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A Longitudinal Study of Workplace Incivility in a Hospital

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ABSTRACT

Workplace incivility is low-level deviant behavior with ambiguous intent to harm the target in violation of workplace norms (Andersson & Pearson 1999). Research has demonstrated that workplace incivility is associated with decreased productivity and negative health outcomes, but more information is needed about the underlying causes before interventions can be developed and tested. No research was found evaluating whether the level of workplace incivility has a single cause or multiple causes. If multi-causal, the level of incivility should fluctuate over time, whereas if it has a single cause, the level should remain stable until that cause is modified. The primary aim of this longitudinal study was to assess whether the level of workplace incivility fluctuated over time in a hospital setting. A secondary aim was to determine if demographic and employment characteristics were related to the level of incivility. Seventy-one randomly selected employees consented to participate and 85% (n=60) returned the Demographic/ Employment survey at baseline. Ninety percent of these participants were female, and 85% were Caucasian. The mean years of education were 13.86. The Incivility in Healthcare Survey (IHS) which consist of five scales measuring incivility from environmental, coworker, manager, physician, and patient sources and was distributed every month for 12 months to the participants. Women and younger employees reported significantly higher levels of incivility; whereas, those occupations reporting the lowest levels of incivility were the physicians and maintenance workers. A repeated measure ANOVA model indicated, while there was not significant fluctuations in the overall level of workplace incivility over 12 months ($F=3.16$ $p<.0763$), there were significant fluctuations in the level of workplace incivility from the coworker ($F= 8.50$ $p=.0037$) and environmental ($F=5.70$ $p=.0174$) sources. These differences in the findings regarding fluctuations over time may have been due to the inability of the IHS (a

newly developed instrument) to fully capture incivility in this work setting. The relationships among incivility and age, gender, and occupational group provided new data regarding how incivility may be perceived differently by employees. If future research supports these results, the effect of demographic and occupational characteristics will need to be considered in intervention development.

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iterations of the data were able to be run. It is a direct result of Dr. Succop's work with me that I have such faith in the findings of this dissertation.

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Finally, for those who are reading this as preparation for their own dissertation, I have a poem from an anonymous author, which I found helpful in the dark times that come with part of this quest for knowledge.

When things go wrong, as they sometimes will,
When the road you're trudging seems all up hill,
When the funds are low and the debts are high,
And you want to smile, but you have to sigh,
When care is pressing you down a bit,
Rest if you must; but don't you quit.

Life is queer with its twists and turns,
As everyone of us sometimes learns,
And many a failure turns about
When he might have won had he stuck it out;
Don't give up, though the pace seems slow;
You might succeed with another blow.

Often the goal is nearer than
It seems to a faint and faltering man,
Often the struggler has given up
When he might have captured the victor's cup.
And he learned too late, when the night slipped down,
How close he was to the golden crown.

Success is failure turned inside out;

The silver tint of the clouds of doubt;

And you never can tell how close you are,

It may be near when it seems afar;

So stick to the fight when you're hardest hit;

It's when things seem worst that you mustn't quit.

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CHAPTER ONE

Introduction

The financial cost of workplace violence is estimated to be 4.2 billion dollars annually (Kinney & Johnson, 1993). According to the U.S. Department of Justice Bureau of Labor statistics (2001), healthcare workers have the second highest incidence of workplace violence. With more than 10 million people employed in healthcare in America, the number of people at risk for injury due to violence is unacceptably high (U.S. Department of Labor, December, 12, 2006). Healthcare professionals are the survivors of violence from clients, visitors, and coworkers. Workplace violence is often started by a minor incident, such as workplace incivility, that spirals out of control. Workplace incivility, known as "low-intensity, deviant behavior with ambiguous intent to harm" (Andersson and Pearson, 1999, p. 457), may initiate a spiral that could contribute to the nine hundred people a year that are murdered at work (U.S. Department of Justice Bureau of Labor statistics, 2001). If an initial minor incident, such as incivility, could be mitigated, then the financial and human capital that would be realized is substantial. Hospitals are at particularly high risk for workplace incivility due to a high level of uncertainty in the work environment and rapidly changing norms. Some posited causes of the increasing uncertainty, in the work environment, are the lack of training for staff on behavioral expectations, increased acuity of hospitalized patients, and increased use of part time, temporary, and agency staff. The lack of training of staff on behavioral expectations and the use of part time, temporary, and agency staff are both potential causes of workplace incivility because they cause degradation in behavioral expectations and subsequently increase the potential for staff to inadvertently violate a behavioral norm. The increased acuity of hospitalized patients is also a potential cause of workplace incivility because, as staff are asked to provide increasing levels of care with the same

or even less human capital, employees may unintentionally violate organizational norms (i.e. not taking the time to refill the coffee pot) in order to complete the care necessary for the more acute patient.

Continuum of Behavior in Healthcare

There is a continuum of behavior in the workplace. On the positive end of this continuum are the behaviors that are positive for both the individual and the organization, like organizational citizenship. On the negative half of the continuum is deviant behavior. Workplace deviant behavior is further divided into workplace incivility, verbal abuse, and physical abuse. Workplace incivility is distinct from workplace violence, both verbal and physical, in that it has an ambiguous intent to harm. In other words, as long as the intent of the act can be denied, then it is incivility. However, as soon as there is a clear intent to harm it becomes workplace violence. There are many kinds of low level workplace violence, including mobbing, bullying, and ostracizing. These differ from workplace incivility because there is clear intent to harm. There has been a great deal of research published in both the nursing and healthcare literature at large on workplace violence. However, there is a lack of research studying workplace incivility and its consequences.

Workplace Incivility and its Consequences

Krebs (1976) found workplace incivility to be ten times more prevalent in healthcare than workplace violence. Further, Hutton and Gates (2008) found that losses in productivity due to workplace incivility had a financial cost to one hospital of greater than one million dollars annually. Pearson, Andersson, and Porath (2000) found that of 775 workers, who had experienced at least one incidence of workplace incivility, 53% lost time worrying about the incident, 46% contemplated changing jobs, 37% noted a decline in commitment to the company,

28% lost time avoiding the instigator, 22% decreased effort at work, 10% decreased the amount of time at work, and 12% separated from the organization. Several researchers (Cortina, Magley, Williams, & Langhout, 2001; Gabriel, 1998; Hornstein, 2003; Johnson & Indvik, 2001) found that after an incident of incivility, employees reported an increase in becoming ill, used more sick days, had lower job satisfaction, cited an increased sense of alienation, and had decreased productivity. Pearson, Andersson, and Wegner (2001) found workplace incivility to be a pervasive problem among diverse groups of professionals including managers, physicians, lawyers, police officers, and emergency medical technicians.

Purpose of the Study

The impetus for this study was a combination of past work by Hutton and Gates (2008) and the work of Pearson, Andersson, and Wegner (2001). Taken together, these studies demonstrate a significant relationship between incivility and productivity, and the ubiquitous nature of workplace incivility. Unfortunately, while support has been demonstrated for the consequences and scope of workplace incivility, there has been no research on whether the cause of workplace incivility is single or multi-factorial. One way to assess if workplace incivility is single or multi-factorial is to monitor the level of workplace incivility over time.

If one of the characteristics of workplace incivility is that it fluctuates over time this would indicate that the cause of workplace incivility is multi-factorial. To aid in the understanding of how the characteristic of fluctuation in the level of workplace incivility relates to the underlying causality a brief discussion of the logic is presented here. If the workplace incivility in an organization was caused by a single source then the level of incivility would remain stable until that source of incivility was addressed. If that single source of incivility was addressed during the year of data collection, then the data would show a precipitous drop in

incivility and then a return to stability. If the level of workplace incivility at this hospital is caused by multiple sources as several authors (Andersson & Pearson, 1999; Cortina & Magley, 2003; Cortina, Magley, Williams, & Langhout, 2001; Pearson, Andersson, & Porath, 2000; Pearson, Andersson, & Wegner, 2001) have suggested then the level of incivility should fluctuate as the sources fluctuate. Therefore, the data would not be level or have a single drop but would instead fluctuate from month to month.

The purpose of this study was to assess if the level of workplace incivility fluctuates over time for employees in a hospital setting. The primary research questions were: 1) How does the mean monthly perceived level of workplace incivility at the individual level differ over the course of a year? and 2) Are there seasonal (3 month intervals) differences in the level of workplace incivility? The secondary research questions were 1)Does the level of workplace incivility from the different sources (i.e. patient, staff, and enviroment) differ over time? 2) Does the level of workplace incivility differ by occupational group? and 3) What are the differences among the hospital employee demographic/ employment characteristics and the level of workplace incivility?

Definition of Terms

For the purpose of this study, variables were conceptually defined as follows. The operational definitions will be presented in chapter three.

1. Workplace incivility was, conceptually, perceived "low intensity deviant behavior with ambiguous intent to harm the target in violation of workplace norms for mutual respect" (Andersson & Pearson, 1999, p. 457).
2. *Healthcare employee* was, conceptually, as any person who works within the hospital as their primary work location.

3. *Demographic characteristics* were, conceptually, defined as those personal characteristics of the employees independent of the organization.
4. *Occupational characteristics* were, conceptually, defined as characteristics of the employees ascribed secondary to being part of the organization.
5. *Organization* was, conceptually, defined as the sum of all individuals systematically conducting business toward a single goal.
6. *Healthcare organization* was, conceptually, defined as any organization with the principle goal of providing healthcare.
7. *Year* was, conceptually, defined as span of time.

The procedure by which the study variables were measured will be presented in Chapter 3.

Assumptions

The study was based on two assumptions. First, incivility is present in every work environment. This assumption is based on the broad range of environments in which incivility has been studied. These environments, while not all inclusive, do include a broad range of American work environments, including the judicial system (Cortina & Magley, 2003; Cortina, Magley, Williams, & Langhout, 2001), university settings (Jex, Adams, Bachrach, & Sorenson, 2003; Luparell, 2004), healthcare organizations (Glomb & Liao, 2003; Krebs, 1976), and traditional business settings (Pearson, Andersson, & Wegner, 2001). Second, incivility has a negative impact on both the individual and the organization. This assumption is based on the research published on workplace incivility which supported that incivility at the individual level caused unresolved negative feeling in the target, separation from the organization, decrease in job satisfaction, and depression (Cortina, et al. 2001; Luparell, 2004; Pearson, Andersson & Wegner, 2001). At the organizational level the research supports that organizations with

workplace incivility have decreased productivity and greater employee attrition (Hutton & Gates, 2008; Pearson, Andersson & Wegner, 2001).

Limitations

This study had four limitations. First, the cause of workplace incivility was inferred from the characteristics of the level of workplace incivility. More specifically, the fluctuation in the level of workplace incivility was used as a proxy for the underlying cause. The reason for this limitation is that at the outset of the study there had been no research to support if workplace incivility was multi-factorial or single factorial. Hence, if workplace incivility was multi-factorial, then measuring the causes would have to capture all the causes, and not just one. Further, as the causes of incivility had not been established, capturing all the causes would be difficult at best. For example, if workplace incivility was caused by empty coffee pots, jammed fax machines, nurses gossiping, and non responsive housekeepers, then the tool to measure incivility would have to capture all of these sources to truly understand the causes. Otherwise, the cause of workplace incivility may be seen as single factorial because the other factors are not measured. The second limitation of this study was that there was a single site, which decreases the generalizability of the study. This decrease in generalizability was twofold. The site was a small rural hospital. It is possible that findings are not generalizable to urban hospitals due to fundamental differences between urban and rural hospitals. These differences include number of admissions, acuity of patients treated in the emergency room, pool of potential employees, community involvement with hospital activities, and interrelationship of employees both within and outside of the work environment. In addition, because there was no comparison site, the study findings could be an anomaly versus what truly occurs at all hospitals. The third limitation is that all the data from the participants is self reported. The validity of self-reported data must

always be questioned: this is particularly true when subjects are asked to report negative social interactions at work. The last limitation was the design of the study. Because the study design was a longitudinal survey design, there was an increased threat to validity. Threats to validity are discussed in greater depth in chapter five.

Rationale for This Study

While there is a limited but growing body of research to support that workplace incivility is a phenomenon with significant negative consequences, there had not been a systematic study to infer the cause. The first step in looking at the cause was to identify whether the cause of workplace incivility is multi-factorial or single-factorial. This was important because recently available evidence supporting the negative consequence of workplace incivility created a need to evaluate interventions to mitigate these effects. However, interventions could not be evaluated until the underlying mechanisms of workplace incivility were described.

This study adds to the understanding of workplace incivility in three ways. First, there had never been a longitudinal study of workplace incivility in any work setting. Second, there had never been any research to determine if workplace incivility is single or multi-factorial. Third, there had never been research assessing workplace incivility at the organizational level.

Summary

Healthcare and mental health workers have the second highest rate of workplace violence in America (U.S. Department of Justice, 2001). While this is distressing, the prevalence of workplace incivility in healthcare could be as much as ten times greater than workplace violence (Krebs, 1976). There is evidence that indicates that there is a significant relationship between workplace incivility and losses in productivity by workers and subsequent increases in cost to the organization, both financial and human. There is a compelling argument to mitigate the effects of

workplace incivility and improve the health of both the organization and the employees. However, no research to date was found on the underlying causes of workplace incivility; hence, the type of intervention necessary is not well understood. Before the community of scientists can move forward on intervention research, the underlying causality needs to be understood.

CHAPTER TWO

Review of the Literature and Theoretical Framework

Incivility has been studied from a variety of perspectives and in a variety of settings. Investigators have explored the role of incivility within society at large (Ferriss, 2002; Phillips & Smith, 2003; Reisig & Cancino, 2004), while others have studied incivility strictly in the workplace. The work sites studied included the judicial systems (Cortina & Magley, 2003; Cortina et al., 2001), university settings (Jex et al., 2003; Luparell, 2004), and healthcare organizations (Glomb & Liao, 2003; Krebs, 1976). Andersson and Pearson (1999) published the theoretical framework most commonly used to explain workplace incivility and then used qualitative methods to assess the transferability and confirmability of the model (Pearson, Andersson, & Wegner, 2001).

Incivility: The Theoretical Work

Andersson and Pearson (1999) wrote a theoretical paper, based in the social interactionist paradigm, introducing "a new concept – workplace incivility" (p. 466). Andersson and Pearson's theory has two primary components. The first component is the incivility spiral and the second component is the organizational model of workplace incivility.

Andersson and Pearson (1999) posited a model of the escalating nature of workplace incivility, which they termed the incivility spiral. Four key points of the incivility spiral are:

1. The perception by the target of the initial uncivil act,
2. The potential at every interaction for departure from the spiral,
3. The escalating nature of retaliation based on the perceived norm violated, and
4. The tipping point when workplace incivility becomes workplace violence.

At the individual level, Andersson and Pearson (1999) hypothesized that personal characteristics would influence a person's perception of workplace incivility. The personality characteristic which Andersson and Pearson suggested as having the greatest impact on perception of workplace incivility is being hot tempered which is described as an individual who is quick to anger when in a stressful situation.

Andersson and Pearson (1999) also evaluated how incivility spreads through an organization. Two key concepts from Andersson and Pearson's organizational model are:

1. secondary incivility spirals, defined as when a third member of the organization observes the workplace incivility and subsequently spreads incivility horizontally in the organization and
2. uncivil entity, defined as the point at which a majority of the employees in the organization believe that the organization has become uncivil.

Similar to the personal characteristics, Andersson and Pearson (1999) also suggested that there are organizational characteristics that influence workplace incivility. The two primary organizational characteristics Andersson and Pearson suggested are an environment of informality and lack of organizational structure. An environment of informality was posited by Andersson and Pearson to increase workplace incivility because of the decrease in stringent adherence to organizational norms. Further, lack of organizational structure was posited to influence the organizational level of workplace incivility by increasing role ambiguity and increasing uncertainty.

Pearson, Andersson, and Wegner (2001) published the empirical data on which the Andersson and Pearson (1999) theory was based. Pearson, Andersson, and Wegner used four different data collection techniques (focused discussions [n=670], brief questionnaire [n=182],

semi-structured interviews [n=38], and a forum of experts [n=12]) to develop and differentiate the concept of workplace incivility from other workplace behavior. Through an analysis of the focus groups for threads and trends, they found that incivility was characterized as "similar to yet distinct from other forms of antisocial, deviant behavior such as aggression and violence" (p. 1397). Pearson, Andersson, and Wegner elaborated that workplace incivility is like other forms of antisocial behavior in that it violates organizational norms. However, Pearson, Andersson, and Wegner distinguish incivility as different from other forms of antisocial behavior because of the ambiguous intent and low intensity. Other important findings were:

1. Incivility is associated with collateral damage, within the organization, when other coworkers seek retribution for the initial target.
2. Research participants reported blaming not only the perpetrator but also the managers for incivility. The research participants stated the primary reason for finding the manager culpable of incivility in the workplace was the lack of disciplinary action.

These two articles provided a solid theoretical foundation for the concept of workplace incivility. Further, Andersson and Pearson's definition of workplace incivility, "low intensity deviant behavior with ambiguous intent to harm the target in violation of workplace norms for mutual respect" (Andersson & Pearson, 1999, p. 457) is the gold standard for how to conceptually define workplace incivility. However, the authors (Andersson and Pearson 1999; Pearson, Andersson, and Wegner 2001) did not examine whether incivility fluctuates over time or is static. The research study described here was an attempt to fill this gap by assessing if there is fluctuation of workplace incivility over time.

Incivility: The Societal Perspective

Ferriss (2002) evaluated the role of civility in a society with increased role ambiguity and subsequent decreased clarity of behavioral norms, using data gathered from the 1996 General Social Survey (GSS), an annual survey from the National Opinion Research Center. Ferriss studied the variance between civility and several demographically diverse groups based on age (18-24, 25-44, 45-59, and 60 and over), color (black, white and other), gender (female and male), and marital status (separated, divorced, never married, married and widowed). Civility was measured, by Ferriss, using responses to four questions from the GSS (n =2904). The variance in civility scores were statistically significant for age (F=13.65 p=.000) and marital status (F=5.75 p=.000) but not for gender and race. Ferriss also correlated factors of societal prestige and civility. The score on the GSS were correlated with education, family income, and occupational prestige. The highest level of schooling (r = -.219; no p value given) and the occupational prestige (r=-.115 p=.002) were weakly negatively correlated to civility scores. Using a t-test, Ferriss found the mean for civility differed for those who had a favorable reaction to anger (M = 11.11) and those who did not (M= 10.47) (p = .007). Ferris describes this favorable reaction as "waiting for the feeling to pass" (p. 388). However, this waiting for the feeling to pass is controversial because it does not deal with the long term negative effect of incivility and the subsequent potential decrease in the individual's threshold toward the tipping point. Ferriss's findings provided support for the potential role of demographic characteristics in perceiving incivility. The current research attempted to fill this gap by looking at the role of demographic characteristics and incivility.

Phillips and Smith (2003) evaluated the differences in perceptions of diverse groups in relation to the sources of incivility in society. These investigators defined incivility as

“commonplace actions and interactions that are perceived to be rude or inconsiderate” (p. 85). This is in contrast to Andersson & Pearson’s (1999) definition of workplace incivility “low intensity deviant behavior with ambiguous intent to harm the target in violation of workplace norms for mutual respect" (p. 457). The primary theoretical differences between these two definitions are that Phillips and Smith do not speak to the intensity of the behavior that is perceived as incivility as Andersson and Pearson do and secondary to this it appears that Phillips and Smith are speaking about unambiguous behavior. Using this definition Phillips and Smith used seven semi-structured interviews with a total of 54 socially diverse people from Melbourne, Australia to examine differences in their recent experiences with incivility from strangers. The 54 people reported 294 incidents of incivility. Middle aged adults and older adults reported that women perpetrated incivility more frequently than men (58% vs. 43%). However, children, teenagers, young adults, “ethnic people”, and drug users reported that men perpetrated incivility more frequently than women (42% vs. 58%). The investigators also found that women reported a greater incidence (35% vs. 17%) of verbal incivility from strangers than men. Phillips and Smith posited that the reason for the difference in perception of the source of incivility is due to differences in peoples’ behavioral expectations. Phillips and Smith’s research was important to the current research because it illustrated how different expectations of people’s behavior effect perceived incivility. Phillips and Smith’s research suggests that these differences in people’s behavioral expectations is one potential explanation for why two people in the same setting with similar experiences may have different perceived levels of workplace incivility. The current research evaluated if people in the same work environment could perceive similar events differently.

While Phillips and Smith's (2003) study examined incivility in a metropolitan area, other investigators have studied incivility in rural areas. Reisig and Cancino (2004) researched the relationship of multiple societal processes and demographic characteristics and perceived incivility in rural areas. The researchers defined incivility as "signs of physical decay and social disorder" (p 15). Reisig and Cancino combined selected items from three government data sources (the community survey [n=1307], the 1990 decennial census data, and the official police crime records) for three rural Michigan areas to assess if societal process and demographic characteristics were related to the perception of incivility in rural areas. After data normalization, they used Pearson correlations and found a statistically significant relationship between rural subjects who were more economically disadvantaged and higher mean of perceived incivility ($r=.29$ $p<.05$). Economic disadvantage was calculated using weighted factor scores on education, family income, and occupational prestige. Reisig and Cancino also found that social cohesion was negatively correlated with perceived mean incivility ($r = -.80$ $p<05$). Social cohesion was conceptually defined as the "levels of mutual trust and solidarity among neighbors" (p. 21). Social cohesion was calculated as the sum of subjects' responses to five statements. These statements were 1) "People around here are willing to help their neighbors. 2) This is a close-knit neighborhood. 3) People in the neighborhood can be trusted. 4) People in this neighborhood do not share the same values (reverse scored). 5) People in the neighborhood generally don't get along with each other (reverse scored)" (p 21). The investigators hypothesized that the impact of social cohesion is to mitigate the negative effects of economic disadvantage because among study participants who had the same level of economic disadvantage those with higher social cohesion had lower perceived incivility. It is important to note that the Reisig and Cancino definition of incivility was different from that of Andersson and Pearson (1999). The important

difference between the two definitions is that Reisig and Cancino look at environmental decay as part of incivility and there is no mention of the intensity of the behavior. Further, Reisig and Cancino were not examining incivility in the workplace, but were instead looking at incivility in society. The study findings support the need for the current research and the role that economic disadvantage plays in incivility. If these findings are generalized to the work environment, then employees who have higher income and occupational prestige or lower economic disadvantage, may perceive lower levels of incivility. The current research attempts to address this issue by evaluating if higher paid occupations had lower workplace incivility.

Incivility: The Legal Perspective

Cortina et al. (2001), using Andersson and Pearson's (1999) definition of workplace incivility, examined the incidence, targets, instigators, and impact of workplace incivility. Using the judicial system as the setting, Cortina et al. surveyed the eighth circuit court's employees (N=1662), excluding judges. Respondents (n=1167) answered surveys about perception of incivility (Workplace Incivility Scale), job related outcomes (Job Descriptive Index), psychological and health related outcomes (Mental Health Index), health satisfaction (Retirement Descriptive Index), and the extrinsic organization commitment (O' Reilly Chatman scale). Cortina et al. regressed the subjects perceived incivility with demographic and employment factors and found that gender only adds about 1% to the variation in workplace incivility (Δr^2=.011 $p<.05$); job position (management instigated incivility) had the highest correlation to incivility when added to the regression model (Δr^2=.073 $p<.001$). The investigators also found that incivility was negatively correlated with all five markers of job satisfaction, particularly supervisor satisfaction (Δr^2=.158 $p<.001$). These last correlations add additional support for the relationship between workplace incivility and negative consequences related to satisfaction with

supervisors. Further, Cortina et al. examined the perceptions of individuals from multiple job classes within the court system. Using multiple job classes provided a broader view of the scope of organizational incivility than if Cortina et al. had only looked at the perception of one job class, like lawyers. However, Cortina et al. used a cross sectional design to examine incivility and while hypothesizing that the cause of workplace incivility is multi-factorial they did not provide any support. That is to say, Cortina et al. did not assess causality nor did they assess if the level of workplace incivility fluctuates over time. Further, because the study was cross sectional Cortina et al. can only speak about associations not causality. The current research attempts to address this gap in the literature by assessing if workplace incivility fluctuates over time.

Cortina and Magley (2003) continued to analyze the data collected for the 2001 article, to identify if employees that reported workplace incivility, from managers to coworkers experienced retaliation victimization and impaired wellbeing. They termed this reporting workplace incivility "using voice" and defined it as "when they (employees) vocalize their dissent or dissatisfaction with an organizational practice" (p. 247). The investigators combined the variables of mistreatment frequency, retaliation victimization, voice, and wrongdoer power into the umbrella variables of social retaliation victimization (SRV) and work retaliation victimization (WRV). SRV was defined as "involves antisocial behaviors that have the purpose or effect of negatively altering the target's interpersonal relations with other organizational members and that are intended by the instigator or perceived by the target to be a reprisal for the target's behavior" (p. 248). WRV was defined as "involves adverse work-related actions that have the purpose or effect of negatively altering the target's job and that are intended by the instigator or perceived by the target to be a reprisal for the target's behavior" (p. 248). Then the

investigators performed regression analyses between the independent variable (the use of voice) and the dependent variables (SRV and WRV) they found that 47% ($p<.001$) of the variance in SRV (i.e. name calling, ostracism, blame, and threats) and 42% ($p<.001$) of the variance of WRV (i.e. discharge, transfer, demotion, and poor performance appraisals) were explained. This study points out the collateral effect of incivility in the workplace. Employees who reported incivility to managers subsequently experienced an increased level of retaliatory incivility from coworkers and managers who were not initially involved in the exchange. The collateral damage creates a toxic work environment. The second important finding of this study is that while administrators may not perpetrate incivility often, when they do the impact on the overall health and welfare of that employee is significantly more detrimental than with employee to employee incivility. Akin to the other studies that have been conducted on workplace incivility, this study evaluated the consequences of incivility but not the causes. The current research attempted to address this gap by assessing if workplace incivility is single or multi-factorial.

Incivility: The Academic Perspective

Jex et al. (2003) studied the relationship between three stressors (organizational constraint, role ambiguity, and role constraint) and employee altruism in non-faculty university workers in Wisconsin (n=79) and Indiana (n=68). Jex et al., using Andersson and Pearson's (1999) definition of workplace incivility, hypothesized that decreasing employee altruism is a precursor to workplace incivility. The investigators used a regression model to analyze the associations among respondents' scores on the Rizzo et al. scale (measuring role ambiguity and role constraint), organizational constraint scale (measuring organizational constraint), and organizational citizenship behavior scale (measuring employee altruism). They found that organizational constraint (conditions making it more difficult to complete tasks) was the only

variable that met traditional levels of statistical significance related to employee altruism (willingness to help other employees) ($r = -.17$, $p < .05$). This study provides weak support for the detrimental effect of organizational characteristics, in this case organizational constraints, on positive workplace behavior and, subsequently, the role of organizational characteristics as it is related to deviant workplace behavior. While not studying workplace incivility, Jex et al did evaluate the relationship between organizational characteristics and potential precursors to workplace incivility. Instead of looking at the precursors of workplace incivility, the current research evaluated trends in the level of workplace incivility and the potential underlying cause of incivility itself.

Luparell (2004) studied nursing faculty members' experiences with incivility in a university setting using semi-structured interviews with 21 nursing faculty members to describe incidents (n=36) of incivility toward them by nursing students. In the interviews, faculty were asked to describe a critical incident of incivility by a student, the surrounding circumstances, and the short and long term impact of the incident. The investigator found that male students perpetrated 43.8% of incidents of incivility despite representing only 5.4% of the nursing work force, which raises concerns about males perpetrating incivility at a greater rate than females. Further, Luparell suggested that incivility from nursing students might be a primary reason that faculty leave education. Using this qualitative data, Luparell (2004) constructed a diagram of incivility in education that is similar to the incivility spiral postulated by Andersson and Pearson (1999). The model Luparell posits is similar to Andersson and Pearson's in that it has an escalating intensity of the incivility experienced by the target. However, unlike Andersson and Pearson's incivility spiral Luparell's model does not contain the interactional nature of workplace incivility. Luparell conceives workplace incivility as a unilateral action taken by the

student towards the faculty member and, therefore, does not provide for the critical interactional nature of the phenomenon. Luparell failed to define incivility and the accounts of incivility in the article appear to be more like examples of workplace violence than incivility as described by Andersson and Pearson. Due to the higher intensity of behavior, Luparell appears to be writing about how incivility in academia becomes workplace violence versus the causes of incivility. Luparell's article is important to the current research because it provides support for the influence that gender could have on the perpetration of incivility. As this is in conflict with what other researchers have found, the current research attempts to clarify the issues of gender's influence on workplace incivility.

Incivility: The Healthcare Perspective

Krebs (1976) studied incivility in hospitals. He used pairs of observers in a large urban hospital to categorize interactions between staff as disrespect (n=122), respect (n=738), and non-respect (n=1304). Krebs' non-respect is the closest to workplace incivility as defined by Andersson and Pearson (1999). Krebs defined non-respect as "neither clearly disrespectful or respectful" (p. 68). The research team then worked with staff to tailor interventions to the specific non-respectful or disrespectful interactions. These interventions accounted for the unique nature of each interaction and environment in which the interaction took place. This individualized approach generated a significant reduction ($cr = 3.42$ $p<.0006$) in number of incidents of non-respectful and disrespectful behaviors observed at the hospital. The interventions that Krebs used are based on the assumption that workplace non-respect is multi-factorial. If Krebs assumed that non-respectful behavior was single factorial, then he would have used a single intervention instead of an intervention for each non-respectful interaction. However, the assumption that there are multiple reasons for non-respectful behavior was not

explicit in the Krebs study. Further, while Krebs' definition of non-respect was similar to workplace incivility, he included low intensity behaviors, which were both positive and negative. This difference obfuscates the applicability of the findings. That is to say that behaviors which are low intensity but positive like not pushing the door closed button on the elevator would be included in Krebs observations even though these are not congruent with Andersson and Pearson's (1999) workplace incivility definition. The current research attempted to address this gap in the research by studying only low level negative behaviors and using a longitudinal design, which allowed for inferences about causality.

Glomb and Liao (2003) did not study incivility per se but rather investigated interpersonal aggression among work groups. Interpersonal aggression is a higher level of deviant workplace behavior than workplace incivility. They surveyed 217 employees in 25 group health care homes to determine the environmental impact of ambient aggression on the employees' individual level of aggression. Although they did not use the term workplace incivility, this research is important to the phenomenon because these investigators addressed one key aspect of workplace incivility that is not described in other literature. They assessed the environmental influences on higher level deviant behavior. They defined aggression as yelling, swearing at a coworker, spreading rumors, and destroying a coworker's property. Ambient environmental aggression as set forth by the investigators is the low level aggression that pervades the work group environment and is not directed at any single employee. For example, a manager's disciplinary policies could change what aggression is tolerated in the environment without directing aggression at any one employee. The investigators found that the addition of ambient work aggression to personal characteristics added an additional 5% ($p<.05$) to the association between the employee and potential for aggression. Also of importance, the

investigators found that individuals who had been the target of aggression were associated with future behavior of engaging in aggression and retribution (r=.15 p<.001). This research is important because it speaks to the role that ambient environmental deviant behavior plays in facilitating further deviant behavior. The current research evaluated whether Glomb and Liao's findings on environmental aggression were also supported at the lower intensity level of workplace incivility. This was accomplished by looking at if employees with a perceived higher environmental incivility had a higher overall perceived workplace incivility.

Hutton and Gates (2008) conducted a study that evaluated the cost associated with workplace incivility in a metropolitan hospital. Using a cross sectional survey design (n=184), Hutton and Gates found a correlation between workplace incivility from direct supervisors and productivity (r=.28 p<.001). The researchers also found a correlation between workplace incivility from patients and productivity (r=.204 *p*=.006). Incivility from physicians, other direct care staff, and environmental incivility were not shown to have significant relationships to productivity. This study is important because the researchers were able to equate losses in productivity with a dollar figure, therefore, illustrating the cost of the consequences of workplace incivility. Unlike other studies, Hutton and Gates found that two sources of incivility, manager and patients, were primarily associated with the negative consequences. This finding is important because it tends to suggest that incivility could have a limited number of sources that are causing the consequences of incivility. The current research attempted to assess if a single source or multiple sources were causing workplace incivility.

Guidroz, Burnfield, Clark, Schwetschenau, and Jex (2007, May) developed an instrument called the Nursing Incivility Scale (NIS). Guidroz et al used both qualitative and quantitative methods to create and validate the NIS. Initially, Guidroz et al. used a panel of nursing experts to

evaluate and tailor a general incivility tool, originally created by Burnfield, Clark, Devendorf, and Jex (2004), to the healthcare environment. After the panel of experts evaluated the tool, Guidroz et al. conducted both focus groups and written interviews with nurses. The participants of the focus group were ask to:

1. Provide a description of incivility and your perception of the prevalence by source type.
2. Enumerate perceived causes of incivility and the extent to which this differed by source.
3. Describe your experiences with incivility.
4. Describe your responses to incivility in the past.
5. Provide thoughts about ways to prevent incivility and provide a description of incivility.

The written interviews were packets, which were distributed to those nurses who were not able to attend the focus groups. The packets included the NIS, a demographic form, and a critical incident form where nurses were asked to write about an incident of incivility in the last month. Guidroz et al. conducted a qualitative analysis on the focus group transcripts as well as the critical incident writing. Problem behaviors from the focus group and interviews were entered into a spreadsheet and used to select variables for construct validity. Quantitatively, Guidroz et al. removed any item on the NIS which 50% of the interviewees did not deem a problem (eight items were removed). Guidroz et al. then distributed the NIS to 700 full time nurses and nurse managers in a hospital and received 160 completed surveys. A principle axis factoring with oblique rotation was conducted by Guidroz et al. on the surveys returned. Three items had significant cross loading for two factors and hence were dropped by the researchers. Guidroz et al. next assessed the NIS for construct validity and internal consistency. The construct validity was based on the initial qualitative analysis and a review of the literature. Guidroz et al. based

internal consistency on Cronbach's alpha, which ranged from .81 to .94 for the NIS. The NIS was modified for the current study. The modifications are presented in chapter three.

Summary

While there has not been a great deal of research on workplace incivility, the research that has been conducted continues to support that there are negative consequences associated with workplace incivility for both the individual and the organization. These consequences are financial, emotional, and societal. Employees who are targets of incivility have decreased organizational citizenship, decreased productivity, and decreased job satisfaction (Pearson, Andersson & Porath, 2000). Pearson et al. expressed the consequences of workplace incivility on organizational behavior eruditely when they stated "whether the toll accrues as increased absenteeism, reduced commitment, decreased productivity, or organizational departure, the stakes of incivility are high" (p. 129). However, while the consequences of incivility have been supported by the reviewed research, there is less evidence supporting the underlying characteristics of workplace incivility. The current research attempted to address this gap in the literature by studying the underlying characteristics of workplace incivility. Both primary research questions (How does the mean monthly perceived level of workplace incivility at the individual level differ over the course of a year and Are there seasonal (3 month intervals) differences in the level of workplace incivility) attempted to describe if one of the underlying characteristic of workplace incivility is a fluctuation in the level of incivility over time. Once the underlying characteristics of workplace incivility are better understood, some assumptions about the underlying causality can be made. From these assumptions, more effective intervention research can begin, and the negative effects of workplace incivility can be mitigated.

CHAPTER THREE

Methods

This chapter describes the methods used to conduct the study and is divided as follows: research design, setting, data collection procedure, brief description of measures, data management, data analysis, and human subjects' protection. The primary purpose of this longitudinal research study was to assess if one of the characteristics of workplace incivility is that the level of workplace incivility differs over time for employees in a hospital setting. The primary research questions were:

1) How does the mean monthly perceived level of workplace incivility at the individual level differ over the course of a year?
2) Are there seasonal (3 month intervals) differences in the level of workplace incivility?

The secondary research questions were:

1) Does the level of workplace incivility from the different sources (i.e. patient, staff, and environment) differ over time?
2) Does the level of workplace incivility differ by occupational group?
3) What are the differences among hospital employee demographic/ employment characteristic and the level of workplace incivility?

Research Design

A descriptive longitudinal design was used in this study. Data were collected monthly for 12 months using surveys that were distributed by study personnel. Research participants completed and returned the surveys to the investigator via the United States Postal Service.

Operational Definitions

Workplace incivility was the mean score of the participant's perceived experiences with direct care providers, physicians, supervisors, patients, and environmental interactions as measured by the Incivility in Healthcare Survey (Appendix A).

Healthcare employee was any individual on the list of employees provided by the chief of human resources at the hospital, after discussing inclusion and exclusion criteria with the investigator.

Demographic characteristics were the age, years of education, ethnicity, and gender as reported by the healthcare employee.

Occupational characteristics were the job title, years of service at the organization, hours worked during a week, primary shift, and average shift length.

Organization was the collection of individuals organized by a formal organizational chart.

Healthcare organization was a tertiary level hospital.

Year was 12 continuous months.

Month was 28 days. Twenty-eight days was set as a month because it kept all the survey distributions on the same day of the week and the same distance from payday.

Season was three month intervals. Winter was January, February, and March; Spring was April, May, and June; Summer was July, August, and September, Fall was October, November, and December.

Setting

The research team collected the data at a small rural tertiary care hospital in Northern Kentucky. The hospital was a 25 bed hospital with 150 fulltime employees. The hospital offered general medical and surgical services to the surrounding community.

Data Collection Procedure

Sample

Subjects. The research team randomly selected 100 participants from the pool of all possible participants at the hospital. A sample size of 100 was selected to account for attrition over the year. Using g*power (Faul, Erdfelder, Lang & Buchner, 2007) and Lipsey (1990) the sample size was calculated for a repeat measure design with an effect size of 0.4, an alpha of 0.05, and a power of 0.95. The sample size needed to assure that this level of power was available was 56 respondents. The pool of possible participants was established by the chief of human resources after she spoke with the investigator and reviewed the inclusion/exclusion criteria. Employees, for the purposes of this study, were defined as all people working greater than 36 hours a week within the hospital who are employed by the hospital.

Inclusion criteria. Inclusion criteria were:

1. employees who had daily contact with at least three of the following five sources of workplace incivility a) environment b) nurses c) physicians d) supervisors e) patients and
2. employees who could read and write English.

Employees needed to have contact with at least three sources of incivility in order to clarify the nature of workplace incivility. If an employee only had exposure to two of these sources and one of the two was not perceived as a source of incivility then it could appear that workplace incivility only had one source when in fact it could have had several. However, if a participant had exposure to three or more of the sources and if only one source was perceived as causing incivility then a stronger argument could be made that incivility had a single source. To assess if someone had contact with at least three sources of incivility, the investigator asked if the participants had interacted with at least three of the sources of incivility at the initial meeting. All employees who were selected reported contact with at least four of the five sources of

incivility. Employees who were able to read and write were essential for completing the survey tools. Furthermore, all hospital policies, memorandums, and meetings were in English. Policies, memorandums, and meetings are the formal structure on which organizational culture and norm expectations are based. Hence, an employee who could not read or write English would have a significant limitation in understanding the norm expectation of the organization. This was not an issue in this case since all employees at the hospital were able to read and write English.

Exclusion criteria. Exclusion criteria included:

1. employees under the age of 18,
2. employees whose primary job assignment is outside of the hospital (i.e. case managers), and
3. employees who work in the hospital but are employed by a third party (i.e. agency and traveling nurses).

Individuals who were 18 had reached the age of majority and were legally able to consent to participate in the study. All of the full time employees of the hospital were 18 or older. The reason that the employee needed to work within in the hospital building itself was that organizational culture is continually changing as people interact. Subsequently, if an employee had minimal interactions with other employees from the organization that employee's ability to change the norm expectation would have been limited. The hospital did not have any employees who spent the majority of their time outside of the hospital. However, the hospital did have a freestanding clinic in one of the surrounding counties. The employees from that clinic were not included in the pool of potential participants. Workers who worked for an outside company (i.e. agency and traveling nurses) were excluded because they potentially have the organizational norms of the parent company, and not the hospital, hence changing their view of organizational

incivility. This was not an issue in this case since the hospital did not employ any agency or traveling nurses.

Randomization Method

The investigator worked with the chief of the human resources department at the hospital to randomly select employees and then the investigator asked the employees to participate in the study. The chief of human resources generated a list of names from all possible employees and organized them by department. The investigator then assigned each employee a number from 1 to 150. The investigator provided the human resource person with the first 100 numbers of a randomly generated sequence of numbers from 1 to 150. The employees assigned these 100 numbers were asked to participate in the study. The investigator generated the sequence via random.org, which is based on the variation in atmospheric noise as the number generator instead of an algorithm, which generates pseudorandom numbers (Haahe, 1999).

Recruitment

Three recruitment methods were used in this study: flyer, explanation of the consent form, and one-to-one explanation. First, one week before the initial distribution of surveys, the chief of human resources distributed a flyer to all employees notifying them that the research team would be coming (Appendix B). Second, participants received the informed consent which explained the study (Appendix C). Last, the investigator personally asked the potential participants to participate in the study. No incentives were used as a recruitment tool.

Initial meeting

The chief of human resources scheduled the initial meetings between the investigator and the participants. The research team conducted the meetings within the hospital building at times compatible with the workers' schedules. The meetings were private between the investigator and the individual subjects to increase the confidentiality of the study. At the initial meeting between the investigator and the research subject, the investigator asked the subject to sign an informed consent (Appendix C) which explained the study. Subjects were provided instructions to complete the surveys at the beginning of the surveys (Appendix D). The investigator was present to answer any questions the participants had about completing the surveys. Two potential participants declined to participate in the study. The reasons provided were "I'm not like that" and "I don't have the time".

With every survey distribution, the participants also received a self-addressed, stamped envelope to be used to return the surveys. The surveys were mailed to Scott Hutton at the following address: College of Nursing, University of Cincinnati, PO Box 210038, Cincinnati, Ohio 45221-0038.

Subsequent monthly meetings

The research team returned to the hospital every month to distribute surveys. The research team scheduled the subsequent meetings with the participants at times conducive to their work schedule at a location within the hospital of the participants choosing on the scheduled days. At every survey distribution, participants were asked if they wanted to continue to participate in the study, and with continued consent, they were provided the IHS tool that had their identification number on it. Two participants declined to continue to participate in the

study. Reasons provided were “I was not comfortable with these questions” and “I have not done a very good job of completing these, so I do not want to do it anymore”.

Brief Description of Measures

Demographic and Employment Characteristic Instrument

The investigator conceptually defined demographic characteristics as those personal characteristics of the employees independent of the organization and occupational characteristics as characteristics of the employees ascribed secondary to being part of the organization. The research team measured demographic and occupational characteristics using a Demographic and Employment Characteristic instrument (Appendix E). Subjects were asked to identify their age, gender, job title, ethnicity, years of education, years of service at this organization, average hours worked a week, average shift length, and primary shift worked. There are two multiple choice items and seven fill-in the blank items. It took approximately three minutes to complete this survey.

Incivility in Healthcare Survey (IHS)

The investigator has defined workplace incivility, conceptually, as perceived “low intensity deviant behavior with ambiguous intent to harm the target in violation of workplace norms for mutual respect" (Andersson & Pearson, 1999, p. 457). The research team measured workplace incivility using the Incivility in Healthcare Survey (IHS) (Appendix A) which is a summated rating scale consisting of forty-one items which measure the incivility experienced by staff from the environment, coworkers, supervisors, physicians and patients/ visitor. The IHS uses a five point Likert scale ranging from never to very often. The IHS has five subscales: the environmental subscale (thirteen items), the nurse subscale (five items), the supervisor subscale (six items), the physician subscale (seven items), and the patient/visitor subscale (ten items). The

IHS is scored by calculating the means of the subscales then the five subscale means are used to generate a mean level of workplace incivility overall.

Tool modifications

The Guidroz et al. (2007, May) Nursing Incivility Scale (NIS) was modified to create the Incivility in Healthcare Survey (IHS) used in this study. The tool was changed from an agreement scale, ranging from strongly disagree to strongly agree, to an incidence scale, ranging from never to very often. This modification was implemented because all of the research that was reviewed provided support for the universal presence of incivility in the workplace; therefore, this research sought to determine how much incivility was present. The items were re-sequenced so like items were together on the survey. This modification was implemented because the NIS had items that appeared to fit better in different subscales. For example, "spread bad rumors around here" was a nursing question on the NIS. However, because this is not a behavior specific to any specific group of hospital employees, on the IHS this item was moved to the environmental subscale. The next modification to the NIS was to change the physician subscale so that the items were stem and leafs like the rest of the instrument. The reason this modification was made was to homogenize the visual ascetics of the tool. The next modification to the NIS was to change the stems for each subscale to reflect the change from an agreement scale to an incidence scale. For example, "Please think about your interactions with your **direct supervisor** (i.e., the person you report to most frequently) and indicate how strongly you agree with the following behaviors." was changed to "Please think about your interactions with your direct supervisor (i.e., the person you report to most frequently). **How frequently does your direct supervisor**…". The next modification was the removal of the items '(supervisor) is condescending to me' because it was not in keeping with the definition of workplace incivility

because they had a clear intent to harm. The last modification to the tool was to change the wording of the nurse subscale to co-worker. The reason for this modification was that the survey was distributed to all hospital employees in this study; therefore, this section needed to reflect all coworkers.

After completing these modifications, the instrument was piloted with 850 employees at a large metropolitan hospital. A response rate of 22% was accomplished (184 surveys). From this data, the internal consistency of this instrument was measured by Cronbach's alpha for the overall tool of .943. An alpha on the environmental subscales was .913, the co-worker subscale was .830, the supervisor subscale was .808, the physician subscale was .927, and the patient/ visitor subscale was .913 (Hutton & Gates, 2008). Then the survey was reviewed by two nursing experts for content validity. Both experts were doctorally prepared occupational health nurses, and one specialized in workplace deviant behavior. The survey was then used in the current study.

Data Management

Subjects mailed the surveys to Scott Hutton at the College of Nursing and the investigator collected the surveys every day the mail was delivered. Once collected, the research team kept the surveys in a locked filing cabinet to which only the investigator, his dissertation chair, and the research assistant had access. The research team stored the informed consents in a separate file from the surveys. The list of names and associated identification numbers were locked in a filing cabinet with the informed consents. Access to these files was restricted to the investigator, his dissertation chair, and the research assistant. The research team stored digital data on a research server with weekly tape backup to a separate locked location.

The research assistant coded the data according to the code book (Appendix F) and entered it into an access database. The research assistant then entered data from different instruments and different time periods into separate data sets for cleaning prior to the data being merged together into one analysis file. The investigator and the research assistant double-checked these data for errors. This process involved checking each survey against a printed copy of the electronic database and discrepancies were corrected. Questions about data were resolved by the investigator. For a survey to be included in the database, 21 of the 41 questions needed to be answered. For a subscale of the survey to be included, greater than half of the questions within that subscale must have been answered. A subject must have returned seven completed IHS surveys, and the demographic survey, to be included in the data set. On surveys that met the criteria for inclusion in the dataset but had missing values within a subscale, the missing values were filled in with the mean value of the completed data within that subscale. If a subject had experience with at least three but less than all sources of incivility the subscales of the survey that were not completed were left blank in the dataset. All unusable surveys were shredded.

Data Analysis

The research assistant exported the data from the Microsoft Access database to a Microsoft Excel spreadsheet. Table 1 presents a brief description of the variables in this study. The data were analyzed using SAS package.

Table 1
Description of the Variables

Dependent Variable	Level of Measurement
Workplace incivility	Continuous (Interval)
Independent Variable	
Time	Continuous (Ratio)
Age	Continuous (Ratio)
Gender	Categorical (Nominal)
Job title	Categorical (Nominal)
Ethnicity	Categorical (Nominal)
Years of education	Continuous (Ratio)
Years of Service at this organization	Continuous (Ratio)
Average hours worked per week	Continuous (Ratio)
Average shift length	Continuous (Ratio)
Primary shift	Categorical (Nominal)

The following discussion outlines the analysis of the data with the rationale for the selection of each statistical method. The analysis of the data included evaluation of the following research questions:

1. How does the mean monthly perceived level of workplace incivility at the individual level differ over the course of a year?
2. Are there seasonal (three month intervals) differences in the level of workplace incivility?

The data analysis included evaluation of the following secondary research questions:

1. Does the level of workplace incivility from the different sources (i.e. patient, staff, and environmental) differ over time?
2. Does the level of workplace incivility differ by occupational group?
3. What are the differences among hospital employee demographic/ employment characteristics and the level of workplace incivility?

Two analysis models were used in this study. Both analyses used a repeat measure ANOVA. The first model used the repeat measure ANOVA to evaluate fluctuations in workplace

incivility by month. Fluctuation in workplace incivility was quantified at monthly intervals with demographic data, occupational group, and source of incivility included in the model to test for differences between these independent variables and monthly change in incivility. The second analysis used the repeat measure ANOVA to evaluate fluctuations in incivility by seasons (January to March, April to June, July to September, and October to December) with demographic data, occupational group, and source of incivility included in the model. The reason that one model could not have been used is the confounding nature of two different time variables, month and season. That is to say that time needs to be measured as either a month or a season but the model cannot analyze both at once.

Human subjects

Informed consent

The investigator obtained the approval of the University of Cincinnati Institutional Review Board (UCIRB) prior to beginning the data collection. Further, all members of the research team completed the CITI course prior to data collection. The investigator, with the assistance of the chief of the human resource department at the hospital, invited randomly selected subjects to a meeting at the worksite. After an introduction, the investigator explained the study and asked the potential participant to sign a consent form approved by the UCIRB. The consent form contained all of the information required by the IRB (i.e. purpose and duration of the study procedure, exclusion criteria, potential risk and benefits, confidentiality, and right to refuse or withdrawal participation). Subjects received a copy of their signed informed consent form; the investigator retained the original consent form in a locked filing cabinet.

Minimizing Potential Risk

Participation in the study only posed minor potential discomfort, including the inconvenience of the time to fill out the survey (less than fifteen minutes) and increased awareness to workplace incivility. No adverse events were reported during the study,

Confidentiality of Records

Confidentiality was effectively maintained through the following procedures. The research team kept all records in locked file cabinets. The investigator coded all surveys with the subject's number and no names appeared in the dataset. The investigator performed all data analyses with subject numbers only. Only the investigator, his dissertation chair, and the research assistant had access to subjects' names and their corresponding subject number. The research team will destroy, via shredder, records of subjects' names and codes five years after the study is completed. The research team will use aggregate data without subject names in all research reports.

Summary

This chapter described the methods that were used to conduct the study. The research team used the setting, data collection process, sample, human subjects' protection, data management, and plan for data analysis to answer the research questions that are described. The results will be discussed in chapter four.

CHAPTER FOUR

Results

This chapter presents the results of the study and is organized around the following sections: description of study sample, description of the survey items, psychometrics of the modified survey, and the results of the repeat measure ANOVA model.

Description of the Study Sample

Sixty people completed the demographic and employment survey. Tables two through five present the demographic characteristics for all participants.

Table 2
Description of the Continuous Demographic and Employment Variables for all Participants

Variable	N	Mean	Std. Dev.	Min	Max
Age	60	40.75	13.17114	19	68
Years of education	59	13.85593	3.625878	2	30
Years of service	60	10.66817	11.30938	.25	39
Hours worked per week	60	39.64167	9.98944	24	100
Shift length	59	9.461864	1.925226	7	15

Table 3
Description of the Gender Variable for all Participants

Gender	N	Percent
Female	53	89.83
Male	6	10.17
Total	59	100

Table 4
Description of the Ethnicity Variable for all Participants

Ethnicity	N	Percent
Asian American	1	1.92
European American	44	84.62
Central and South American	1	1.92
Other	6	11.54
Total	52	100

Table 5
Description of the Shift Worked Variable for all Participants

Shift	N	Percent
Day	54	90.00
Evening	3	5.00
Night	2	3.33
Other	1	1.67
Total	60	100

Of the 60 people who completed the demographic and employment survey, 40 completed a minimum of seven monthly Incivility in Healthcare Surveys (IHS). Tables six through nine present the demographic characteristics of these 40 participants.

Table 6
Description of the Continuous Demographic and Employment Variables for Participants Completing a Demographic Form and Seven IHS Surveys

Variable	N	Mean	Std. Dev.	Min	Max
Age	40	42.25	13.03791	22	68
Years of education	39	13.32051	3.325514	2	23
Years of service	40	12.4335	12.11061	.25	39
Hours worked per week	40	39.0625	6.759786	24	60
Shift length	39	9.301282	1.775361	7.5	12

Table 7
Description of the Gender Variable for Participants Completing a Demographic Form and Seven IHS Surveys

Gender	N	Percent
Female	36	90
Male	4	10
Total	40	100

Table 8
Description of the Ethnicity Variable for Participants Completing a Demographic Form and Seven IHS Surveys

Ethnicity	N	Percent
Asian American	1	2.70
European American	33	89.19
Central and South American	1	2.70
Other	2	5.41
Total	37	100

Table 9
Description of the Shift Worked Variable for Participants Completing a Demographic Form and Seven IHS Surveys

Shift	N	Percent
Day	37	92.50
Evening	2	5.00
Night	1	2.50
Total	40	100

Of the 60 people who completed the demographic and employment survey, 20 did not complete a minimum of seven monthly IHS. Tables 10 through 13 present the demographic characteristics of these 20 participants.

Table 10
Description of the Continuous Demographic and Employment Variables for Participants Completing a Demographic Form but Less than Seven IHS Surveys

Variable	N	Mean	Std. Dev.	Min	Max
Age	20	37.75	13.25012	19	60
Years of education	20	14.9	4.034718	9	30
Years of service	20	7.1375	8.742643	.33	30
Hours worked per week	20	40.8	14.6273	25	100
Shift length	20	9.775	2.203317	7	15

Table 11
Description of the Gender Variable for Participants Completing a Demographic Form but Less than Seven IHS Surveys

Gender	N	Percent
Female	17	89.47
Male	2	10.53
Total	19	100

Table 12
Description of the Ethnicity Variable for Participants Completing a Demographic Form but Less than Seven IHS Surveys

Ethnicity	N	Percent
European American	11	73.33
Other	4	26.67
Total	15	100

Table 13
Description of the Shift Worked Variable for Participants Completing a Demographic Form but Less than Seven IHS Surveys

Shift	N	Percent
Day	17	85.00
Evening	1	5.00
Night	1	5.00
Other	1	5.00
Total	20	100

Of the 60 people who completed the demographic and employment survey, nine separated from the organization during the year of data collection. Tables 14 through 17 present the demographic characteristics of these nine participants.

Table 14
Description of the Continuous Demographic and Employment Variables for Participants who Separated from the Organization

Variable	N	Mean	Std. Dev.	Min	Max
Age	9	33.8889	13.42986	22	57
Years of education	9	13.55556	1.721998	12	16.5
Years of service	9	3.453333	4.813286	.33	16
Hours worked per week	9	40.11111	2.260777	36	45
Shift length	9	9.22222	1.715938	8	12

Table 15
Description of the Gender Variable for Participants who Separated from the Organization

Gender	N	Percent
Female	8	100
Total	8	100

Table 16
Description of the Ethnicity Variable for Participants who Separated from the Organization

Ethnicity	N	Percent
European American	4	66.67
Other	2	33.33
Total	6	100

Table 17
Description of the Shift Worked Variable for Participants who Separated from the Organization

Shift	N	Percent
Day	6	66.67
Evening	2	22.22
Night	1	11.11
Total	20	100

Of the 60 people who completed the demographic and employment survey, 49 continued to work at the healthcare organization for the duration of the study. Tables 18 through 21 present the demographic characteristics of these 49 participants.

Table 18
Description of the Continuous Demographic and Employment Variables for Participants who are Still with the Organization

Variable	N	Mean	Std. Dev.	Min	Max
Age	49	42.22449	13.00844	19	68
Years of education	48	13.84375	3.935864	2	30
Years of service	49	12.37776	11.70083	.25	39
Hours worked per week	49	40.05102	10.73266	24	100
Shift length	48	9.578125	1.974678	7.5	15

Table 19
Description of the Gender Variable for Participants who are Still with the Organization

Gender	N	Percent
Female	43	87.76
Male	6	12.24
Total	49	100

Table 20
Description of the Ethnicity Variable for Participants who are Still with the Organization

Ethnicity	N	Percent
Asian American	1	2.22
European American	39	86.67
Central and South American	1	2.22
Other	4	8.89
Total	45	100

Table 21
Description of the Shift Worked Variable for Participants who are Still with the Organization

Shift	N	Percent
Day	46	93.88
Evening	1	2.04
Night	1	2.04
Other	1	2.04
Total	49	100

Of the 60 people who completed the demographic and employment survey, two participants opted out of the study. Tables 22 through 25 present the demographic characteristics of these two participants.

Table 22
Description of the Continuous Demographic and Employment Variables for Participants Who are Still with the Organization but Opted out of the Study

Variable	N	Mean	Std. Dev.	Min	Max
Age	2	35.5	9.192388	29	42
Years of education	2	15.5	2.12132	14	17
Years of service	2	1.25	.3535534	1	1.5
Hours worked per week	2	27.5	3.53534	25	30
Shift length	2	7.75	1.06066	7	8.5

Table 23
Description of the Gender Variable for Participants Who are Still with the Organization but Opted out of the Study

Gender	N	Percent
Female	2	100
Total	2	100

Table 24
Description of the Ethnicity Variable for Participants Who are Still with the Organization but Opted out of the Study

Ethnicity	N	Percent
European American	2	100
Total	2	100

Table 25
Description of the Shift Worked Variable for Participants Who are Still with the Organization but Opted out of the Study

Shift	N	Percent
Day	2	100
Total	2	100

Description of the Survey Items

The Incivility in Healthcare Survey consists of 41 Likert scale items. The potential responses are never (1), rarely (2), sometimes (3), often (4), and very often (5). Table 26 presents the mean and standard deviation of all 41 items of the IHS across all data points. Table 27 present the mean and standard deviation of the five subscales of the IHS across all data points. Table 28 presents the description of the overall tool and all five subscales by month for the 12 months, and Figure 1 is a graphic representation of the means and standard deviations for the overall level of workplace incivility by month. Table 29 presents the description of the overall tool and all five subscales by seasons, and Figure 2 is a graphic representation of the means and standard deviations for the overall level of workplace incivility by season.

Table 26
Description of the Mean and Standard Deviation for Items on the IHS

Item	N	Mean	SD	Min	Max
We would like to know about the type of interactions you have with the people you work with. For the following items, please consider all individuals you interact with at work, including patients, visitors, doctors, and co-workers. **How frequently**…					
…do basic disagreements turn into personal verbal attacks on other employees?	490	1.702	.8228	1	5
…are there violent outbursts or heated arguments in your workplace?	488	1.806	.8563	1	5
…do hospital employees scream at other employees?	489	1.711	.8285	1	5
…do hospital employees curse (i.e., swear) in the workplace?	487	2.685	1.088	1	5
…do people raise their voices when they get frustrated?	487	2.554	.9647	1	5
…do hospital employees blame others for their mistakes or offenses?	487	2.322	1.021	1	5

…do people, in this hospital, make jokes about minority groups?	489	1.722	.9146	1	5
…do people, in this hospital, make jokes about religious groups?	485	1.703	.8991	1	5
…do hospital employees make inappropriate remarks about other people's characteristics (i.e., remarks about race or gender)?	488	1.822	.9692	1	5
…do hospital employees spread bad rumors at work?	489	2.593	1.136	1	5
…do hospital employees bad-mouth others in the workplace?	488	2.670	1.104	1	5
…do hospital employees gossip about their supervisor at work?	488	2.492	1.141	1	5
…do hospital employees make too much noise (i.e., talking too loudly)?	489	2.769	1.047	1	5
The following items ask about your interactions with your co-workers. **How frequently do your co-workers**…					
…argue with each other?	490	1.927	.8056	1	5
…take things without asking?	490	1.743	.7722	1	5
…claim credit for your work?	489	1.822	.9205	1	5
…gossip about one another?	489	2.540	1.099	1	5
…take credit for work they did not do?	489	1.879	.9833	1	5
Please think about your interactions with your direct supervisor (i.e., the person you report to most frequently). **How frequently does your direct supervisor**…					
…behave in a way that is verbally abusive?	488	1.387	.7976	1	5
…yell at you about matters that are not important?	489	1.387	.7918	1	5
…shout or yell at you for making mistakes?	489	1.335	.7749	1	5
…take his/her feelings out on you (i.e., stress, anger, "blowing off steam")?	488	1.559	.8952	1	5
…not respond to your concerns in a timely manner?	489	1.791	1.005	1	5
…include gossip and personal information into personnel decisions?	488	1.746	1.077	1	5
This section refers to your interactions with physicians that you work with. **How frequently do physicians**…					
…behave in a way that is verbally abusive?	481	1.468	.7552	1	5
…yell at you about matters that are not important?	479	1.407	.7398	1	5
…shout or yell at you for making mistakes?	480	1.454	.7410	1	5
…take their feelings out on you (i.e., stress, anger, "blowing off steam")?	478	1.598	.8936	1	5
…not respond to your concerns in a timely manner?	479	1.666	.8564	1	5
…treat you as though your time is not important?	479	1.722	.9285	1	5
…treat you in a condescending manner?	479	1.622	.8923	1	5

Please reflect upon your interactions with the patients and their family and visitors. **How frequently do patients/visitors…**					
…not trust the information you give them and ask to speak with someone of higher authority?	485	1.788	.8271	1	5
…behave in a way that is condescending to you?	484	1.827	.8682	1	5
…make comments that question the competence of hospital employees?	484	2.066	.9212	1	5
…criticize your job performance?	484	1.694	.8250	1	5
…make personal verbal attacks against you?	484	1.591	.8378	1	5
…pose unreasonable demands?	485	1.835	.9032	1	5
…take out their frustrations on you?	484	2.083	.9830	1	5
…make insulting comments to you?	485	1.740	.8968	1	5
…treat hospital employees as if they were inferior or stupid?	485	1.868	.8856	1	5
…show that they are irritated or impatient?	485	2.437	1.016	1	5

Table 27

Description of Mean and Standard Deviation for the Subscales of the IHS

Subscale	N	Mean	Std. Dev.	Min	Max
Environmental	490	2.1947178	0.7658220	1	5
Co-worker	490	1.9828571	0.7523868	1	5
Supervisor	489	1.5345944	0.7807954	1	5
Physician	481	1.5648748	0.7505192	1	5
Patient/ visitor	485	1.8948675	0.7563615	1	5

Table 28

Description of the Mean and Standard Deviation for the IHS and all Five Subscales by Month

Month	Overall Incivility		Environmental Incivility		Co-worker Incivility		Supervisor Incivility		Physician Incivility		Patient Incivility	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1	2.037	.0854	2.404	.7187	2.134	.7215	1.649	.9943	1.612	.8283	1.998	.7487
2	2.045	.0833	2.466	.8427	2.238	.9263	1.621	.8726	1.563	.8849	1.924	.8807
3	1.968	.0861	2.335	.8368	2.195	.8480	1.626	.9290	1.584	.7929	1.841	.7508
4	1.879	.0917	2.159	.6898	1.995	.6519	1.536	.7569	1.556	.6698	1.955	.7478
5	1.962	.0899	2.236	.7485	2.045	.7254	1.647	.8973	1.707	.8026	1.997	.7986
6	1.808	.0898	2.098	.7927	1.918	.7285	1.488	.7038	1.478	.5627	1.893	.6912
7	1.885	.0953	2.162	.8152	2.010	.7611	1.521	.8312	1.722	.8863	1.884	.8429
8	1.803	.1002	2.086	.8272	1.878	.7793	1.449	.7101	1.534	.7190	1.756	.7405
9	1.861	.1001	2.024	.6643	1.860	.6113	1.392	.5332	1.428	.5989	1.738	.6901
10	1.791	.1012	2.036	.7263	1.641	.5821	1.338	.4810	1.331	.5189	1.847	.7046
11	1.917	.0993	2.174	.7257	1.782	.6423	1.519	.6749	1.596	.7522	1.925	.7224
12	1.828	.0965	2.052	.7666	1.768	.6451	1.472	.6242	1.563	.7894	1.847	.7217

Figure 1. Mean and Standard Deviation for the Overall Level of Workplace Incivility by Month

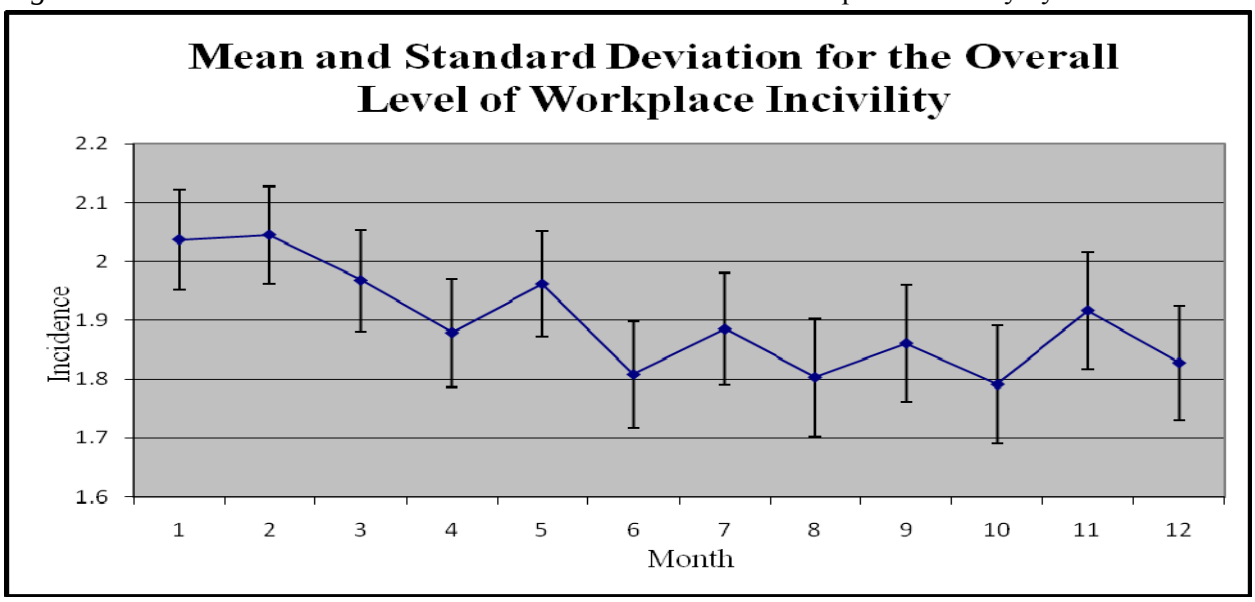
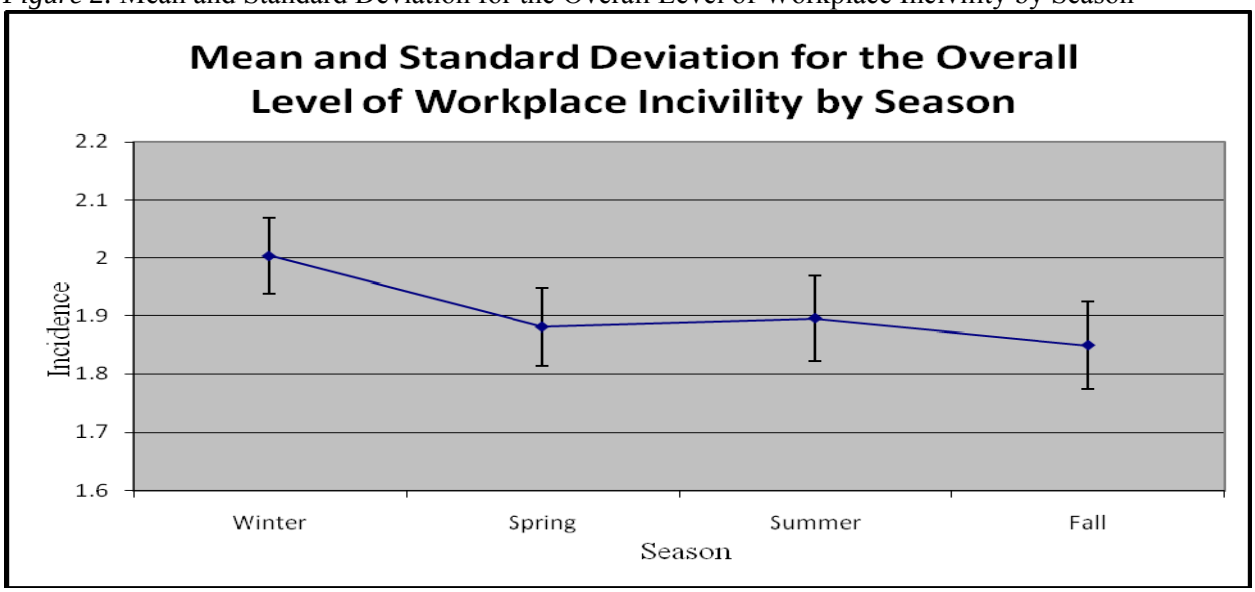


Table 29

Description of the Mean and Standard Deviation for the IHS and all Five Subscales by Season

Season	Overall Incivility		Environmental Incivility		Co-worker Incivility		Supervisor Incivility		Physician Incivility		Patient Incivility	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Winter	2.004	.065	2.403	.800	2.190	.833	1.632	.926	1.586	.833	1.923	.794
Spring	1.881	.068	2.165	.742	1.986	.701	1.558	.788	1.581	.687	1.948	.742
Summer	1.896	.073	2.092	.766	1.921	.719	1.457	.703	1.567	.758	1.797	.760
Fall	1.850	.075	2.085	.736	1.732	.622	1.444	.600	1.500	.704	1.872	.711

Figure 2. Mean and Standard Deviation for the Overall Level of Workplace Incivility by Season



Psychometrics of the Modified Survey

As discussed in chapter three the IHS was modified for this study. At the conclusion of the study, the internal consistency was remeasured. The internal consistency of the entire instrument, measured by Cronbach's alpha, was found to be .9700. The alpha was .9446 for the environmental subscale, .8717 for the co-worker subscale, .9359 for the supervisor subscale, .9608 for the physician subscale, and .9540 for the patient/ visitor subscale. All of these measures of internal consistency were higher than those for the a priori values.

ANOVA Model

Two separate repeat measure ANOVA models were set up as outlined in chapter 3. The first model was set up to address the primary research question, "How does the mean monthly perceived level of workplace incivility at the individual level differ over the course of a year?" The second model was set up to address the primary research question, "Are there seasonal (3 month intervals) differences in the level of workplace incivility?" The following sections will display the results of these models according to the research questions. For all tests, an alpha level of .05 was used for statistical significance. The assumption of homogeneity was meet as measured by an estimation of Hartley F max.

First ANOVA Model(Monthly Variance)

Primary research question. In the repeat measure ANOVA model with month as the independent variable and mean level of workplace incivility as the dependent variable, month was defined as a continuous linear variable because a linear model provided a better fit to the data than treating month as either a categorical variable or a quadratic variable. In the ANOVA model, there was not a statistically significant effect ($F(1, 425)=3.16$ $p=.0763$) for differences over time.

Secondary research question. In addition to addressing the primary research question, the first ANOVA model addressed all three of the secondary research questions. The first of the secondary research questions was: Does the level of workplace incivility from the different sources (i.e. patient, staff, and environment) differ over time? The ANOVA model was used for all of the subscales of the IHS. Both the environmental ($F(1, 425)=5.70$ $p=.0174$) and the coworker ($F(1, 425)=8.50$ $p=.0037$) subscales had significant difference in the level of workplace incivility over the course of the year. The supervisor ($F(1, 424)=1.49$ $p=.2232$), physician ($F(1, 416)=.02$ $p=.8876$), and patient/ visitor ($F(1, 421)=.018$ $p=.6719$) subscales did not have significant difference over the course of the year.

The second of the secondary research question was: Does the level of workplace incivility differ by occupational group? The output of the ANOVA model was statistically significant for a difference between the levels of incivility based on occupational group ($F(11, 44)=2.31$ $p=.0245$). Table 30 presents the post hoc test for differences of least squares means that were significant between groups.

Table 30
Post Hoc Test for Differences of Least Squares Mean Level of Workplace Incivility by Occupation Group over 12 Months

Occupation group 1	df	Mean (SD)	Occupational group 2	Mean (SD)	t	*p*
Registrar	44	2.2453 (.23)	Secretary	1.6267 (.52)	2.22	0.0319
Registrar	44	2.2453 (.23)	Maintenance	1.2730 (.25)	2.86	0.0064
Technician	44	2.1582 (.12)	Maintenance	1.2730 (.25)	3.18	0.0027
Office other	44	2.0487 (.09)	Maintenance	1.2730 (.25)	2.89	0.0059
Manager	44	1.9475 (.10)	Maintenance	1.2730 (.25)	2.49	0.0165
RN	44	1.9115 (.13)	Maintenance	1.2730 (.25)	2.23	0.0308
LPN	44	1.6976 (.17)	Technician	2.1582 (.12)	-2.24	0.0302
Secretary	44	1.6267 (.52)	Technician	2.1582 (.12)	-2.72	0.0094
Secretary	44	1.6267 (.52)	Office other	2.0487 (.09)	-2.33	0.0246
Physician	44	1.3645 (.25)	Registrar	2.2453 (.23)	-2.59	0.0129
Physician	44	1.3645 (.25)	Technician	2.1582 (.12)	-.2.85	0.0066
Physician	44	1.3645 (.25)	Office other	2.0487 (.09)	-2.55	0.0142
Physician	44	1.3645 (.25)	Manager	1.9475 (.10)	-2.15	0.0367

In addition to assessing if there was a difference between occupational groups in the level of incivility overall, the repeat measure ANOVA model was used to assess differences between occupational groups in the level of workplace incivility for each subscale. Occupational groups were not statistically different related to the environmental ($F(11, 44)=1.93$ $p=.0605$), physician ($F(11, 44)=1.62$ $p=.1270$), or patient/ visitor ($F(11, 43)=1.56$ $p= .1474$) subscales. Occupational groups were statistically different related to the coworker ($F(11,44)=2.39$ $p=.0200$) and supervisor ($F(11, 44)=2.73$ $p=.0089$) subscales. Table 31 and Table 32 present post hoc test for differences of least squares means that were significant in workplace incivility by occupational group and subscales of co-worker and supervisor,

Table 31
Post Hoc Test for Differences of Least Squares Mean Level of Coworker Incivility by Occupational Group over 12 months

Occupation group 1	df	Mean (SD)	Occupational group 2	Mean (SD)	t	*p*
Office other	44	2.2779 (.11)	Maintenance	1.2345 (.30)	3.26	0.0022
Specialty center	44	2.2402 (.35)	Maintenance	1.2345 (.30)	2.19	0.0342
Nursing assistants	44	2.1876 (.44)	Physician	1.0729 (.30)	2.09	0.0421
LPN	44	2.1853 (.20)	Maintenance	1.2345 (.30)	2.62	0.0120
LPN	44	2.1853 (.20)	Physician	1.0729 (.30)	3.06	0.0037
Technician	44	2.0809 (.14)	Maintenance	1.2345 (.30)	2.55	0.0145
Registrar	44	2.0730 (.27)	Maintenance	1.2345 (.30)	2.07	0.0444
Secretary	44	2.0369 (.18)	Maintenance	1.2345 (.30)	2.28	0.0278
RN	44	1.8930 (.16)	Physician	1.0729 (.30)	2.40	0.0207
Manager	44	1.8644 (.12)	Office other	2.2779 (.11)	-2.61	0.0122
Physician	44	1.0729 (.30)	Office other	2.2779 (.11)	-3.77	0.0005
Physician	44	1.0729 (.30)	Specialty center	2.2402 (.35)	-2.54	0.0148
Physician	44	1.0729 (.30)	Technician	2.0809 (.14)	-3.03	0.0041
Physician	44	1.0729 (.30)	Registrar	2.0730 (.27)	-2.47	0.0175
Physician	44	1.0729 (.30)	Secretary	2.0369 (.18)	-2.73	0.0090
Physician	44	1.0729 (.30)	Manager	1.8644 (.12)	-2.45	0.0183

Table 32
Post Hoc Test for Differences of Least Squares Mean Level of Supervisor Incivility by Occupational Group over 12 months

Occupation group 1	df	Mean (SD)	Occupational group 2	Mean (SD)	t	*p*
Technician	44	2.1260 (.14)	Office other	1.6604 (.11)	2.59	0.0130
Technician	44	2.1260 (.14)	Specialty center	1.3083 (.35)	2.15	0.0373
Technician	44	2.1260 (.14)	Maintenance	1.0829 (.31)	3.06	0.0037
Secretary	44	1.4801 (.19)	Technician	2.1260 (.14)	-2.76	0.0084
RN	44	1.4428 (.16)	Technician	2.1260 (.14)	-3.14	0.0030
Manager	44	1.3985 (.12)	Technician	2.1260 (.14)	-3.93	0.0003
Physician	44	1.2829 (.31)	Technician	2.1260 (.14)	-2.47	0.0173
LPN	44	1.1806 (.21)	Technician	2.1260 (.14)	-3.76	0.0005
LPN	44	1.1806 (.21)	Registrar	1.9204 (.29)	-2.09	0.0421
LPN	44	1.1806 (.21)	Office other	1.6604 (.11)	-2.05	0.0465
Nursing assistants	44	1.0425 (.45)	Technician	2.1260 (.14)	-2.29	0.0271

The third secondary research question was: What are the differences between the hospital employee demographic and employment characteristics and the level of workplace incivility? Employee demographic groups which were significantly different in their level of workplace incivility were gender ($F(1, 53)=22.15$ $p<.0001$) and age ($F(1, 54)=7.49$ $p=.0084$). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee demographic characteristics which were not significantly associated with the level of workplace incivility were ethnicity ($F(3, 45)=.38$ $p=.7659$) and education ($F(1, 53)=.01$ $p=.9145$). None of the following employment characteristics were significantly different among the groups in their level of workplace incivility: years of service at the organization ($F(1, 54)=1.85$ $p=.1797$), hours worked per week ($F(1, 54)=1.41$ $p=.2408$), primary shift ($F(2, 53)=.25$ $p=.7792$), and average shift length ($F(1,53)=3.40$ $p=.0709$). Occupational group which is an employment characteristic had statistical differences between the groups ($F(11, 44)=2.31$ $p=.0245$) on their level of workplace incivility.

The repeat measure ANOVA model was also used to assess for differences between the employee demographic and employment characteristics and the level of workplace incivility for

each subscale. Employee demographic characteristics which were significantly different among the groups related to the level of environmental workplace incivility were gender ($F(1, 53)=18.95$ $p<.0001$) and age ($F(1, 54)=6.79$ $p=.0118$). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of environmental workplace incivility were ethnicity ($F(3, 45)=1.72$ $p=.1755$) and education ($F(1, 53)=.40$ $p=.5307$). None of the following employment characteristics were significantly different among the groups related to the level of environmental workplace incivility: years of service at the organization ($F(1, 54)=2.20$ $p=.1441$), hours worked per week ($F(1, 54)=2.19$ $p1443$), primary shift ($F(2, 53)=.32$ $p=.7268$), and average shift length ($F(1, 53)=2.07$ $p=.1557$).

The only employee demographic characteristic which was significantly different among the groups related to the level of co-worker workplace incivility was gender ($F(1, 53)=28.35$ $p<.0001$). Women were more likely than men to experience greater incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of co-worker workplace incivility were ethnicity ($F(3, 45)=.89$ $p=.4527$), age ($F(1, 54)=2.32$ $p=.1337$), and education ($F(1, 53)=1.10$ $p=.3000$). None of the following employee employment characteristics were significantly different among the groups related to the level of co-worker workplace incivility: years of service at the organization ($F(1, 54)=1.38$ $p=.2452$), hours worked per week ($F(1, 54)=1.64$ $p=.2062$), primary shift ($F(2, 53)=.40$ $p=.6710$), and average shift length ($F(1, 53)=.43$ $p=.5152$).

Employee demographic characteristics which were significantly different among the groups related to the level of supervisor workplace incivility were gender ($F(1, 53)=6.42$

p=.0143) and age (F(1, 54)=5.59 p=.0217). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of supervisor workplace incivility were ethnicity (F(3, 45)=1.40 p=.2548) and education (F(1, 53)=.65 p=.4242). None of the following employment characteristics were significantly different among the groups related to the level of supervisor workplace incivility: years of service at the organization (F(1, 54)=1.31 p=.2570), hours worked per week (F(1, 54)=.20 p=.6543), primary shift (F(2, 53)=.57 p=.5673), or average shift length (F(1, 53)=.04 p=.8519).

The only employee demographic characteristic which was significantly different among the groups related to the level of physician workplace incivility was gender (F(1, 53)=6.81 p=.0117). Women were more likely than men to experience greater incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of physician workplace incivility were ethnicity (F(3, 45)=.48 p=.6983), age (F(1, 54)=.07 p=.7885), and education (F(1, 53)=.16 p=.6910). None of the following employment characteristics were significantly different among the groups related to the level of physician workplace incivility: years of service at the organization (F(1, 54)=.39 p=.5357), hours worked per week (F(1, 54)=1.29 p=.2602), primary shift (F(2, 53)=.00 p=.9976), and average shift length (F(1, 53)=2.55 p=.1166).

Employee demographic characteristics which were significantly different among the groups related to the level of patient/ visitor workplace incivility were gender (F(1, 52)=6.19 p=.0161) and age (F(1, 53)=8.84 p=.0044). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee

demographic characteristics which were not significantly different among the groups related to the level of patient/ visitor workplace incivility were ethnicity ($F(3, 45)=.10$ $p=.9612$) and education ($F(1, 52)=.95$ $p=.3336$). Employment characteristics which were significantly different among the groups related to the level of patient/ visitor workplace incivility were hours worked per week ($F(1, 53)=9.22$ $p=.0037$) and average shift length ($F(1, 52)=12.86$ $p=.0007$). Both hours worked during a week and average shift length were positivly related to the employees experence of workplace incivility from patients/ visitors. Employment characteristics which were not significantly different among the groups related to the level of patient/ visitor workplace incivility were years of service at the organization ($F(1, 53)=2.79$ $p=.1007$) and primary shift ($F(2, 52)=1.20$ $p=.3094$).

Second ANOVA Model (Seasonal Variance)

Primary research question. In the second ANOVA model, season was defined as three month intervals. Winter was January, February and March; Spring was April, May and June; Summer was July, August and September; Fall was October, November, and December. The output of the ANOVA model was not statistically significant ($F(1, 425)=2.53$ $p=.1122$) for differences over time.

Secondary research question. In addition to addressing the primary research question, the second ANOVA model was used to address all three of the secondary research question as the questions relate to season. The first of the secondary research questions was: Does the level of workplace incivility from the different sources (i.e. patient, staff, and environment) differ over time? The ANOVA model was used for all of the subscales of the IHS. Both the environmental ($F(1, 425)=5.79$ $p=.0165$) and the coworker ($F(1, 425)=10.89$ $p=.0010$) subscales had significant differences in the level of workplace incivility over the seasons. The supervisor ($F(1, 424)=1.21$

p=.2722), physician (F(1, 416)=.04 p=.8416), and patient/ visitor (F(1, 421)=.00 p=.9526) subscales did not have significant differences over the course of the seasons.

The second of the secondary research question was: Does the level of workplace incivility differ by occupational group? The output of the ANOVA model was statistically significant that there was a difference between the level of incivility based on occupational group (F(11, 44)=2.30 p=.0251) over the seasons. Table 33 present the post hoc test for differences of least squares means between groups.

Table 33
Post Hoc Test for Differences of Least Squares Mean Level of Workplace Incivility by Occupation Group over Seasons

Occupation group 1	df	Mean (SD)	Occupational group 2	Mean (SD)	t	*p*
Registrar	44	2.2493 (.23)	Secretary	1.6344 (.15)	2.24	0.0304
Registrar	44	2.2493 (.23)	Maintenance	1.2755 (.25)	2.86	0.0064
Technician	44	2.1579 (.12)	Maintenance	1.2755 (.25)	3.17	0.0028
Office other	44	2.0497 (.09)	Maintenance	1.2755 (.25)	2.88	0.0060
Manager	44	1.9473 (.10)	Maintenance	1.2755 (.25)	2.48	0.0170
RN	44	1.9106 (.13)	Maintenance	1.2755 (.25)	2.22	0.0319
LPN	44	1.6997 (.17)	Technician	2.1579 (.12)	-2.23	0.0313
Secretary	44	1.6344 (.15)	Technician	2.1579 (.12)	-2.72	0.0093
Secretary	44	1.6344 (.15)	Office other	2.0497 (.09)	-2.34	0.0238
Physician	44	1.3674 (.25)	Registrar	2.2493 (.23)	-2.59	0.0129
Physician	44	1.3674 (.25)	Technician	2.1579 (.12)	-.2.84	0.0069
Physician	44	1.3674 (.25)	Office other	2.0497 (.09)	-2.54	0.0146
Physician	44	1.3674 (.25)	Manager	1.9473 (.10)	-2.14	0.0379

In addition to assessing if there was a difference in the level of incivility overall, the ANOVA model was used to assess for differences in the level of workplace incivility by occupational group and subscale over the seasons. Occupational groups were not statistically different related to the environmental (F(11, 44)=1.92 p=.0626), physician (F(11, 44)=1.62 p=.1267), or patient/ visitor (F(11, 43)=1.56 p= .1467) subscales over the seasons. Occupational groups were statistically different related to the coworker (F(11, 44)=2.38 p=.0204) and

supervisor ($F(11, 44)=2.72$ $p=.0091$) subscales. Table 34 and Table 35 present the post hoc test for differences of least squares means for workplace incivility by occupational group for the subscales co-worker and supervisor.

Table 34
Post Hoc Test for Differences of Least Squares Mean Level of Coworker Incivility by Occupational Group over Seasons

Occupation group 1	df	Mean (SD)	Occupational group 2	Mean (SD)	t	*p*
Office other	44	2.2791 (.11)	Maintenance	1.2382 (.30)	3.25	0.0022
Specialty center	44	2.2454 (.35)	Maintenance	1.2382 (.30)	2.19	0.0342
Nursing assistants	44	2.1932 (.44)	Physician	1.0767 (.30)	2.09	0.0420
LPN	44	2.1867 (.20)	Maintenance	1.2382 (.30)	2.61	0.0123
LPN	44	2.1867 (.20)	Physician	1.0767 (.30)	3.05	0.0038
Technician	44	2.0817 (.14)	Maintenance	1.2382 (.30)	2.53	0.0149
Registrar	44	2.0684 (.27)	Maintenance	1.2382 (.30)	2.05	0.0467
Secretary	44	2.0363 (.18)	Maintenance	1.2382 (.30)	2.26	0.0288
RN	44	1.8927 (.16)	Physician	1.0767 (.30)	2.39	0.0214
Manager	44	1.8645 (.12)	Office other	2.2791 (.11)	-2.62	0.0121
Physician	44	1.0767 (.30)	Office other	2.2791 (.11)	-3.75	0.0005
Physician	44	1.0767 (.30)	Specialty center	2.2454 (.35)	-2.54	0.0148
Physician	44	1.0767 (.30)	Technician	2.0817 (.14)	-3.02	0.0042
Physician	44	1.0767 (.30)	Registrar	2.0684 (.27)	-2.45	0.0186
Physician	44	1.0767 (.30)	Secretary	2.0363 (.18)	-2.72	0.0094
Physician	44	1.0767 (.30)	Manager	1.8645 (.12)	-2.4 4	0.0190

Table 35
Post Hoc Test for Differences of Least Squares Mean Level of Supervisor Incivility by Occupational Group

Occupation group 1	df	Mean (SD)	Occupational group 2	Mean (SD)	t	*p*
Technician	44	2.1256 (.14)	Office other	1.6614 (.11)	2.58	0.0133
Technician	44	2.1256 (.14)	Specialty center	1.3096 (.35)	2.14	0.0378
Technician	44	2.1256 (.14)	Maintenance	1.0852 (.31)	3.05	0.0038
Secretary	44	1.4780 (.19)	Technician	2.1256 (.14)	-2.76	0.0083
RN	44	1.4418 (.16)	Technician	2.1256 (.14)	-3.14	0.0030
Manager	44	1.3982 (.12)	Technician	2.1256 (.14)	-3.92	0.0003
Physician	44	1.2854 (.31)	Technician	2.1256 (.14)	-2.46	0.0177
LPN	44	1.1828 (.21)	Technician	2.1256 (.14)	-3.75	0.0005
LPN	44	1.1828 (.21)	Registrar	1.9247 (.29)	-2.10	0.0417
LPN	44	1.1828 (.21)	Office other	1.6614 (.11)	-2.04	0.0470
Nursing assistants	44	1.0491 (.45)	Technician	2.1256 (.14)	-2.27	0.0281

The third secondary research question was: What are the differences among hospital employee demographic/ employment characteristics and the level of workplace incivility? Employee demographic characteristics where there were significant differences among the groups related to workplace incivility over the seasons were gender ($F(1, 53)=22.08$ $p<.0001$) and age ($F(1, 54)=7.57$ $p=.0081$). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of workplace incivility over the seasons were ethnicity ($F(3, 45)=.39$ $p=.7643$) and education ($F(1, 53)=.01$ $p=.9046$). None of the following employment characteristics were significantly different among the groups related to the level of workplace incivility over the seasons: years of service at the organization ($F(1, 54)=1.89$ $p=.1749$), hours worked per week ($F(1, 54)=1.44$ $p=.2355$), primary shift ($F(2, 53)=.26$ $p=.7699$), or average shift length ($F(1, 53)=3.40$ $p=.0706$). Occupational group which is an employment characteristic had statistical differences between the groups ($F(11, 44)=2.30$ $p=.0251$) on their level of workplace incivility.

In addition to assessing if there was a difference between the employee demographic/ employment characteristics and the overall level of workplace incivility over the seasons, the ANOVA model was used to assess for differences between the hospital employee demographic/ employment characteristics and the level of workplace incivility for each subscale over the seasons.

Employee demographic characteristics which were significantly different among the groups related to the level of environmental workplace incivility over the seasons were gender ($F(1, 53)=18.81$ $p<.0001$) and age ($F(1, 54)=6.87$ $p=.0114$). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of

incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of environmental workplace incivility over the seasons were ethnicity ($F(3, 45)=1.73$ $p=.1743$) and education ($F(1, 53)=.41$ $p=.5249$). None of the following employee employment characteristics were significantly different among the groups related to the level of environmental workplace incivility over the seasons: years of service at the organization ($F(1, 54)=2.23$ $p=.1408$), hours worked per week ($F(1, 54)=2.25$ $p=.1397$), primary shift ($F(2, 53)=.33$ $p=.7212$), or average shift length ($F(1, 53)=2.09$ $p=.1540$).

The only employee demographic characteristic which was significantly different among the groups related to the level of co-worker workplace incivility over the seasons was gender ($F(1, 53)=28.16$ $p<.0001$). Women were more likely than men to experience greater incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of co-worker workplace incivility were ethnicity ($F(3, 45)=.90$ $p=.4479$), age ($F(1, 54)=2.35$ $p=.1312$), and education ($F(1, 53)=1.09$ $p=.3016$). None of the following employment characteristics were significantly different among the groups related to the level of co-worker workplace incivility over the seasons: years of service at the organization ($F(1, 54)=1.39$ $p=.2440$), hours worked per week ($F(1, 54)=1.58$ $p=.2136$), primary shift ($F(2, 53)=.39$ $p=.6760$), and average shift length ($F(1, 53)=.41$ $p=.5229$).

Employee demographic characteristics which were significantly different among the groups related to the level of supervisor workplace incivility over the seasons were gender ($F(1, 53)=6.41$ $p=.0144$) and age ($F(1, 54)=5.64$ $p=.0211$). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of supervisor workplace incivility over the seasons were ethnicity ($F(3,$

45)=1.38 p=.2613) and education (F(1, 53)=.63 p=.4301). None of the following employment characteristics were significantly different among the groups related to the level of supervisor workplace incivility over the seasons: years of service at the organization (F(1, 54)=1.34 p=.2518), hours worked per week (F(1, 54)=.21 p=.6482), primary shift (F(2, 53)=.55 p=.5774), or average shift length (F(1, 53)=.03 p=.8535).

The only employee demographic characteristic which was significantly different among the groups related to the level of physician workplace incivility over the seasons was gender (F(1, 53)=6.84 p=.0116). Women were more likely than men to experience greater incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of physician workplace incivility over the season were ethnicity (F(3, 45)=.51 p=.6797), age (F(1, 54)=.08 p=.7847), and education (F(1, 53)=.15 p=.7013). None of the following employment characteristics were significantly different among the groups related to the level of physician workplace incivility over the seasons: years of service at the organization (F(1, 54)=.38 p=.5424), hours worked per week (F(1, 54)=1.29 p=.2605), primary shift (F(2, 53)=.00 p=.9981), and average shift length (F(1, 53)=2.53 p=.1174).

Employee demographic characteristics which were significantly different among the groups related to the level of patient/ visitor workplace incivility over the seasons were gender (F(1, 52)=6.20 p=.0160) and age (F(1, 53)=8.91 p=.0043). Women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Employee demographic characteristics which were not significantly different among the groups related to the level of patient/ visitor workplace incivility were ethnicity (F(3, 45)=.10 p=.9606) and education (F(1, 52)=.97 p=.3281). Employment characteristics which were significantly different among the groups related to the level of patient/ visitor workplace

incivility over the seasons were hours worked during a week ($F(1, 53)=9.26$ $p=.0036$) and average shift length ($F(1, 52)=12.84$ $p=.0007$). Both hours worked during a week and average shift length were positivly related to the employees experence of workplace incivility from patients/ visitors. Employment characteristics which were not significantly different among the groups related to the level of patient/ visitor workplace incivility over the seasons were years of service at the organization ($F(1, 53)=2.84$ $p=.0976$) and primary shift ($F(2, 52)=1.24$ $p=.2986$).

Summary

This chapter presented the results of the investigator's findings. The chapter included a description of study sample, description of the survey items, psychometrics of the modified survey tool, and the results of the repeat measure ANOVA model. The results of the repeat measure ANOVA model were based on the primary and secondary research questions. First, the study population was described. Then, to assess the internal consistency of the subscales of the IHS, Cronbach's alpha values were computed. Next, means, standard deviations, minimums, and maximums were calculated for each of the Likert scale items. Hypotheses' testing was conducted using two repeat measure analyses of variance models.

The results from the repeat measure ANOVA models did not support that there were fluctuations in the overall level of incivility as a function of either month or season. The results from the repeat measure ANOVA models supported that there were fluctuations in the level of incivility for the environmental and co-worker sources but not the supervisor, physician, or patients/ visitor sources of workplace incivility as a function of both month and season. Further, the results from the repeat measure ANOVA models supported that women were more likely than men to experience greater incidence of incivility and age was inversely related to incidence of incivility. Chapter five will discuss these findings in greater depth.

CHAPTER 5

Discussion

Framed by the research questions and using Andersson and Pearson's (1999) theoretical framework, chapter five is divided into three sections. The first section discusses the study findings in relation to Andersson and Pearson's (1999) theoretical framework and the literature reviewed. The next section presents the implications for nursing theory, research, and practice. The last section presents the study's limitations.

Discussion of Study Findings in Relation to Research Questions

This theory-driven descriptive study had two purposes. The first purpose was to assess if the level of workplace incivility changed over time for employees in a hospital setting. The second purpose was to examine if there was a difference between workplace incivility and selected demographic or employment characteristics. The following discussion will describe how the findings obtained from this longitudinal study were used to answer two primary and three secondary research questions.

Primary Research Question Number One: How does the mean monthly perceived level of workplace incivility at the individual level differ over the course of a year?

The findings in this study suggest that the monthly perceived level of workplace incivility did not differ over the course of a year; these findings are in opposition to the hypotheses put forth by Cortina & Magley (2003), Cortina et al. (2001), Pearson, Andersson, & Porath (2000), and Pearson, Andersson, & Wegner (2001). Further complicating the lack of difference in the overall level of workplace incivility over time is the finding that different sources of workplace incivility varied on a monthly basis over the course of the year. This complicates the lack of difference in the overall level of incivility because it is not logical to think the overall level of

workplace incivility was not fluctuating when the sources of workplace incivility were fluctuating. Last, the anecdotal verbal reports of the participants as surveys were disseminated (i.e. "You know this changes every month." and "This month is much worse than last month.") (Personal communication, October 8, 2007) appear to be in conflict with the lack of difference in the overall level of workplace incivility. The participants were reporting that the level of workplace incivility differed; however, the IHS did not detect this difference.

One potential explanation could be that the overall level of workplace incivility remained relatively stable over time and as one source of incivility increased another source of incivility decreased. However, this is not the case as presented in Tables 28 and 29, which shows that the mean monthly level of incivility sources trended in the same direction both on a monthly and seasonal basis. Because the sources trended in the same direction it is difficult to support that as one source went up the other source went down.

Another possible explanation for the conflict found within these findings is that the Incivility in Healthcare (IHS) tool was not sensitive enough to pick up the subtle differences in the level of workplace incivility. It is possible that the reason there were differences in the level of workplace incivility at the source level is that the employee has the greatest exposure to environmental and co-worker sources of incivility, and the magnitude of the differences was a function of exposure. If this is true, then it raises concerns that a more sensitive tool may have been able to detect fluctuations in the other sources of incivility. This is discussed in greater detail in the limitations section later in this chapter.

Primary Research Question Number Two: Are there seasonal (3 month intervals) differences in the level of workplace incivility?

The study findings do not support that there were differences in the overall level of workplace incivility over the seasons. Like the first primary research question, while the overall instrument did not show significant difference over seasons the environmental and co-worker sources did have significant difference on a seasonal basis over the year of data collection. This lack of seasonal difference in the overall level of workplace incivility has three potential explanations.

The first explanation for the lack of seasonal difference in the overall level of workplace incivility is that workplace incivility did not significantly differ. While the overall incivility data supports this, the seasonal difference in several sources of incivility over time raises concerns about this explanation.

The second explanation for the lack of seasonal difference in the overall level of workplace incivility is that there was a threat to statistical conclusion validity, which will be discussed in the limitations section.

The third explanation for the lack of seasonal difference in the overall level of workplace incivility is that the IHS was not valid and could not detect low-level deviant behavior, such as workplace incivility. This will also be discussed in the limitations section.

The lack of seasonal difference in the overall level of workplace incivility as a function of time raises concerns about the traditionally held view that workplace incivility is multi-factorial. As posited in chapter one, if one of the characteristics of workplace incivility is that the level does not differ with time then this would support that workplace incivility is single-factorial. However, the fact that two subscales did differ with time raises the possibility that

workplace incivility is not single-factorial. As posited in chapter one, if a characteristic of workplace incivility is that it differs over time this would indicate that the cause of workplace incivility is multi-factorial. Since more than one subscale differed, it would appear that workplace incivility does not have a single factor. This apparent paradox creates a need for additional research on the characteristic of how workplace incivility differs with time.

Secondary Research Question Number One: Does the level of workplace incivility from the different sources (i.e. patient, staff, and environment) differ over time?

The study findings supported that some sources of incivility differ both on a monthly and seasonal basis. Both environmental incivility and co-worker incivility significantly differed with time, but supervisor, physician, and patients sources of incivility did not differ with time. One potential explanation for why some sources of incivility differed with time, while others did not, is that workers, across all job classes, have the greatest exposure to co-workers and environmental incivility. These sources, therefore, have the greatest exposure and subsequent differences. Theoretically, this adds support to Andersson and Pearson's (1999) theory in that the more interactions a person has with a potential source of incivility the greater the potential that at least one organizational norm will be violated.

Secondary Research Question Number Two: Does the level of workplace incivility differ by occupational group?

This study supported that different occupational groups experienced different levels of workplace incivility. Of particular note is that maintenance workers had statistically lower levels of incivility than five other occupational groups. This finding adds support to the Cortina et al. (2001) finding that employees with high informal power report lower levels of incivility. That is to say that because the Maintenance workers had high informal power (i.e. if you want to have a

light bulb you need to be civil to the Maintenance staff) they experienced lower levels of workplace incivility. However, the opposite also appears to be true. Physicians, who have high formal organizational power, had significantly lower levels of incivility than other occupational groups. One explanation for this is that it does not matter if the organizational power is formal or informal it is how much absolute organizational power an occupation has that influences how civil other people are to them. Further, the finding that maintenance workers had the lowest levels of workplace incivility raises concerns about the Reisig and Cancino (2004) finding that economically disadvantaged people had higher levels of incivility than those with more economic means.

Secondary Research Question Number Three: What are the differences among hospital employee demographic or employment characteristics and the level of workplace incivility?

This study supports that gender was related to the level of workplace incivility. Women experienced higher levels of workplace incivility at this study site than men. This finding supports the Luparell (2004) and Phillips and Smith (2003) findings that gender plays a role in workplace incivility, and calls into question Ferriss's (2002) finding that gender does not play a role. One potential explanation for why women have higher levels of workplace incivility is that women have a greater awareness of the nuances of social behavior and hence detect smaller violations in workplace norms then men do (Lim, Cortina, & Magley, 2008). It is possible that women are less tolerant of deviant behavior than their male counterparts (Lim, Cortina, & Magley). Another potential explanation for the gender differences is that the men who were randomly selected for this study were primarily in the physician and maintenance occupational groups. As discussed above, these groups could be experiencing lower levels of workplace

incivility because of their higher organizational power. Therefore, the apparent difference in gender is an artifact of the occupational groups.

This study further supports that age was related to the level of workplace incivility. Younger employees experienced greater levels of workplace incivility than older employees at this study site. This finding is the opposite of Phillips and Smith's (2003) research, which found that middle age and older adults experienced greater levels of workplace incivility. It is possible that as employees grow older their tolerance for deviant behavior increases ("she is just having a bad day") and hence they do not experience as much incivility as other younger co-workers. Another explanation for the difference between younger and older employees is that older employees have greater informal power based on their longevity in the organization and hence have lower levels of incivility. Theoretically, Andersson and Pearson (1999) would support that older employees have had a greater amount of time to learn techniques to leave the incivility spiral and have lower levels of incivility.

Recommendations for Theory, Research, and Practice

Theory

Andersson and Pearson's (1999) theory of workplace incivility was robust enough to structure this study. However, these study findings suggests that three modifications to the theory may be needed. First, as stated above, the study findings support adding to Andersson and Pearson's theory that the more interactions a person has with a potential source of incivility the greater the potential that at least one organizational norm will be violated. For example, an employee may only see a physician once a day for 5 minutes but that same employee sees their co-workers 30 times a day in many different settings which increases the chance that the co-worker will violate an organizational norm. The second modification to the theory is the role

gender, age, and organizational power play related to workplace incivility. The study findings suggest that gender, age, and organizational power need to be added as personal and organizational characteristics that influence workplace incivility. This is important to add to the theory because the differences between these personal/ organizational characteristics will need to be considered when looking at interventions for workplace incivility. Last, Andersson and Pearson's theory implicitly includes time as a component of incivility. That is to say that because Andersson and Pearson's theory is based on multiple interactions, time must be part of the incivility spiral. Because the global level of workplace incivility did not significantly vary in this study, time may not be an important concept in the phenomenon of workplace incivility.

Research

Because of this study's limitations, it serves as a pilot study for future research on whether workplace incivility differs with time. This research supported that a characteristic of workplace incivility is that it does not differ with time, although this may indicate that the cause of workplace incivility is single-factorial it is more logical to conclude that the IHS could not detect the subtle changes in the level of workplace incivility because of the reasons discussed in the primary research questions section above. Even though the overall level of workplace incivility did not differ, the differences of the subscales would suggest that workplace incivility is multi-factorial. This apparent paradox will need to be resolved through further research. Better understanding of this characteristic of workplace incivility will both foster a more comprehensive understanding of the phenomenon and be needed before intervention research can begin. That is to say that before interventions can be studied the underlying characteristics of the phenomenon must be understood.

A second related area for future research is the need to replicate the study in different types of healthcare settings. The results of this study were from a small rural hospital; subsequently, replication of this study in a large urban hospital and a moderate sized suburban hospital will provide additional insight into the characteristics of workplace incivility in healthcare. Replication of this study in different geographic areas will also help with the generalizability.

The third area for future research is tool development. While the IHS has excellent internal consistency, the fact that it is only a five point Likert scale raises concerns about whether it is sensitive enough to detect the subtle fluctuations that occur with low-level deviant behavior. Future researchers may want examine more sensitive instruments to evaluate the level of workplace incivility. The limitations of the tool will be discussed at greater length in the limitations section later in chapter five.

Practice

Greater than one million dollars are lost annually in productivity related to workplace incivility for one hospital (Hutton & Gates, 2008). Human consequences like increase in becoming ill, more sick days used, lower job satisfaction, increased sense of alienation can be attributed to workplace incivility (Cortina, Magley, Williams, & Langhout, 2001; Gabriel, 1998; Hornstein, 2003; Johnson & Indvik, 2001). Because of these financial and human consequences, the occupational health professional needs to take the information in this study and apply it to their practice. At the very least, the consistent differences in the level of co-worker incivility suggests that the occupational health professional needs to have work group level meetings to monitor and discuss workplace incivility. While no researched interventions for workplace incivility could be found, if the occupational health professional starts having open discussions

about workplace incivility, this could potentially increase employee awareness of the phenomenon until an intervention becomes available. Further, while not research based it is logical that the occupational health professional needs to work with human resources and administrative staff to create a policy on acceptable behaviors in the workplace. This policy will create a guideline for employees to use to moderate their own behavior. Once this policy is developed, the occupational health professional will need to provide education to staff on the importance of a civil organization to both the employees' and the organization's health. The last implication for practice is that the occupational health professional needs to take seriously any employee report of workplace incivility because of the serious consequences of incivility to the workplace.

Limitations

The following section presents the limitations of this study. Limitations are divided into threats to external validity, internal validity, statistical validity, and construct validity.

External Validity

External validity is concerned with the generalizability of the study findings across different settings and people (Shadish, Cook & Campbell, 2002). Per Shadish, Cook and Campbell, there are five threats to external validity, these include:

- Interaction of causal relationships with units: What is found for one set of subjects may not be true for a different set of subjects.
- Interaction of causal relationships over treatment variations: An effect of a treatment may not hold if that treatment is given a different dose or with other treatments.
- Interaction of causal relationships with outcomes: An effect found on one tool may not hold if other tools were used.

- Interaction of causal relationships with setting: An effect in one setting may not be true in a different setting.
- Context-dependent mediation: An explanatory mediator effect, which is present in one setting may not be present in another setting.

Each of these five threats will be discussed except for interaction of causal relationships over treatment variations and context-dependent mediation. Interaction of causal relationships over treatment variation is not discussed because there was no intervention in this study and hence no treatment variation. Context-dependent mediation is not discussed because there was no intervention and hence no effect. Because there was no effect of an intervention, there is by default no mediating effect.

Interaction of causal relationships with units. This hospital's workforce was not representative of the general healthcare workforce in that minorities were under-represented, although the ethnic make-up of this hospital was representative of the county in which the hospital is located. This limitation decreased the generalizability of this study to other healthcare workers. However, this study was a pilot study attempting to describe one characteristic of workplace incivility. Homogeneity of the sample decreased between subject variability and possibly provided a clearer description of the phenomenon, which was the intent of the study.

Interaction of causal relationships with outcomes. Because the IHS was the only tool used to measure workplace incivility, interaction of causal relationships with outcomes could be a potential threat to external validity. However, the IHS was not used to set a standard for the level of workplace incivility across hospitals. The tool was used to measure the level of workplace incivility and to assess if one characteristic of workplace incivility is that it differs with time. Further, this line of research is still new and there is no gold standard in measurement.

Further still, no other tools have been found to measure workplace incivility from multiple sources.

Interaction of causal relationships with setting. Because the study took place in a rural setting, it is possible that the findings cannot be generalized to urban and suburban hospitals, which is an interaction of causal relationships with setting. As discussed above in interaction of causal relationships with units, this was a pilot study and future research will need to be conducted in different settings to increase the generalizability of the findings to other healthcare environments.

Internal Validity

Internal validity is traditionally defined as whether observed covariance between two variables reflects a causal relationship (Shadish, Cook & Campbell, 2002). This study did not attempt to establish causality per se but instead attempted to describe a characteristic of workplace incivility. However, using the nine threats to internal validity provides a structure to discuss limitations of this study. Per Shadish, Cook, and Campbell, there are nine threats to internal validity these include:

- Ambiguous Temporal Precedence: Lack of clarity about which variable occurred first.
- Selection: Systematic difference over conditions in respondent characteristics.
- History: An event occurring concurrently with the experiment that could cause the observed effect.
- Maturation: Naturally occurring changes that happen over time, which can be confused as the observed effect.
- Regression: When subjects are selected for their extreme scores on one variable, they will often have less extreme scores on other variables, which can appear to be an effect.

- Attrition: Loss of respondents from the study can cause the remaining participants to look like there is an effect present.
- Testing: Exposure to the test can affect scores on subsequent tests, which can look like an effect.
- Instrumentation: The nature of the measure may change over time in a way that looks like an effect.
- Additive and interaction effects: The impact of a threat can be added to or interact with that of another threat and look like an effect

Each of these nine threats is discussed below except for ambiguous temporal precedence and regression. Ambiguous temporal precedence is not discussed because this study did not attempt to establish causality; therefore, it is not relevant whether the workplace incivility caused the employee to violate a workplace norm or if an employee violated a workplace norm and then there was workplace incivility. Regression is not discussed because it was not a high score on any variable that was used in the selection process. Participants were not selected based on any characteristic other than their employment.

Selection. In this study, selection was not an issue as it relates to the population of this hospital workforce. The subjects selected for this study were selected at random, as outlined in chapter three, from the entire workforce of the hospital. Further, there was no intervention and hence no need for random assignment.

History. This study had a major threat to its validity due to history. In month three, the parent company of the hospital went bankrupt, and the employees were not paid for three weeks. Theoretically, if an employee was not paid then behaviors like decreased organizational commitment, decreased altruism, and separation from the organization would all be expected at a

greater frequency. This could mimic incivility and look like difference in the level of incivility. However, as presented in table 28, month three did not have the highest level of workplace incivility either overall or from any of the sources.

Maturation. This study had the potential for maturation in that as the subjects aged their perceptions of what workplace incivility is could have changed. This could appear as difference in the level of workplace incivility. While it is possible that maturation was a threat to the internal validity of the study, the lack of statistically significant fluctuation in the level of workplace incivility would tend to discount this threat.

Attrition. In this study, 33% of the people who started the study did not complete the minimum data requirements which could be a threat to validity. That is to say that if a participant did not have any difference in their level of incivility then they might not continue to complete the IHS survey. If this happened, then the people who continued to complete the survey would have a greater impact on the level of incivility, and there could be a false appearance of difference. The analysis was run both with all the participants regardless of how many surveys they returned as well as with only those participants that completed the minimum data set as described in chapter three. There was no statistical difference in the output of the analysis. Further, the lack of difference in the overall level of incivility would suggest that attrition was not a major threat to the validity of this study.

Testing. The subjects in this study received the IHS every month. Subsequently, they could have changed their behavior because the IHS encouraged them to look at their own behavior, which would be a testing threat to the internal validity. However, as noted in table 28, while both the overall level and source level of incivility did tend to go down with subsequent

survey distributions, there are some months where the mean level increases, if only incrementally.

Instrumentation. Because the IHS was not a mechanical measurement tool the threat of instrumentation was minimized. Further, instrumentation was not an issue for this study because there was no statistical change with time which would be expected in instrumentation.

Additive and interaction effects. While additive and interaction effects of the above threats to internal validity cannot be ruled out, the lack of significant effect would support that additive and interaction effects were not a threat to validity. For example, if there was an error of history and an error of testing then it is possible that these two effects could have a synergistic effect, which would appear to be a difference between groups even though there was no real effect. However, because there was no effect in this study there should not have been an additive and interaction effect.

Statistical Conclusion Validity

Statistical conclusion validity is concerned with two types of statistical errors (Shadish, Cook & Campbell, 2002). Per Shadish, Cook and Campbell, these errors are "(1) whether the presumed causes and effect co-vary and (2) how strongly they co-vary" (p 42). In this study, the first type of statistical error, whether the presumed causes and effect co-vary, may have been present. That is to say, that the results of this study could incorrectly conclude that workplace incivility does not differ with time when in fact it does. One potential cause of this kind if statistical conclusion error is low statistical power. The current study may have had low statistical power due to the effect size. The effect size of the fluctuation in workplace incivility could have been smaller than the hypothesized .4. If this is true, then there is difference in the level of workplace incivility over time but the study was too underpowered to detect the

fluctuation. While this was a significant limitation, this was a pilot study and future research will need to include a greater number of subjects to better assess the characteristics of workplace incivility.

Construct Validity and Sensitivity

Construct validity is concerned with whether a measurement tool is actually measuring what it is designed to measure (Polit & Hungler, 1999). The IHS may have been either not sensitive enough to measure workplace incivility or may not have measured the construct of workplace incivility at all.

Sensitivity is how small a variation in an attribute can be measured (Polit & Hungler, 1999). Polit and Hungler state an instrument is more sensitive if it is "objective, comprehensible, balanced, unidemensional, reactive and linear"(p 426). The disconnect between workplace incivility not fluctuating as a global measure but fluctuating as a source measure suggests the instrument may not have been sensitive enough. The reason this supports a lack of sensitivity of the IHS is that as the number of interactions goes up so does the potential for an organizational norm to be violated. For example, an employee may only see a physician once a day for 5 minutes but that same employee sees their co-workers 30 times a day in many different settings which increases the chance that the co-worker will violate an organizational norm. Therefore, the scales that measured the sources to which the participants had the most exposure should have, theoretically, showed the greatest difference in the level of workplace incivility even if the tool that lacked sensitivity. Therefore, it is posited that the IHS is reliable as demonstrated by the high internal consistency but lacks sensetivity.

The IHS may not have been valid. That is to say that the IHS may not have been measuring the construct of workplace incivility at all but instead measuring very low level

workplace violence. While neither the month model nor the season model was statistically significant, the month model ($F(1, 425)=3.16$ $p=.0763$) was closer to significance than the season model ($F(1, 425)=2.53$ $p=.1122$). This indicates a lack of validity. As a person's exposure (three months instead of one) to a source of incivility increases, a tool, even one lacking sensitivity, should be able to detect a change if one is present. The reason for this is that as exposure to a source of workplace incivility increases the potential that an organizational norm will be violated also increases. Subsequently, the amount of workplace incivility should increase and the difference between the seasons should have increased. Hence, the season model should have been closer to significance than the month model if the IHS was lacking sensitivity. Because the month model was closer to significance than the season model, it would support that the tool was not lacking sensitivity but instead lacking construct validity. If the IHS did not have construct validity, then it may not have been detecting events of workplace incivility, such as empty coffee pots, jammed fax machines, and gossiping. If this explanation is correct, then the differences that were detected over time in the general and co-worker sources could actually have been differences in low intensity workplace violence. Theoretically, this explanation is supported because Andersson and Pearson (1999) suggest that workplace incivility, left unmanaged, could spiral into workplace violence. It is possible that the IHS was measuring behavior slightly more violent than workplace incivility. For example, item number three on the IHS is "do hospital employees scream at each other". Screaming at each other appears to have a clear intent to harm and hence whould actually be workplace violence.

Summary

This chapter discussed study findings in relation to Andersson and Pearson's (1999) theoretical framework and the literature reviewed were presented. The next section of chapter

five presented the implications for nursing theory, research, and practice. Implications for nursing included direction for future research into the characteristics of workplace incivility. Research is specifically needed to determine whether the level of incivility differs with time. The last section of chapter five discussed the study's limitations. Summary findings and recommendations include:

- the level of workplace incivility overall did not differ as a function of time,
- sources of workplace incivility did differ as a function of time,
- gender and age both significantly different among groups related to the level of workplace incivility,
- there is a need for additional research on the characteristics of workplace incivility, and
- the IHS had acceptable reliability however it may be lacking in sensitivity or validity.

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Appendix A

Incivility in Healthcare Survey

ID#_____

	We would like to know about the type of interactions you have with the people you work with. For the following items, please consider all individuals you interact with at work, including patients, visitors, doctors, and co-workers. **How frequently**…	Very Often	Often	Sometimes	Rarely	Never
1	…do basic disagreements turn into personal verbal attacks on other employees?	1	2	3	4	5
2	…are there violent outbursts or heated arguments in your workplace?	1	2	3	4	5
3	…do hospital employees scream at other employees?	1	2	3	4	5
4	…do hospital employees curse (i.e., swear) in the workplace?	1	2	3	4	5
5	…do people raise their voices when they get frustrated?	1	2	3	4	5
6	…do hospital employees blame others for their mistakes or offenses?	1	2	3	4	5
7	…do people, in this hospital, make jokes about minority groups?	1	2	3	4	5
8	…do people, in this hospital, make jokes about religious groups?	1	2	3	4	5
9	…do hospital employees make inappropriate remarks about other people's characteristics (i.e., remarks about race or gender)?	1	2	3	4	5
10	…do hospital employees spread bad rumors at work?	1	2	3	4	5
11	…do hospital employees bad-mouth others in the workplace?	1	2	3	4	5
12	…do hospital employees gossip about their supervisor at work?	1	2	3	4	5
13	…do hospital employees make too much noise (i.e., talking too loudly)?	1	2	3	4	5
	The following items ask about your interactions with your co-workers. **How frequently do your co-workers**…					
14	…argue with each other?	1	2	3	4	5
15	…take things without asking?	1	2	3	4	5
16	…claim credit for your work?	1	2	3	4	5
17	…gossip about one another?	1	2	3	4	5
18	…take credit for work they did not do?	1	2	3	4	5
	Please think about your interactions with your direct supervisor (i.e., the person you report to most frequently). **How frequently does your direct supervisor**…					
19	…behave in a way that is verbally abusive?	1	2	3	4	5
20	…yell at you about matters that are not important?	1	2	3	4	5
21	…shout or yell at you for making mistakes?	1	2	3	4	5
22	…take his/her feelings out on you (i.e., stress, anger, "blowing off steam")?	1	2	3	4	5
23	…not respond to your concerns in a timely manner?	1	2	3	4	5
24	…include gossip and personal information into personnel decisions?	1	2	3	4	5
	This section refers to your interactions with physicians that you work with. **How frequently do physicians**…					
25	…behave in a way that is verbally abusive?	1	2	3	4	5
26	…yell at you about matters that are not important?	1	2	3	4	5
27	…shout or yell at you for making mistakes?	1	2	3	4	5
28	…take their feelings out on you (i.e., stress, anger, "blowing off steam")?	1	2	3	4	5
29	…not respond to your concerns in a timely manner?	1	2	3	4	5

30	…treat you as though your time is not important?	1	2	3	4	5
31	…treat you in a condescending manner?	1	2	3	4	5
	Please reflect upon your interactions with the patients and their family and visitors. **How frequently do patients/visitors…**					
32	…not trust the information you give them and ask to speak with someone of higher authority?	1	2	3	4	5
33	…behave in a way that is condescending to you?	1	2	3	4	5
34	…make comments that question the competence of hospital employees?	1	2	3	4	5
35	…criticize your job performance?	1	2	3	4	5
36	…make personal verbal attacks against you?	1	2	3	4	5
37	…pose unreasonable demands?	1	2	3	4	5
38	…take out their frustrations on you?	1	2	3	4	5
39	…make insulting comments to you?	1	2	3	4	5
40	…treat hospital employees as if they were inferior or stupid?	1	2	3	4	5
41	…show that they are irritated or impatient?	1	2	3	4	5

Appendix B

Recruitment Flyer

Hello

My name is Scott Hutton and I am a PhD student in nursing at the University of Cincinnati. My advisor, Dr. Gates, and I are going to be conducting a study at your hospital and I will be asking 100 of you to help me with data collection. I am interested in looking at how people interact at work. The study will take about 5 minutes of your time one day a month for one year. If you have been selected to participate in this study we will contact you during the week of January 29th 2007.

Thank you

Scott Hutton RN MSN MBA

Appendix C

Informed Consent

University of Cincinnati
Consent to Participate in a Research Study
College of Nursing/ Department of Occupational Health
Scott Hutton, RN M.S.N M.B.A.
(513) 558-6717 (huttonsa@email.uc.edu)

Title of Study:
A Longitudinal Study of Workplace Incivility in Hospitals

Introduction:
I am inviting approximately 100 hospital employees from 3 different hospitals to take part in a research study that I am conducting as part of my doctoral degree program. Please read the following explanation carefully and ask questions about anything you do not understand.

Purpose:
The purpose of this study is to examine changes in the workplace incivility experienced by employees in healthcare.

Duration:
Your participation in this study will take approximately 5 minutes every month for a year.

Procedures:
I will give you the same survey to fill out every month for one year. I will bring the survey to you at work. You will be given a self-addressed stamped envelope with the survey so you can complete it at your convenience and mail it back to me.

Risks/Discomforts:
I do not expect you to be exposed to any risk or discomfort from participating in this study.

Benefits:
You will receive no direct benefit from your participation in this study. However, your participation may help hospitals provide better work environments in the future.

Alternatives:
There are no other activities planned if you do not want to be surveyed.

Confidentiality:
Your research data will be kept in a locked file cabinet in my office. Only my faculty advisor, Dr. Gates; my research assistant, LaToya Bridgeman; and I will have access to your data. Research data will be stored in a locked file cabinet for three years after the end of this study and will then be destroyed by shredding. The data from the study may be published; however, you will not be identified by name.

Offer to Answer Questions:
If you have any questions about study-related activities, you may call me at 558-6717 or my research assistant, LaToya Bridgeman, at 558-5703. If you have any questions about your rights as a research participant, you may call the Chair of the Institutional Review Board – Social and Behavioral Sciences at 558-5784.

Voluntary Participation:
You do NOT have to participate in this study. You may choose not to participate or you may quit participating AT ANY TIME.

Agreement:
I have read this consent document. I voluntarily agree to participate in this study. I will receive a copy of this consent document for my reference.

_____ _____
Participant Signature Date

_____ _____
Signature and Title of Person Obtaining Consent Date

_____
Identification of Role in the Study

Appendix D

Instructions to Complete the IHS

Please answer the following questions as they relate to your experiences with workplace incivility. Please make sure to answer all the questions.

When complete please place in envelope provided, seal and mail.

Thank you

Appendix E

Demographic and Employment Characteristic Instrument

ID# _____
Age: _____
Gender: _____
Job title: _____
Ethnicity: ☐ African American
☐ Asian American
☐ European American
☐ Central/ South American
☐ Pacific Islander
☐ Multiracial
☐ Native American, Eskimo, Aleut
☐ Other _____

Years of education: _____
Years of service at this organization: _____
Average hours worked per week: _____

Average shift length: _____

Primary shift
☐ Day shift
☐ Evening shift
☐ Night shift
☐ Other: _____

Appendix F

Code Book

Categorical Variables

Completion Code
Demographic form and seven completed surveys=1
Seven completed surveys no demographic form=2
Demographic form, less than seven completed surveys=3
Less than seven completed surveys, no demographic form=4

Attrition Code
Has left the organization=0
Still with the organization=1
Other (opt out, part-time)=2

Gender Code
Female=1
Male=2

Occupation Code
RN=1
Nurse Assistant=2
LPN=3
Physician=4
Registrar=5
Manager/Supervisor=6
Secretary=7
Radiologist=8
File Clerk=9
Physical Therapist=10
Technician=11
Dietary=12
Office other=13
Respiratory Therapist=14
Specialty Center=15
Maintenance=16
Receptionist=17

Ethnicity Code
African American=1
Asian American=2
European American=3

Central/South American=4
Pacific Islander=5
Multiracial=6
Native American, Eskimo, Aleut=7
Other=8

Primary shift Code
Day Shift=1
Evening Shift=2
Night shift=3
Other=4

Continuous Variables

Years of education	2 to 30
Years of service at this organization	.25 to 39
Average hours worked per week:	24 to 100
Average shift length:	7 to 15

IHS

Part 1 (Environmental)	
Question 1	1 to 5
Question 2	1 to 5
Question 3	1 to 5
Question 4	1 to 5
Question 5	1 to 5
Question 6	1 to 5
Question 7	1 to 5
Question 8	1 to 5
Question 9	1 to 5
Question 10	1 to 5
Question 11	1 to 5
Question 12	1 to 5
Question 13	1 to 5
Part 2 (Co-Worker)	
Question 14	1 to 5
Question 15	1 to 5
Question 16	1 to 5
Question 17	1 to 5
Question 18	1 to 5
Part 3 (Supervisor)	
Question 19	1 to 5
Question 20	1 to 5
Question 21	1 to 5
Question 22	1 to 5

Question 23	1 to 5
Question 24	1 to 5
Part 4 (Physician)	
Question 25	1 to 5
Question 26	1 to 5
Question 27	1 to 5
Question 28	1 to 5
Question 29	1 to 5
Question 30	1 to 5
Question 31	1 to 5
Part 5 (Patient, Patient Family, Vistor)	
Question 32	1 to 5
Question 33	1 to 5
Question 34	1 to 5
Question 35	1 to 5
Question 36	1 to 5
Question 37	1 to 5
Question 38	1 to 5
Question 39	1 to 5
Question 40	1 to 5
Question 41	1 to 5