Hypothesis</i>	<i>Supported/Not Supported</i>
H1: Civility climate will be negatively related to burnout.	Supported
H2: Civility climate will be negatively related to absenteeism.	Not Supported
H3: Coworker instrumental support will be negatively related to burnout.	Supported
H4: Coworker instrumental support will be negatively related to absenteeism.	Not Supported
H5: Civility climate and coworker instrumental support interaction related to burnout.	Supported
H6: Civility climate and coworker instrumental support interaction related to absenteeism.	Not Supported
H7: Sense of coherence will be negatively related to burnout.	Supported
H8: Sense of coherence will be negatively related to absenteeism.	Not Supported
H9: Sense of coherence will partially mediate the relationship between coworker instrumental support and coworker civility and burnout.	Not Supported
H10: Burnout will fully mediate the relationship between coworker civility, coworker instrumental support, sense of coherence and absenteeism.	Not Supported
H11: Burnout will be positively related to an increased resting heart rate.	Not Supported

Figure 1: Proposed Interaction

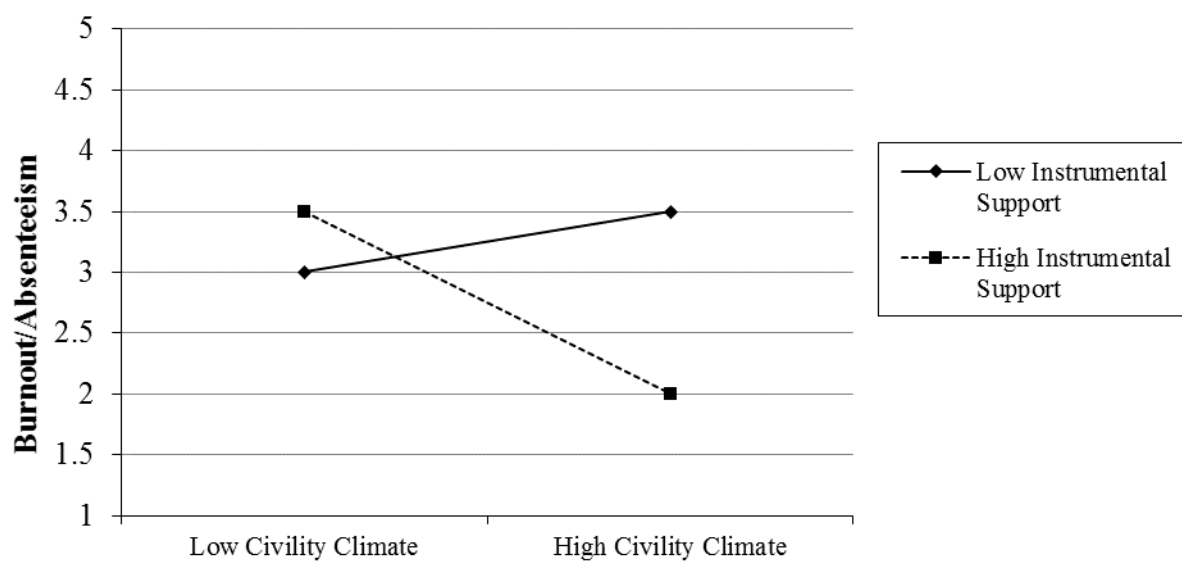


Figure 2: Hypothesized Model

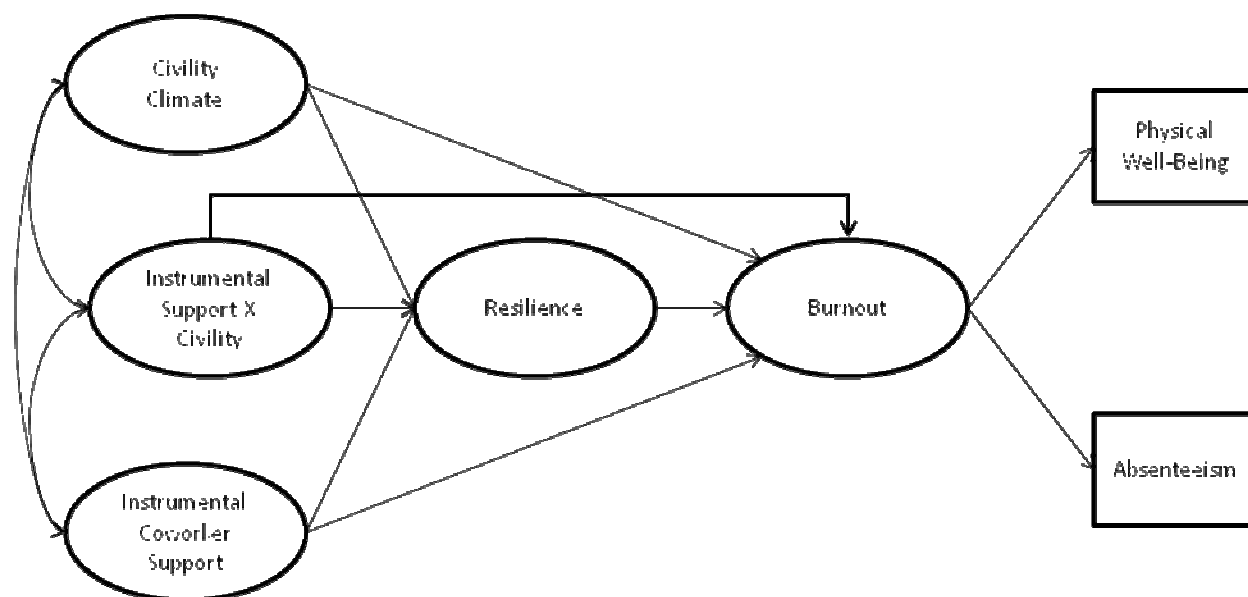
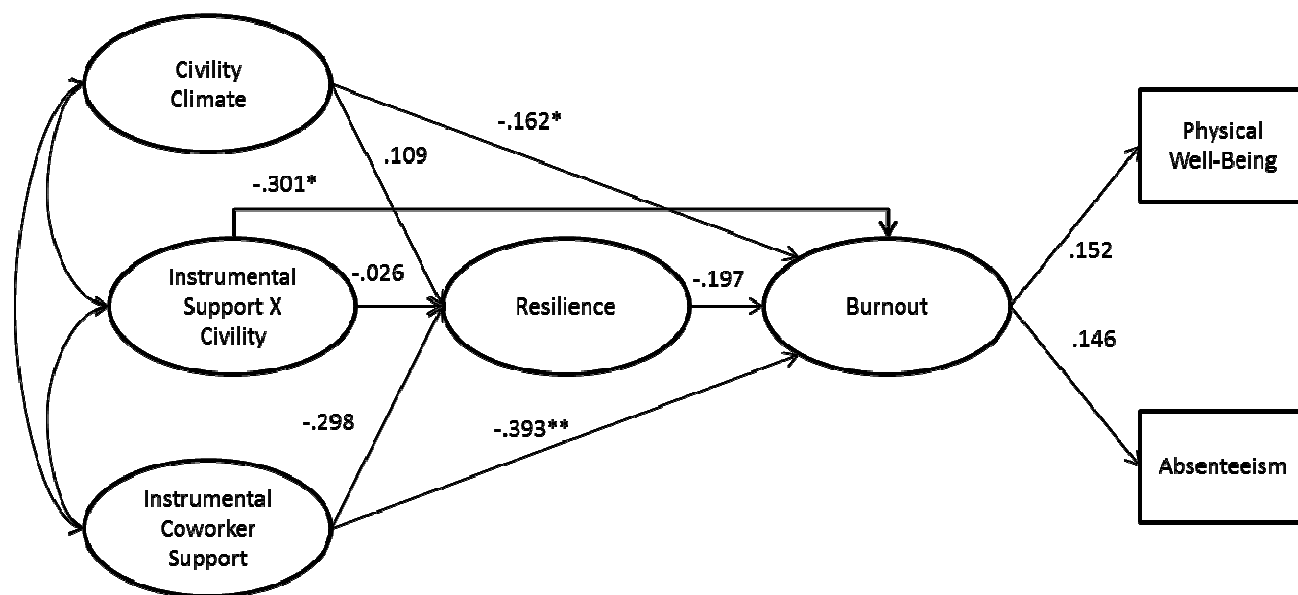


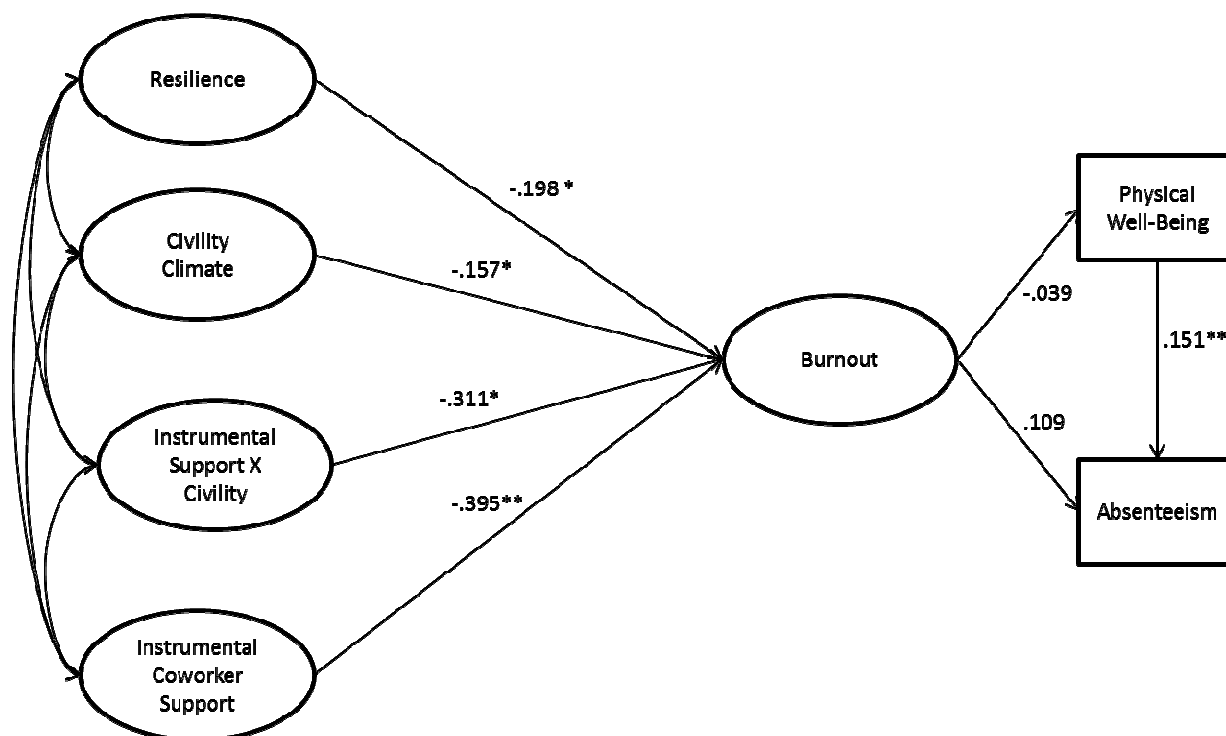


Figure 3: Hypothesized Model Results



Note: \*:  $p < .05$ , \*\*:  $p < .01$

Figure 4: Re-Specified Model Results



Note: \*:  $p < .05$ , \*\*:  $p < .01$

