

AN ABSTRACT OF THE THESIS OF

Amanda L. McCarthy for the Master of Science

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The purpose of this study was to examine how gender, generational differences, and whether working in a team versus individually would affect the three subscales of burnout: emotional exhaustion, cynicism, and professional efficacy in manufacturing employees. Participants were 120 manufacturing employees from a small aerospace company located in the Midwest. Women were predicted to score higher in emotional exhaustion and professional efficacy than men; whereas men were predicted to score higher in cynicism than women. It was also predicted that GenXers, who were born between 1961-1980, and GenMe, who were born between 1981-1999, would experience higher levels of emotional exhaustion and cynicism and lower levels of professional efficacy than Baby Boomers born between 1943-1960. Lastly, it was predicted that employees who work in a team would experience higher levels of burnout in all three subscales than employees who work individually. No statistically significant differences were found between gender, generations or team setting and the burnout subscales. Since the current organization in this study had experienced growth and was doing well, it would be interesting to see how much the employee's burnout levels would change if the company were to start layoffs. Past research has shown that once companies start to downsize, employees tend to feel the pressure and experience the classic symptoms of burnout (Schaufeli & Greenglass, 2001).

**AN EXAMINATION OF HOW GENDER, GENERATIONAL DIFFERENCES,
AND TEAM SETTING WILL AFFECT BURNOUT SUBSCALES**

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CHAPTER 1

INTRODUCTION

In 2006, a well-known job search website by the name of CareerBuilder.com conducted a nationwide survey of more than 2,500 workers. An astounding 77% of workers reported feeling burnout on the job and another 16% reported that co-workers were their primary cause of stress at work (UPI News Track, 2006). The long-term effects of stress can cause burnout, which is characterized by emotional exhaustion, depersonalization, and diminished personal accomplishment (Densten, 2001). Past research on burnout has focused primarily on occupations that require extensive interpersonal contact such as human resource professionals, teachers, nurses, (Brotheridge & Grandey, 2002) sales, customer service, and leadership positions (Wittmer & Martin, 2010).

Organizations are constantly downsizing, restructuring and merging to cut down on costs. These kinds of strategic courses of action have caused deleterious consequences for workers and their families. Since 1979, 43 million workers have lost their jobs due to companies becoming greedy (Schaufeli & Greenglass, 2001). In the long-term, dwelling and constantly worrying about losing one's job can cause serious psychological consequences. The work environment may cause a person to become burned out from the devastating thought of job loss. One study found that nurses' levels of cynicism and anger were greater and job performance drastically declined during a hospital downsizing because there was an increase in fear of losing one's job (Schaufeli & Greenglass, 2001).

Schaufeli and Greenglass (2001) best described burnout "as the physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding" (p. 501). The knowledge gained from

research on burnout is very important for an organization to understand because it provides the systematic and theory-based reason why burnout occurs. The following review on burnout describes its history, the three subscales, the differences in traditional burnout models, and how the independent variables (gender, generational difference and working in a team vs. individually) have affected people.

Historical Background on Burnout

Initially burnout was thought to be a manifestation of a person's character, behavior and motivation. However, researchers quickly found that burnout was more likely the result of a person's work environment (Angerer, 2003). In 1975, Herman Freudenberger, a psychiatrist who worked at an alternative health care agency, was the first person to coin the term of burnout (Maslach, Schaufeli & Leiter, 2001). He collected information from interviews, case studies, and on-site observations of health care professionals. Close to a year later, a social psychologist by the name of Christina Maslach conducted interviews based on the emotions people experienced in human service occupations (Maslach et al., 2001).

The information gathered from the hundreds of interviews and observations by Freudenberger and Maslach pointed to a reoccurring theme experienced by people who dealt with emotional work. They found that those who provided a care-giving service for others on a consistent and extended period of time eventually experienced the long-term effects of stress. These people were exhibiting the classic symptoms of burnout: emotional exhaustion, depersonalization, and diminished personal accomplishment (Maslach et al., 2001).

Several theories were postulated based on the research done by Freudenberger and Maslach on burnout (Maslach et al., 2001). The first theory contends that only

idealistic employees, those who put too much effort into their work, experienced burnout. Second, it was theorized that since burnout happens after being exposed to the long-term effects of stressors, employees would experience burnout later in their career. Lastly, many researchers have debated about whether burnout is the result of work overload (too many demands with scarce resources) or from under stimulated work (monotonous and tedious) (Maslach et al., 2001).

In the 1980s, the method of collecting qualitative data became empirical or quantitative in nature. Researchers began to conduct research using questionnaires and surveys involving larger sample sizes. The Maslach Burnout Inventory (MBI) was specifically designed to measure the burnout of people within human service occupations. It is the most commonly used scale and has the strongest psychometric properties (Cordes & Dougherty, 1993; Maslach et al., 2001; Schaufeli & Greenglass, 2001).

The field of industrial-organization (I/O) psychology played an important role during the 1980s as well. The concepts of job satisfaction, organizational commitment, turnover and absenteeism were related to burnout. The combined efforts of clinical, social and I/O psychology helped researchers produce a stronger basis and theory for burnout (Maslach et al., 2001).

The collection of quantitative data continued into the 1990s, causing research to branch out into new directions. People in clerical, technological, military and managerial occupations other than the human services were beginning to be explored (Maslach et al., 2001). Second, a new inventory known as the MBI-General was designed to study those occupations outside the human services. The main purpose of this inventory was to examine the problems of a person's relationship with work rather than the relationships one has with others (Schaufeli & Greenglass, 2001).

Three Components of Burnout

As mentioned above, burnout consists of three components: emotional exhaustion, depersonalization, and diminished personal accomplishments. Many researchers have argued that emotional exhaustion plays the primary role in the burnout process and is a strong predictor for work related outcomes (Wittmer & Martin, 2010) such as, life and job satisfaction, job performance, absenteeism, commitment and turnover (Burke & Greenglass, 1995; Lee & Ashforth, 1996). It has been the most thoroughly analyzed and reported in the research literature on burnout. However, emotional exhaustion cannot solely explain the critical aspects of one's relationship with others at work (Maslach et al., 2001; Maslach & Leiter, 2008).

Emotional exhaustion. Emotional exhaustion is commonly referred to an individual who is physically fatigued and unable to fully give 100% emotional energy to work or others (Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Maslach et al., 2001). People may express the dread of having to return to another day of work. Wittmer and Martin (2010) found that emotional exhaustion was related to what shift one works. Those in the graveyard shift experience more emotional exhaustion than those on the day or evening shifts. Another strong predictor of emotional exhaustion was unfavorable work conditions ($r = 0.50$ for day and evening workers and $r = 0.46$ for night shift workers). They also found that supervisors can mitigate emotional exhaustion. They found a negative correlation between supervisory support and emotional exhaustion ($r = -0.40$ for day and evening workers and $r = -0.40$ for night workers) and also between supervisory satisfaction and emotional exhaustion ($r = -0.37$ for day and evening workers and $r = -0.43$ for night workers).

Depersonalization or cynicism. Exhaustion prompts one to distance oneself mentally and emotionally from one's work, which is referred to as depersonalization (Maslach et al., 2001; Maslach & Leiter, 2008). Employees may act in a callous manner, purposely take longer breaks or use derogatory language. These two constructs have consistently had a strong relationship throughout research on burnout in a variety of organizational settings.

Lack of personal accomplishment or professional efficacy. The third component, lack of personal accomplishment, is regarded as one's negative attitude towards the success of work and interpersonal relationships (Cordes & Dougherty, 1993; Lee & Ashforth, 1996; Maslach et al., 2001). Professional efficacy includes both social and nonsocial aspects in the workplace; in which employees assess their own expectation of continued effectiveness (Schutte et al., 2000). Emotional exhaustion and depersonalization are usually discussed in the literature as being sequential because they rely on the demands of work and social problems; whereas, lack of personal accomplishment depends more on what resources are available (Cordes & Dougherty, 1993; Maslach et al., 2001).

Theoretical Models of Burnout

There has been much debate for the past 40 years about whether the phase model by Robert Golembiewski or the sequential model by Christina Maslach, both developed in the 1970s is superior (Cordes & Dougherty, 1993; Greiner, 1992; Golembiewski, 1996; Hsieh & Hsieh, 2003; Maslach et al., 2001; Schaufeli & Greenglass, 2001). Both models are still used today, but a majority of the research conducted has used the model developed by Christina Maslach. The order in which the three components of burnout progress over time are slightly different according to each model.

The sequential model, more commonly known as the Maslach Burnout Inventory (MBI) was proposed in the late 1970s. The model suggests that a person experiences emotional exhaustion first, followed by depersonalization, and finally diminished personal accomplishment (Cordes & Dougherty, 1993; Maslach et al., 2001). The process begins when a person feels the overwhelming strain of too many demands and becomes emotionally drained. The person mentally and emotionally detaches from others and the situation causing the person to perform badly. Last, the person's sense of accomplishment diminishes because the individual's original expectations of success on the job (task or relationships with others) are not met.

The eight-phase model by Golembiewski (1992) proposes that people's level of burnout experience is different based on the situation of the current work environment. The model is based on the subscales of the MBI; however, the scales are only divided into high or low scores. In Phase I, a person is described as being in good shape or showing low scores for burnout. Whereas, in Phase VIII, a person is described as someone who is at the end of the rope and feels completely detached from work and others. The first four phases of this model describe a person who is able to effectively serve others but at a greater cost to the employee and organization. The latter four phases describe a person who is unable to work effectively, has poor physical and emotional health. The model supports the idea that a person will first exhibit depersonalization, and then diminished personal accomplishment and emotional exhaustion last (Cordes & Dougherty, 1993; Golembiewski, 1992; Maslach et al., 2001).

Despite the order in which the three components of burnout occur, there are a few similarities between the two models. First, they both agree that there is a sequential relationship between emotional exhaustion and depersonalization. Second, both models

support the notion that burnout is caused by the long-term effects of stress (Maslach et al., 2001).

Gender and Burnout

When examining differences in gender, women and men have typically held different occupations. Women were more likely to possess nursing or social work positions, whereas men tended to hold the position of a police officer or a psychiatrist (Schaufeli & Greenglass, 2001). Therefore, many researchers have concluded that men and women would have different work experiences (Pretty, McCarthy, & Cantano, 1992).

Past research suggests that women are more likely to experience burnout because they take care of the children in addition to working (Keene and Reynolds, 2005). Women have been found to be more vulnerable to family interference with work because they share more of the responsibilities at home than men. In their research, Keene and Reynolds (2005) found that women spent an average of five to ten hours more each week doing household labor compared to men.

Researchers Becker and Moen (1999) conducted a number of in-depth interviews of more than 100 people in dual-career couples and found the women were twice as likely to limit how much they took on at work to protect the family from work obligations. They scaled back on a number of items, such as, the number of hours worked, refused to put in overtime, or turned down promotions which required more travel or relocation. These adjustments made at work in response to their family, negatively impacted the women's work experience more than the men's.

Men were reported in many studies as having higher depersonalization than women (Lee & Ashforth, 1996; Pretty et al., 1992; Schaufeli & Greenglass, 2001). Researchers Schaufeli and Greenglass (2001) suggested that men tended to detach

themselves from the situation or others in order to protect their masculinity. They exhibited coping mechanisms such as higher levels of aggression and antisocial behavior. Competition also caused some men to compare their success to other males and feel threatened and become very cynical and distrustful (Schaufeli & Greenglass, 2001).

Pretty et al. (1992) examined the level of burnout scores for both gender and the job level (managers and non-managers) in a telecommunications company. They found men and women at either job level experienced burnout differently. Men at the managerial level and women, who were non-managers, experienced more emotional exhaustion and depersonalization. Also, female managers were more sensitive to the relationships with their staff, whereas, male managers were more sensitive to the demands of top-level management.

Little research was found comparing the work environment of manufacturing to burnout. There have only been a couple of papers that have explored the relationship of burnout to manufacturing, which involves routine, monotonous, and tedious work (Hsieh and Hsieh, 2003). Researchers Hsieh and Hsieh (2003) found no direct relationship between job standardization and burnout. However, they only examined the task itself (job standardization) and not how the effects of gender differences related to burnout.

Generational Differences and Burnout

More than 75 million older workers will be retiring in the coming years (Twenge, Campbell, Hoffman, & Lance, 2010). In today's workforce, as many as four generations are working together with some who are as old as their parents and as young as their children. Those generations include: the Silent Generation (born 1925-1945), the Baby Boomers (born 1946-1964), Generation X (born 1965-1981) and Generation Me or Millennials (born 1982-1999). Generations are defined as individuals who are born

around the same time who share distinctive social or historical life events, which are the strongest during one's childhood and adolescence (Gursoy, Maier, & Chi, 2008; Twenge et al., 2010). The literature on multi-generational differences is still a relatively new research concept in the workplace.

Baby Boomers. Baby boomers were born between the years of 1946-1964.

Boomers are those workers who were born during or after WWII and represent two-thirds of all U.S. workers (Gursoy et al., 2008; Twenge et al., 2010). They like to be in charge and take credit for those things that are positive. They also respect authority and hierarchy within the workplace. Boomers grew up in a time when there were two parent households, safe schools and job security. They have the "live to work" mindset and are not technologically literate (Gursoy et al., 2008). However, they are results driven, give maximum effort and plan to stay with a company for the long-term. They tend to view younger workers as scatter brained and inattentive (Twenge et al., 2010).

Generation X. GenXers were born between the years of 1965-1981. GenX was born into a rapidly changing social culture and economic recession (Twenge et al., 2010). They learned from their parents that a company may not be there for them always. GenX children had a higher chance of witnessing their parents' divorce or losing their job due to downsizing which caused them to become more independent and less committed to their organization (Gursoy, et al., 2008; Twenge et al., 2010). During this time, it was also the start of the high-tech and information age. Workers of this generation tend to have the attitude towards work as "leaving work at work" because life outside their work is very important to them (Gursoy, et al., 2008). GenX workers prefer isolation over teams or meetings and expect opportunities for on the job training so they can get a

promotion or find a better job someplace else. They tend to be self-sufficient, self-reliant and good at multi-tasking.

Generation Me. Generation Me were born between the years of 1982-1999. GenMe workers are the children born from the Baby Boomer generation (Twenge et al., 2010). They grew up with the Internet which makes it easy for them to access information and they have the ability to adapt to new technology quickly (Gursoy et al., 2008; Twenge et al., 2010). GenMe workers tend to work best when there is personal contact, leadership and direction. They believe “the more the merrier” and enjoy teamwork due to having to be a part of a group function in school, sports and extracurricular activities growing up (Gursoy et al., 2008). They feel that they are not appreciated or taken seriously because they are young. GenMe workers tend to be good at multi-tasking, even better than GenXers, and are very independent, self-confident and self-expressive.

Within an organization, it used to be that the middle-aged workers were usually in middle management and the younger workers were below. There was a hierarchical system that one relied on to move up through the organization in order to acquire seniority (Gursoy et al., 2008). Communication was usually a top-down approach where the veteran worker would have the line supervisor talk to their employees. Decision-making was not shared between employees, but rather through the chain of command. This type of leadership was appropriate for the Industrial Age, but is not effective for the modern day workplace.

To date, the research on generational differences stems from qualitative interviews. The few systematic studies used measurements that were taken only at one point in time (Twenge et al., 2010). This design cannot show the difference between age

and generational differences. Twenge and colleagues (2010) used a time-lag method which compared individuals of the same age at different points in time. They used a random sampling of high school students ($n = 16,057$) who had graduated in 1976, 1991 and 2006 to represent the work values (leisure, extrinsic, intrinsic, altruistic and social rewards) of the three generations of U.S. workers (Boomers, GenX and GenMe) because it was found that a person's work interest remained predictive as far as 12 years after graduation.

In regards to leisure rewards, researchers Twenge et al. (2010) found almost twice as many GenMe students in 2006 (31.3%) rated having a job with more than two weeks of vacation as very important compared to those in 1976 (17.3%) and a job at which they could work slowly (14.9%) than did those in 1976 (8.9%). Also, in 2006, students wanted a job in which they could have a lot of time for other things outside of work. On the other hand, consistent with findings from past research, three-fourths of Boomers said they expected work to be a central part of their lives, compared with only 62% of GenMe workers (Twenge et al., 2010).

In order to attract younger workers, some top companies have added amenities that focus on the work-life balance that most desire. Google offers onsite laundry and massages, while eBay has two rooms for meditation. Organizations will need a clear understanding of how the values of each generation differ, in order to attract and retain workers (Twenge et al., 2010).

Working in a Team vs. Individually and Burnout

Traditionally, an employee has focused on one relationship, usually with a supervisor, whereas individuals in a self-managed work team must focus on managing multiple relationships with fellow team members and in some situations, with a

supervisor. Burnout has been found in these instances when the team members are required to have more intense and frequent interactions with one another (Ellroy, Terpening, & Kohls, 2001).

According to Ellroy et al. (2001), a self-managed team is defined as a group of individuals who have the responsibility to complete a task and the decision of how that task will be completed. The team aspect was thought to maximize both participation and involvement to create a better fit between the needs of the individual and those of the organization. A significant amount of time is sometimes spent in team meetings discussing work-related problems where interpersonal relationships issues are usually the main problem.

Shared feelings between team members can produce what has been defined as a “collective mood” (Bakker et al., 2006). This can happen when team members respond similarly to a situation and then end up feeling the same way. Another way a team can experience a collective mood is when team members affect each other’s mood by the transmission of emotions. That is, an employee will automatically take on the symptoms of burnout when they perceive another team member is experiencing burnout.

The different emotions felt by team members as they form a group can best be explained by Bruce Tuckman’s 1965 basic model of group development which concludes there is a developmental sequence divided into four phases: forming, storming, norming and performing. In the first stage of forming, group members define boundaries that are both interpersonal and task behaviors. In storming, there is resistance by group influences and emotional responses to task related issues. In the next stage of norming, group members overcome the resistance of group influences and develop a group, rather than an individual perspective. The last stage, referred to as performing, interpersonal and group

issues have been resolved and the group's energy is primarily directed at addressing the task (Tuckman, 1965).

According to Guzzo and Dickson (1996), teams who are comprised of individuals who are familiar with one another are shown to have better work effectiveness than teams with members who are strangers. However, older research indicates that at some point, possibly two to three years after a group is formed, team members are able to work together effectively (Guzzo & Dickson, 1996). The effectiveness of a team can also be the direct result of what kind of leader is present. Platoons who trained under leaders with high expectations out-performed other platoons on physical and cognitive tests at the end of training. Also, a study which examined the effects of professional baseball managers on their won-loss record found it was possible to identify superior managers (Guzzo & Dickson, 1996). These managers were effective through exercising excellent tactical skills or by improving the individual performance of team members.

Many manufacturing firms have implemented work teams on production lines due to pressure to improve quality. Banker, Field and Sinha (2001) conducted a longitudinal study spanning 28 months from September 1992 through December 1994 of four production lines within an electromechanical assembly plant operated by a Fortune 500 firm. The main objective of the study was whether the implementation of work teams had a "sustainable" impact on manufacturing quality. Substantive participation happens when membership is mandated, the work teams makes and implements decisions and management is supportive and involved.

A work team was formed in each of the four production lines (submotor, gear train, printed circuit-board and final assembly) at the start of the study in September of

1992. Banker, Field and Sinha's (2001) main focus of each production line was the relationship the workers had with each other prior to the implementation of work teams and how this would affect the defect rate of the product output. The couple of months following the introduction of teams, each team was asked to focus on building trust between themselves and management. Being a unionized environment, the plant did not have a history of cooperation between the production workers and management. The workers were also skeptical of management's commitment to team building due to the number of programs that were introduced and abandoned over the years. A facilitator who was not a unionized person was assigned to the plant and began by showing the workers that management was on board with implementing their ideas and decisions.

In the initial stages of the work team formation, there was notable conflict within the teams. The submotor team seemed to have the highest level of initial internal conflict which persisted throughout the period of the study. On the other hand, the gear train line had a harmonious working relationship prior to the team formation and throughout the study. The printed circuit-board and final assembly team conflict levels were somewhere between these two extremes. Once trust building and conflict resolution was well on its way, the facilitator wanted the teams to focus on solving problems in each of their areas. For the next six months (January-June 1993), each production line was assigned to work through a 10-module toolkit training that focused specifically on helping them to work as a team.

The sub motor line operated with very little human intervention. However, about seven to eleven workers were needed to manually complete the motor. The gear train line had a machining and an assembly area. The employees in the machining area were trained machinists and they tended to have more seniority than workers. For the assembly

portion, very few workers were needed because the labor is mostly automated. As a group, the two areas had between four and six employees.

The most intensive line in the plant was the print circuit-board line, where workers primarily inspect the completed boards. The number of workers ranged between four and six employees. The final assembly line was the most labor intensive where the workers had to have trouble shooting skills. It was noted by Banker, Field and Sinha (2001) that the production engineer and the workers seemed to have a very good working relationship prior to the study. There were anywhere from fourteen to eighteen employees who worked in this area.

Banker, Field and Sinha (2001) found that quality improvements were made after the formation of work teams and were sustainable overtime. Most of the production lines had a significant reduction in the defect rate except for the printed circuited-board, which is the most capital intensive and the workers lacked the technical skills to implement high-impact quality improvements. The team also had a hard time being able to resolve the conflict among its members. In regards to the defect rate, the sub motor line had a 57% reduction that was significant at the $p < .01$ level. The gear train line had a reduction of 58% in defects and according to the facilitator the team members, were consistently congenial and collaborative for the duration of the study. The final assembly line proved to have the most impact on their defect rate at a 70% reduction. The members had a harmonious working relationship prior to the formation of teams which continued throughout the study. This allowed the team to focus on quality improvements early on and thus resulted in a sustainable relationship.

MBI-GS Testing Scale

The MBI-GS was created to test those professions outside of the human services.

It focuses on the crisis in a person's relationship with work in general and not on the relationship with people at work. As a result, the three subscales of burnout had to be redefined when the focus was shifted to only on the work itself. Exhaustion was defined as severe fatigue irrespective of its cause, depersonalization was changed to cynicism, which reflects a distant or indifferent attitude towards one's work instead of others. Lack of personal accomplishment was redefined as lack of professional efficacy, in which both social and non-social aspects of work are based on one's accomplishment (Bakker et al., 2006; Maslach & Leiter, 2008; Maslach et al., 1996; Salanova et al., 2005; Schutte et al., 2000). The MBI-GS measures participants' relationship with their work on a sequence from engagement to burnout. If an individual scores high on Emotional Exhaustion and Cynicism and low on Professional Efficacy this reflects a high degree of burnout (Maslach et al., 1996).

The Present Study

Most of the past research on burnout has only focused its efforts on the human service or care-giving occupations (Brotheridge & Grandey, 2002; Cherniss, 1992; Cordes & Dougherty, 1993). The number of women working is increasing each year and occupations once considered to be occupied by a significant number of men or women are slowly disappearing in the human services field. Although there have been an overabundance of studies conducted between gender and burnout, the results have remained inconsistent, except for higher depersonalization among men in social and health professions (Zani & Pietrantonio, 2001). Therefore, research in burnout should consider a new direction such as those working in a manufacturing environment.

The research on burnout has also provided useful information for those occupations that provide a service with direct contact with the outside world. The focus

of research has not branched out into new directions with other occupations. Cordes and Dougherty (1993) pointed out that those in helping professions have to constantly deal with other people and their emotions. Employees at industrial plants do not have direct contact with the public, but they do experience a number of interactions with coworkers and supervisors on a daily basis. Therefore, it could be said that employees who work in departments that require them to work as a team could also experience burnout because they have to communicate and interact with one another to accomplish certain tasks. The duration and frequency of the interaction among the employees would get old and frustrating, especially if any of the employees have an unpleasant relationship.

The examination of how gender, generational differences, and whether working in a team versus individually will affect burnout in manufacturing employees will open a new door for future research. After 40 years of research in burnout, it is surprising researchers did not attempt to study other occupations. There has been an increase, not only in the amount of women who have entered the workforce, but also for minorities and those who have disabilities.

In a demographics survey, other factors such as age and what department an employee works will also be explored as possible variables affecting the levels of burnout. This study aims to fill the gap in current scientific literature on burnout within manufacturing employees. The Maslach Burnout Inventory—General Survey (MBI-GS) will be used to test the following hypotheses (Schaufeli, Leiter, Maslach, & Jackson, 1996):

H1a: Women's scores will be higher in emotional exhaustion than men's scores.

H1b: Women's scores will be higher in professional efficacy than men's scores.

Many women in today's society serve a dual role within the family because they take care of the children at home in addition to working (Schaufeli & Greenglass, 2001). In regards to the workplace, women were found to be more sensitive towards their relationships with colleagues, whereas men were focused on the sensitive needs of upper management (Pretty et al., 1992).

H2: Men's burnout scores will be higher in cynicism than women's scores.

Researchers have concluded that men tend to pull themselves away from a situation or others in order to protect their masculinity. Due to their competitive nature, when men compared their success with other males they felt threatened and became very cynical and distrusting (Schaufeli & Greenglass, 2001).

H3a: GenMe and GenX workers will experience higher levels of emotional exhaustion than Boomers.

H3b: GenMe and Gen X workers will experience higher levels of cynicism than Boomers.

H3c: GenMe and GenX workers will experience lower levels of professional efficacy than Boomers.

The average U.S. worker put in an average of 11 hours more a week in 2006 than those in 1979. In fact, U.S. workers work more hours than most other developed country and have fewer laws to support working families, including lack of paid sick days, limits on mandatory overtime, and the right to request work-time flexibility without retaliation (Williams & Boushey, 2010). Both GenMe and GenX grew up witnessing these social and labor trends and have entered the workforce with the expectation of increased work hours, the need for dual-income, and limited vacation time. Therefore, it makes sense that the value of additional leisure time is particularly strong among these generations

(Twenge et al., 2010). On the other hand, Boomers grew up in a time when there were two parent households, safe schools and job security. They tend to be loyal to their company and expect the same in return (Gursoy et al., 2008).

H4a: Those employees who work in a team will experience higher levels of emotional exhaustion than employees who work individually.

H4b: Those employees who work in a team will experience higher levels of cynicism than employees who work individually.

H4c: Those employees who work in a team will experience higher levels of professional efficacy than employees who work individually.

Many companies have started to or already have work teams in place within the organization. In the past, a worker had to only manage one relationship within the workplace, which was a supervisor. People in work teams must focus on managing multiple relationships with fellow team members in addition to the supervisor. The intense and constant interaction required among the workers has shown to contribute to the burnout found within the team (Ellroy et al., 2001).

CHAPTER 2

METHOD

Participants

A total of 125 participants returned the survey data. However, five questionnaires had to be discarded because one participant decided s/he no longer wanted to participate and the remaining four did not complete one or more of the surveys, which reduced the number of responses to 120. The company had over 400 workers employed, but only those employees located on the shop floor who have direct contact with the parts were surveyed.

A demographics survey was used to collect additional information regarding the participants: gender, marital status, age, tenure, department, shift and a question about coworker dependence (see Appendix A). The population consisted of 120 employees (men = 90 and women = 30) from an aerospace manufacturing plant located in the mid-west. Of those who participated, 34% indicated they were Baby Boomers who were born between the years of 1943-1960; 45% were GenXer's who were born between 1961-1980; and 21% were GenMe's who were born between 1981-1999. The participants indicated the following department or area in which they worked: sheetmetal assembly had four areas—bench top/sub-assembly ($n = 24$), doors ($n = 21$), wings/spars ($n = 13$), and sealing ($n = 3$); shipping had two areas—shipping ($n = 27$) and receiving ($n = 5$); fabrication ($n = 13$); machining ($n = 12$); and composites/metal bond ($n = 2$).

The current marital status for employees completing the survey was single with children ($n = 15$), single without children ($n = 9$), married with children ($n = 61$), married without children ($n = 12$), divorced with children ($n = 16$) and divorced without children ($n = 6$). The employees were also asked how long (tenure) they had worked for the

company. More than 76% of the employees indicated they had worked for the company less than two years, 9% had worked 3-5 years, 11% had worked 6-8 years and only 2% had worked either 9-11 years or 12 plus years. Lastly, a majority of those employees surveyed worked first shift (92%), a small percentage worked second shift (7%) and only 1% worked third shift.

Measures

Maslach Burnout Inventory-General Scale (MBI-GS). The 16-item Maslach Burnout Inventory-General Survey (MBI-GS) was used to assess how the independent variables (gender, generational differences and working in a team vs. individually) would affect the dependent variable (burnout) (see Appendix B for a copy of the original MBI-GS) (Schaufeli et al., 1996). The MBI-GS subscales are Emotional Exhaustion (5-items), Cynicism (5-items) and lack of Professional Efficacy (6-items). The subscales were scored on a 7-point Likert scale based on how often or frequently the individual experiences the feeling ranging from 0 = never to 6 = daily (Leiter & Maslach, 1988; Maslach & Jackson, 1981; Maslach et al., 1997).

The MBI-GS manual has a scoring key which provides the directions on how to score each subscale. It was suggested that researchers report the average rating rather than the total. The average rating is calculated for each subscale by dividing the total score by the number items responded to (Exhaustion = 5 items, Cynicism = 5 items and Professional Efficacy = 6 items). The mean score is computed for each subscale because they are considered to be separate scores and are coded as low, moderate or high by using numerical cutoff points shown in the scoring key. The scoring average for each subscale are as follows: emotional exhaustion (EX)—low score (0-10), moderate score (11-15) and high score (16 or over); cynicism (CY)—low score (0-5), moderate score (6-10) and

high score (11 or over); professional efficacy (PE)—low score (0-23), moderate score (24-29) and high score (30 or over). Professional efficacy (PE) has to be interpreted in the opposite direction from EX and CY because it is actually lack of professional efficacy, so any significant results found would have to be reported as significant but in the wrong direction (Maslach et al., 1997).

The development of the MBI-GS was tested with workers from a multicultural base where the scale was tested on samples from Canada, Holland and Finland in their native languages (Maslach et al., 1997). The participants ($n = 4,741$) of the multicultural study came from various working backgrounds: civil servants, rural workers (Dutch), computer (Finnish), military, clerical, technology, nursing, management and psychiatrists (Canadian). The scale started with 28 items and then was scaled back to 24 items that met certain criteria for skewness and kurtosis. Following this, a series of regression analyses were also run and the scale was then again cut down to 16-items for the final survey. The strongest correlations were found between exhaustion and cynicism ($r = .44$ to $r = .61$) and the weakest were between exhaustion and professional efficacy ($r = -.04$ to $r = -.34$). The correlations between cynicism and professional efficacy ($r = -.38$ to $r = -.57$) were found to be slightly weaker than those between exhaustion and cynicism (Maslach et al., 1997).

Another study done by Maslach and colleagues (1997) used participant's written responses to validate the relationships of the three MBI-GS subscales. This sample used 853 workers from a tertiary care hospital where participants made written comments in addition to the survey. It was found that people who made comments about problems with the quality of care at the hospital scored higher in emotional exhaustion and

cynicism and lower in professional efficacy and the opposite held true for those who made positive remarks about management.

From the multicultural study conducted by Maslach and colleagues (1997), it was found the Dutch civil service sample was able to provide information regarding the stability coefficients of the three subscales of the MBI-GS at the one year interval: .65 (emotional exhaustion), .60 cynicism, and .67 (professional efficacy). These coefficients are similar to those found for the MBI-HSS designed for participants who provide care to clients in the human services field. This comparison confirms that people in a variety of occupations respond to the affects of exhaustion by distancing themselves psychologically from work. The MBI-GS has a broader scope and can be used to assess a full range of occupations (Maslach et al., 1997). The reliability of the MBI-GS was analyzed for the current study. The burnout score found from the combination of emotional exhaustion, cynicism, and professional efficacy had an adequate Cronbach's alpha ($\alpha = .76$).

Generational differences. To measure generational differences, participants were asked to select what range in years they were born (see Appendix A). To determine what generation each employee would fall under, the categories were as follows: Baby Boomers were born between 1946-1964 and would be 49 to 67 years of age, GenX workers were born between 1965-1981 and would be 32 to 48 years old and GenMe employees were born during 1982-1999 and would be 14 to 31 years of age based on the current year of 2013 (Gurosy et al., 2008; Twenge et al., 2010).

Working in a team vs. individually. The demographics survey was used to determine whether an employee works in a team or individually. Each department or section of a department was coded as being team-oriented or was considered to be

individually-based. The sheetmetal assembly department was the largest department represented in this study. The sheetmetal assembly department had four areas in which two were coded as team-oriented (doors and wings/spars) and the other two areas (bench top/sub-assembly and sealing) had employees who worked individually. Those employees in the shipping department were divided into two areas as shipping or receiving and each were coded as being team-oriented. The employees in machining, fabrication and composites/metal bond departments don't have separate areas and were coded as being individually-based.

Procedure

Permission was obtained from the university's Internal Review Board (IRB) to conduct the research after completing and submitting the proper paperwork (see Appendix C). A letter was also sent to the Human Resources Manager requesting permission to use the manufacturing employees for the current research study (see Appendix D). To make sure production of the entire shop floor was not interrupted by the survey, the researcher surveyed each section or department separately as follows: the four sections of sheetmetal assembly (bench top/sub-assembly, doors, wings/spars, and sealing), the two sections of shipping (shipping and receiving), fabrication, machining, and composites/metal bond. The researcher sent each manager an email asking them to send their employees to a pre-arranged break room and time for the survey.

Each participant was handed two copies of the informed consent form (see Appendix E), which was the first form of the survey and described the purpose of the study by emphasizing voluntary participation, guaranteeing absolute confidentiality, and indicating to participants that by completing the survey they were giving their consent to participate. The informed consent form also included contact information for the

researcher, the department for which she is completing her program and the IRB. Those who decided to participate were asked to sign one of the informed consent forms and fill out the short demographics survey along with the Maslach Burnout Inventory-General Scale (MBI-GS).

To ensure the surveys completed by each participant remained together, the researcher stapled the surveys and the signed informed consent together and also numbered the back of each piece of paper. The surveys took about five minutes to complete. At the end of the survey, participants were thanked and given a goody bag for their participation. The participants were asked to put their responses for the demographics and Maslach Burnout Inventory-General Scale surveys, along with the signed informed consent form, into the drop off box which was located inside the break room. The box was locked at all times and I was the only one who had access.

CHAPTER 3

RESULTS

The Maslach Burnout Inventory-General Survey (MBI-GS) completed in 1996 was designed to test those occupations outside of the human services field (Fitzpatrick & Wright, 1996). For the purpose of this study the MBI-GS was used instead of the original MBI due to the nature of the study. The researcher had planned to run a three-way (2X3X2) ANOVA with one independent variable as gender with two levels (male and female), the second as generational differences with three levels (Baby Boomers, GenX, and GenMe) and the third has two levels (whether employees work in a team vs. individually) for the entire study. The three-way ANOVA was going to be run three times, once with each of the three dependent variables (emotional exhaustion, cynicism and professional efficacy). However, after collecting the data for each participant's total scores on the MBI-GS survey for each subscale, it became apparent that none of the scores were scored very low, meaning the participants were not experiencing burnout.

As a result, the researcher decided it would be best to run different statistical testing for each of the hypotheses and exploratory analyses. An independent t-test was selected for both gender and teams vs. individuals because it was only comparing the means between two variables. The hypotheses for generations, marital status, and shift were analyzed using a one-way ANOVA because two or more means were being compared and to also reduce the risk of Type 1 error from occurring. Both tenure and coworker dependence were analyzed using a correlation to see if there was relationship among the burnout subscales.

Hypotheses 1a, 1b, and 2

Gender and burnout. Table 1 displays the means and standard deviations of the

Table 1

Summary of Means and Standard Deviations for Gender

Subscale	Men <i>n</i> = 90		Women <i>n</i> = 30		Sig.	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotional Exhaustion	2.62	1.52	2.30	1.50	.64	-0.12
Cynicism	2.10	1.36	2.13	1.39	.85	-0.19
Professional Efficacy	.94	.82	1.05	.98	.14	-0.59

p > .05

participant's ratings of emotional exhaustion, cynicism and professional efficacy.

Hypotheses 1a and 1b postulated that women's scores would be higher in emotional exhaustion and professional efficacy than men's scores. An independent t-test indicated there was not a significant difference between women's ($M = 2.30, SD = 1.50$) and men's scores ($M = 2.62, SD = 1.52$) in emotional exhaustion, $t(118) = -.12, p > .05$. There was also no significant difference found between the women's ($M = 1.05, SD = .98$) and men's scores ($M = .94, SD = .82$) for professional efficacy, $t(118) = -.59, p > .05$.

According to Table 1, Hypothesis 2 was also not supported, $t(118) = -.19, p > .050$, because men's scores ($M = 2.10, SD = 1.36$) in regards to cynicism were not higher than the women's scores ($M = 2.13, SD = 1.39$).

Hypotheses 3a, 3b, and 3c

Generational differences and burnout. It was hypothesized for 3a and 3b that both GenMe and GenX workers would experience higher levels of emotional exhaustion and cynicism than Boomers. According to Table 2, the means from the one-way analysis (ANOVA) for both GenMe ($M = 2.40, SD = 1.48$) and GenX ($M = 2.50, SD = 1.49$) workers were higher in emotional exhaustion than it was for Boomers ($M = 1.89, SD = 1.50$). Also, the means for GenMe ($M = 2.16, SD = 1.16$) and GenX ($M = 2.15, SD = 1.45$) workers were higher in cynicism than it was for the Boomers ($M = 1.98, SD = 1.37$). However, the analysis was not of statistical significance for either emotional exhaustion or cynicism, $p > .05$). Hypothesis 3c suggested GenMe and GenX workers would experience lower levels of professional efficacy than Boomers. Although the results for professional efficacy appears to be statistically significant ($F(2,117) = 4.26, p = .02$), it is in the wrong direction. Since professional efficacy is really lack of professional efficacy, the data had to be reported in the opposite direction of the results,

Table 2

ANOVA Burnout Subscales Comparison for GenMe, GenX, and Boomers

	Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
EX	Between Groups	2	3.83	4.68	2.10	.13
	Within Groups	117	266.39	2.23		
CY	Between Groups	2	5.86	.40	.21	.81
	Within Groups	117	213.74	1.87		
PE	Between Groups	2	.90	2.97	4.26	.02*
	Within Groups	117	86.58	.70		

* $p < .05$, but in the wrong direction. EX = emotional exhaustion, CY = cynicism and PE = professional efficacy

therefore making it non-significant. Additionally, there was no reason to run a post-hoc Tukey to find out whether there were any significant differences between the means of the three levels (Baby Boomers, GenX, and GenMe) because none of the results from hypothesis three were significant.

Hypotheses 4a, 4b, and 4c

Working in a team vs. individually and burnout. For Hypothesis 4a and 4b it was theorized that those employees who work in a team would experience higher levels of emotional exhaustion and cynicism than employees who work individually. According to Table 3, independent t-tests showed both hypotheses to be non-significant ($p > .05$), even though the team variable showed to have slightly more exhaustion ($t = -1.67$) than cynicism ($t = .67$). The t-test for emotional exhaustion $t(118) = -1.67$, $p > .05$, indicated there was not a significant difference between those who worked individually ($M = 2.03$, $SD = 1.55$) or in a team ($M = 2.48$, $SD = 1.46$). There was also no significant difference found between those who worked individually ($M = 2.00$, $SD = 1.27$) or in a team ($M = 2.17$, $SD = 1.43$) for cynicism $t(118) = .67$, $p > .05$. The last hypothesis, 4c, postulated that those who work in a team would experience higher levels of professional efficacy than employees who worked individually. Once again, there was no significant difference found for professional efficacy $t(118) = .12$, $p > .05$, between those who worked individually ($M = .98$, $SD = .76$) or in a team ($M = .96$, $SD = .93$).

Exploratory Analysis

The demographics survey asked several questions in addition to the MBI-GS to see if there would be any significant differences found between these variables and the subscales of burnout. The participants of the study were asked to indicate the following: status (single, married or divorced with or without children); tenure (0-2 years, 3-5 years,

Table 3

Summary of Means and Standard Deviations for Individuals vs. Teams

Subscale	Individual <i>n</i> = 54		Team <i>n</i> = 66		<i>Sig.</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotional Exhaustion	2.03	1.55	2.47	1.46	.39	-1.67
Cynicism	2.00	1.27	2.17	1.43	.23	-0.68
Professional Efficacy	.98	.76	.96	.93	.22	.11

p > .05

6-8 years, 9-11 years, 12-14 years or 15+ years); shift (1st, 2nd or 3rd) and asked the question regarding co-worker dependence, “What percentage of the time do you have to depend on other employees within your area to be able to complete your job? In regards to status, a post-hoc Tukey was run in addition to an ANOVA to see if there would be any differences found between the types of status and the three subscales of burnout.

Table 4 shows professional efficacy to be the only significant result for workers who were married without children ($p < .05$) and divorced without children ($p < .001$), but not for those who were single with children ($p > .05$). However, as previously stated, all results the present themselves as being statistically significant for professional efficacy need to be interpreted in the opposite direction of emotional exhaustion and cynicism, therefore the results are non-significant. Shown on Table 5, a one-way ANOVA for shift revealed there were no significant differences found among the participants who worked first shift ($n = 110$), second shift ($n = 8$) or third shift ($n = 2$) and for emotional exhaustion ($F(2,117) = .84, p > .05$), cynicism ($F(2,117) = 1.63, p > .05$) or professional efficacy ($F(2,117) = .61, p > .05$).

A correlation analysis was run for both tenure and coworker dependence.

According to Table 6, results indicated there was no significant difference between the relationship of tenure and the subscales of burnout, $p > .01$. The question regarding coworker dependence showed there was also no significant differences found among the burnout subscales, $p > .01$.

Table 4

ANOVA Tukey HSD Mean Differences, Standard Error, and Significance for Status

Subscale	Marital Status	Marital Status	Mean Diff.	Std. Error	Sig.	
EX	s w c	s w o c	-0.24	.64	1.00	
		m w c	-0.17	.44	1.00	
		m w o c	.27	.59	1.00	
		d w c	-0.48	.55	.95	
		d w o c	-0.58	.73	.97	
	s w o c	m w c	.07	.54	1.00	
		m w o c	.51	.67	.97	
		d w c	-0.24	.63	1.00	
		d w o c	-0.34	.80	1.00	
	m w c	m w o c	.44	.48	.94	
		d w c	-0.31	.43	.98	
		d w o c	-0.41	.65	.99	
	m w o c	d w c	-0.75	.58	.79	
		d w o c	-0.85	.76	.87	
	d w c	d w o c	-0.10	.73	1.00	
	CY	s w c	s w o c	-0.29	.57	1.00
			m w c	-0.46	.39	.85
			m w o c	-0.11	.53	1.00
d w c			-0.28	.49	.85	
d w o c			-1.09	.66	.56	
s w o c		m w c	-0.17	.49	1.00	
		m w o c	.18	.60	1.00	
		d w c	-0.28	.57	1.00	
		d w o c	-0.80	.72	.88	
m w c		m w o c	.35	.43	.96	
		d w c	-0.11	.38	1.00	

(Table 4 cont'd)

ANOVA Tukey HSD Mean Differences, Standard Error, and Significance for Status

		d wo c	-0.63	.58	.89
	m wo c	d w c	-0.46	.52	.95
		d wo c	-0.98	.68	.70
	d w c	d wo c	.53	.65	.97
PE	s w c	s wo c	-0.13	.33	1.00
		m w c	-0.26	.23	.86
		m wo c	-0.91*	.31	.04*
		d w c	-0.10	.29	1.00
		d wo c	-1.56*	.39	.00***
	s wo c	m w c	-0.13	.28	1.00
		m wo c	-0.78	.35	.23
		d w c	.02	.33	1.00
		d wo c	-1.43*	.42	.01
	m w c	m wo c	-0.65	.25	.11
		d w c	.16	.22	.98
		d wo c	-1.30*	.34	.00***
	m wo c	d w c	-0.81	.30	.09
		d wo c	-0.65	.40	.58
	d w c	d wo c	-1.46*	.38	.00***

*** $p < .001$, ** $p < .01$, * $p < .05$, but in wrong direction. EX = emotional exhaustion, CY

= cynicism, and PE = professional efficacy

s w c = single with children

s wo c = single without children

m w c = married with children

m wo c = married without children

d w c = divorced with children

d wo c = divorced without children

Table 5

ANOVA Burnout Subscales Comparison for 1st, 2nd and 3rd shifts

	Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
EX	Between Groups	2	3.83	1.92	.84	.43
	Within Groups	117	266.39	2.28		
CY	Between Groups	2	5.86	2.93	1.60	.21
	Within Groups	117	213.74	1.83		
PE	Between Groups	2	.90	.45	.61	.55
	Within Groups	117	86.58	.74		

$p > .05$

Table 6

Correlations Among and Descriptive Statistics for Tenure and Coworker Dependence

	Tenure	Co. Dep.	EX	CY	PE	Burnout
Tenure		.03	-0.09	-0.06	.00	-0.08
Co. Dep.			.13	.17	.02	.16
EX				.55**	-0.09	.80**
CY					.24**	.88**
PE						.39**

** $p < .01$, Co. Dep. = coworker dependence

CHAPTER 4

DISCUSSION

The purpose of this study was to examine how gender, generational differences, and whether working in a team versus individually would affect the three subscales of burnout: emotional exhaustion, cynicism, and professional efficacy. Results from the study failed to show statistical significance for any of the hypotheses presented. Before any analyses were run, the researcher could tell by looking at the individual scores for each subscale that there would probably be no significant results because most of the participant's scores were low for emotional exhaustion and cynicism and high for professional efficacy.

Surprisingly, no differences were found between men and women for any of the burnout subscales. This finding contradicts past research concerning women and how they experience more emotional exhaustion than men. Researchers Keene and Reynolds (2005) found that women are more vulnerable to emotional exhaustion than men because they work in addition to taking care of the household. Also, men have found to exhibit higher levels of cynicism than women due to protecting their masculinity where comparing their successes to other males (Schaufeli & Greenglass, 2001).

A possible reason there was no difference found between men and women regarding burnout may be that research rarely looks at working fathers as possibly having the same level of experience concerning work-family challenges as those reported by mothers (Hill, 2005). This new concept points to a new way of looking at how both men and women may experience or deal with balancing both work and family issues. Also, there were a low number of women who participated ($n = 30$) in the study compared to the number of men ($n = 90$), which caused the statistical power to be reduced. This result

is not surprising because males tend to be the dominate gender in the field of manufacturing.

The results for generational differences were found to be non-significant for all three hypotheses which proposed GenMe and GenX workers would experience higher levels of emotional exhaustion and cynicism and lower levels of professional efficacy than Boomers. Smola and Sutton (2002) research suggested that work values are impacted more by life events and socialization and less by age and maturity. One part of their study compared 27-40 year olds and 41-65 year old in 1974 and 1999 where it was found that both age groups in 1999 felt it was less important to feel a sense of pride in one's work. Also, both groups from 1999 were less likely to believe that work should be the center of one's life, pointing to the trend that work has become less of a priority than it was in 1974. Another possibility as to why the results were not of statistical significance may be due to the fact that more than 75% of the employees had been employed for less than two years and many had been laid off for several months prior to being hired. As a result, the workers might have been still adjusting to their current roles within the company and were appreciative for having a job.

Unfortunately, the last of the hypotheses for 4a, 4b and 4c all turned out to be non-significant as well. It was theorized that employees who worked in a team would experience higher levels of emotional exhaustion, cynicism, and professional efficacy than those who worked individually. Lower levels of burnout levels have been associated with supportive peer relationships within a team. Team members who have high quality interactions have been found to have less team-member burnout (Ellroy et al., 2001). A longitudinal study done at a motor manufacturing plant which focused on the implementation of self-managing teams concluded the one team who had a harmonious

working relationship before, during and after formation had the most reduction in their defective rate (Banker et al., 2001). Employees who reported lower levels of burnout have also reported they experience an opportunity to use their professional skills, have autonomy to do their jobs and are given positive feedback (Ellroy et al., 2001). Being in a small manufacturing facility, the current sample may have more of an opportunity to experience more of the positives of being part of team. Employees are able to receive constant feedback from their coworkers and/or supervisors on a daily basis, where a worker in a big manufacturing plant of more than 1,000 may not see their supervisor but maybe once a month.

A correlation analysis on both tenure and coworker dependence did not result in any statistical significance among any of the burnout subscales, $p > .01$. In regards to coworker dependence, the question asked was, "What percentage of the time do you have to depend on other employees within your area to be able to complete your job?" This question did not align well with the departments or areas the researcher coded as being team-oriented or individual. It could have to do with the way a participant interpreted the question. The researcher was asked by several participants what the question was really asking. For example, a worker would not be able to complete a task if a part from another department was not available. This would prevent the worker from completing a task on time because of another department, not necessarily due to something within their own department or area. Also, those that were considered to be team-oriented departments or sections might have thought their own personal tasks would not be affected by others in their area.

There has been very little scientific research done comparing tenure or years of employment and burnout. There were no differences found among the amount of years

the participants had worked for the company. One study done by Fisher (2011) examined the differences in burnout levels between novice teachers, those who taught less than five years and experienced teachers who taught more than five years. It was found that novice teachers had higher levels of burnout compared to experience teachers ($F = 3.95, p < .05$). However, this finding is hard to compare to the current study because the majority of the participants had been employed for less than two years and had previously worked in aerospace, therefore they were not new to the field and had the knowledge and skills needed for their position. Also, it is difficult to compare manufacturing workers and teachers because they hold very different types of roles.

Professional efficacy was the only significant factor for workers who were married without children ($p < .05$) and divorced without children ($p < .001$), but it was in the wrong direction. It may be that workers of either group may not have anyone at home, whether it be a significant other or children to share their lives. The effects of this would spill over into their work lives, making their jobs seem like more of a means to an end.

The postal office study by Wittmer and Martin (2010) found those who worked the night shift ($M = 3.20$) experienced higher levels of emotional exhaustion compared to those who worked the evening ($M = 2.79$) or the day ($M = 2.45$). The current study did not find any significant differences between first, second or third shift. These non-significant results may have been due to the relatively small sample size of both the second and third shifts.

Limitations

This study attempted to fill the gap in current scientific literature on burnout by surveying manufacturing employees. However, there were several limitations involved with using this sample. First, the results from the current study cannot be generalized to

other manufacturing populations because the participants were not randomly selected. Second, the sample size could have been expanded by including office staff who also help in the process of moving the parts from start to finish. This would have increased the amount that could have been surveyed to over 300 employees. Third, the research survey was conducted a month after a majority of the sheetmetal assembly sections had been working twelve hour days, seven days a week, so it's possible the participant's level of burnout had reduced significantly. Lastly, the survey was conducted while production was still being conducted on the shop floor. This might have distracted employees because they might have been thinking about what they needed to get done on the job and not completely focusing on the survey.

Conclusions and Future Research

Since the manufacturing environment has been vastly under researched concerning burnout, there were few other studies like the current one for a comparison. This might have helped in knowing what questions needed to be asked concerning gender, generations, team setting or additional exploratory questions. The sample for this study experienced a number of positive changes in the last couple of years. The company grew to over twice its size in one year and has continued to take on new business every couple of months. From just these two reasons alone, the employees might have felt a sense of accomplishment and pride and would more than likely not feel "burnt out."

The results of this study will benefit future researchers who are interested in studying occupations where employees do not have direct contact with the public or take care of clients. Future research on burnout would benefit from comparing the same employees burnout levels during a period where the employees are working mandatory overtime of 12 hour days, seven days a week. The current study was conducted a few

months after a period of mandatory overtime and the employees may not have been as overwhelmed with working long hours. Since the current organization in this study had experienced growth and was doing well, it would be interesting to see how much the employees burnout levels would change if the company were to start layoffs. Past research has shown that once companies start to downsize, employees tend to feel the pressure and experience the classic symptoms of burnout (Schaufeli & Greenglass, 2001).

References

- Angerer, J. M. (2003). Job burnout. *Journal of Employment Counseling, 40*, 98-107.
- Bakker, A., Van Emmerik, H., & Euwema, M. (2006). Crossover of burnout and engagement in work teams. *Work and Organizations, 33*(4), 464-489. doi: 10.1177/0730888406291310
- Banker, R. D., Field, J. M., & Sinha, K. K. (2001). Work-team implementation and trajectories of manufacturing quality: A longitudinal field of study. *Manufacturing & Service Operations Management, 3*, 25-42.
- Becker, P. E., & Moen, P. (1999). Scaling back: Dual-earner couples' work-family strategies. *Journal of Marriage and the Family, 61*(4), 995-1007.
- Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of "people work." *Journal of Vocational Behavior, 60*, 17-39. doi:10.1006/jvbe.2001.1815
- Cherniss, C. (1992). Long-term consequences of burnout: An exploratory study. *Journal of Organizational Behavior, 13*, 1-11.
- Cordes, C. L., & Dougherty, T. W. (1993). A review and integration of research on job burnout. *The Academy of Management Review, 18*, 621-656.
- Densten, I. (2001). Re-thinking burnout. *Journal of Organizational Behavior, 22*, 833-842.
- Ellroy, D., Terpening, W., & Kohls, J. (2001). A causal model of burnout among self-managed work team members. *The Journal of Psychology, 135*(3), 321-334.
- Fisher, M. H. (2011). Factors influencing stress, burnout, and retention of secondary teachers. *Current Issues in Education, 14*(1), 1-37.

- Fitzpatrick, R., & Wright, C. R. (2001). [Review of the Maslach Burnout Inventory]. In the 14th Mental Measurements Yearbook. Palo Alto, CPP Inc.
- Golembiewski, R. T. (1996). Public-sector change and burnout: Phases as antecedents, limiting condition, and common consequence. *Public Productivity & Management Review*, 20, 59-69.
- Greiner, G. M. (1992). The phase versus traditional approach to burnout diagnosis. *Group & Organizational Management*, 17(4), 370-379.
- Gursoy, D., Maier, T. A., & Chi, C. G. (2008). Generational differences: An examination of work values and generational gaps in the hospitality workforce. *International Journal of Hospitality Management*, 27, 448-458. doi: 10.1016/j.ijhm.2007.11.002
- Guzzo, R. A., & Dickson, M. W. (1996). Team in organizations: Recent research on performance and effectiveness. *Annual Review Psychology*, 47, 308-338.
- Hill, J. E. (2005). Work-family facilitation and conflict, working fathers and mothers, work-family stressors and support. *Journal of Family Issues*, 26, 793-815. doi: 10.1177/0192513X05277542
- Hsieh, Y., & Hsieh, A. (2003). Does job standardization increase job burnout? *International Journal of Manpower*, 24, 590-614. doi: 10.1108/014377720310491107
- Kalliath, T. J. (2001). Is the path to burnout and turnover paved a lack of supervisory? A structural equations test. *New Zealand Journal of Psychology*, 30, 72-79.
- Keene, J. R., & Reynolds, J. R. (2005). The job costs of family demands: Gender differences in negative family-to-work spillover. *Journal of Family Issues*, 26(5), 275-299. doi: 10.1177/0192513X04270219

- Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81*, 123-133.
- Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. *Journal of Organizational Behavior, 9*, 297-308.
- Maslach, C., & Jackson, S. E. (1981). The measurement of burnout experienced. *Journal of Occupational Behaviour, 2*, 99-113.
- Maslach, C., Jackson, S. E., & Leiter, M.P. (1996). Maslach Burnout Inventory: Third Edition. In Zalaquett, C. P., & Wood, R. J. (Eds). *Evaluating Stress: A book of resources (p.191-207)*. Lanham, Md., & London: The Scarecrow Press, Inc.
- Maslach, C., & Leiter, M. P., (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology, 93*(3), 498-512. doi: 10.1037/0021-9010.93.3.498
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397-422.
- McGuire, P. A. (1999). Worker stress and health reaching critical point. *APA Monitor, 30*(5), 1, 27.
- Pretty, G. M., McCarthy, M. E., & Cantano, V. M. (1992). Psychological environments and burnout: Gender considerations within the corporation. *Journal of Organizational Behavior, 13*, 701-711.
- Salanova, M., Llorens, S., Garcia-Renedo, M., Burriel, R., & Bresc, E. (2005). Toward a four-dimensional model of burnout: A multigroup factor-analytic study including depersonalization and cynicism. *Educational and Psychological Measurement, 65*(5), 901-913. doi: 10.1177/0013166405275662

- Schaufeli, W. B., & Greenglass, E. R. (2001). Introduction to special issues on burnout and health. *Psychology and Health, 16*, 501-510.
- Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). *Maslach Burnout Inventory –General Survey* (MBI-GS). In C. Maslach, S. E. Jackson, & M. P. Leiter, MBI Manual (3rd ed). Mountain View, CA: CPP, Inc.
- Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory—General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organizational Psychology, 73*, 53-66.
- Smola, K. W., & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behavior, 23*, 363-382. doi: 10.1002/job.147
- Survey: Most U.S. workers feel burnout. (2006, May 3). *UPI News Track*. Retrieved from: http://accessmylibrary.com/coms2/summary_0286-15093548_ITM
- Tuckman, B.W. (1965). Developmental sequence in small groups. *Psychological Bulletin, 63*(4), 384-399.
- Twenge, J. M. Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management, 36*(5), 1117-1142. doi: 10.1177/014920630935224
- Williams, J. C., & Boushey, H. (2010). The three faces of work-family conflict: The poor, the professionals, and the missing middle. *Work Life Law*. Retrieved from: <http://www.americanprogress.org/wpcontent/uploads/issues/2010/01/pdf/threefaces.pdf>

Wittmer, J., & Martin, J. (2010). Emotional exhaustion among employees without social or client contact: The key role of nonstandard work schedules. *Journal of Business Psychology, 25*(4), 607-623. doi: 10.1007/s10869-009-9153-x

Zani, B., & Pietrantonio, L. (2001). Gender differences in burnout, empowerment and somatic symptoms among health professionals: Moderators and mediators. *Equal Opportunities International, 20*, 39-49.

Appendix A
Demographics Questionnaire

Please mark, circle or fill in the appropriate response for each question.

1. Gender: Male _____ Female _____

2. What year were you born?

a) 1946-1964 b) 1965-1981 c) 1982-1999

3. Status

Single with children _____ Single without children _____

Married with children _____ Married without children _____

Divorced with children _____ Divorced without children _____

4. How many years have you worked for the company?

a) 0-2 years b) 3-5 years c) 6-8 years d) 9-11 years e) 12-14 years f) 15+years

5. Department (*Please indicate with a check mark what section you currently work for*).

Sheetmetal Assembly

Doors _____

Sealing _____

Wings/Spars _____

Bench Top/Sub-assembly _____

Shipping/Receiving

Shipping _____

Receiving _____

Composites/Metal Bond

Composites _____

Machining

Fadal _____

Lathe _____

DMG/DMF _____

Toyoda/MAG _____

Deburr

Deburr _____

Fabrication

Fabrication _____

6. What shift do you work?

1st _____ 2nd _____ 3rd _____ Weekend _____

7. What percentage of the time do you have to depend on other employees within your area to be able to complete your job? *Please write in a number between (0 - 100%).*

Appendix B

Maslach Burnout Inventory-General Survey

MBI-General Survey

Wilmar B. Schaufeli, Michael P. Leiter, Christina Maslach & Susan E. Jackson

The purpose of this survey is to discover how staff members view their job, and their reactions to their work.

Instructions: On the following page are 16 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about *your* job. If you have *never* had this feeling, write the number "0" (zero) in the space before the statement. If you have had this feeling, indicate *how* often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

Example:

How often:	0	1	2	3	4	5	6
	Never	A few times a year	Once a month or less	A few times a month	Once a week	A few times a week or less	Every day

**How often
0-6**

Statement:

1. _____ I feel depressed at work.

If you never feel depressed at work, you would write the number "0" (zero) under the heading "How Often." If you feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week but not daily), you would write the number "5."

MBI-General Survey

How often:	0	1	2	3	4	5	6
	Never	A few times a year	Once a month or less	A few times a month	Once a week	A few times a week or less	Every day

How often
0-6

Statements:

1. _____ I feel emotionally drained from my work.
2. _____ I feel used up at the end of the workday.
3. _____ I feel tired when I get up in the morning and have to face another day on the job.
4. _____ Working all day is really a strain for me.
5. _____ I can effectively solve the problems that arise in my work.
6. _____ I feel burned out from my work.
7. _____ I feel I am making an effective contribution to what this organization does.
8. _____ I've become less interested in my work since I started this job.
9. _____ I have become less enthusiastic about my work.
10. _____ In my opinion, I am good at my job.
11. _____ I feel exhilarated when I accomplish something at work.
12. _____ I have accomplished many worthwhile things in this job.
13. _____ I just want to do my job and not be bothered.
14. _____ I have become more skeptical about whether my work contributes anything.
15. _____ I doubt the significance of my work.
16. _____ At my work, I feel confident that I am effective at getting things done.

(Administrative use only)

EX: _____ cat: _____ CY: _____ cat: _____ PE: _____ cat: _____

Appendix C

Internal Review Board Approval Letter



February 1, 2013

Amanda McCarthy
3408 E Waterman St
Wichita, KS 67218

Dear Ms. McCarthy:

Your application for approval to use human subjects has been reviewed. I am pleased to inform you that your application was approved and you may begin your research as outlined in your application materials. Please reference the protocol number below when corresponding about this research study.

Title:	An Examination of How Gender, Generational Differences and Team Setting Will Affect Burnout Subscales
Protocol ID Number:	13053
Type of Review:	Expedited
Time Period:	01/15/2013 - 08/30/2013

If it is necessary to conduct research with subjects past this expiration date, it will be necessary to submit a request for a time extension. If the time period is longer than one year, you must submit an annual update. If there are any modifications to the original approved protocol, such as changes in survey instruments, changes in procedures, or changes to possible risks to subjects, you must submit a request for approval for modifications. The above requests should be submitted on the form Request for Time Extension, Annual Update, or Modification to Research Protocol. This form is available at www.emporia.edu/research/irb.html.

Requests for extensions should be submitted at least 30 days before the expiration date. Annual updates should be submitted within 30 days after each 12-month period. Modifications should be submitted as soon as it becomes evident that changes have occurred or will need to be made.

On behalf of the Institutional Review Board, I wish you success with your research project. If I can help you in any way, do not hesitate to contact me.

Sincerely,

Michael Butler
Chair, Institutional Review Board

pf

cc: Dr. Brian Schrader

Appendix D

Letter to Human Resources Manager

November 30, 2012

Dear Mr. Eric Shaffer,

I am asking for your permission to use your 200 floor employees who directly work with the production of the airplane parts to participate in a research project to be conducted within your plant. The purpose of this study is to examine how gender, generational differences and whether working in a team vs. individually will affect burnout in manufacturing employees. The results of this research may give you a better understanding about how much your current employees are experiencing burnout. It will also contribute to the lack of research on how workers outside the human service occupations experience burnout.

I assure you that your employees' participation is voluntary. The information obtained from each of the participants as well as the name of the research site will be confidential. Only I will have access to the informed consent forms. If you have any further questions or comments please contact me at (620) 794-8085.

Respectfully,

Amanda L. McCarthy
Emporia Graduate Student

Appendix E
Informed Consent Document

Participation Consent Form

Read this consent form. If you have any questions ask the experimenter and she will answer the question.

You are invited to participate in a study that will examine manufacturing employee's job attitudes. You will be asked to fill out a short demographics survey and a 16-item work related questionnaire. This study should take no longer than 15 minutes.

Information obtained in this study will be identified only by basic demographic information (gender, range of age, status, years worked, department, and shift). Please do not write your name on any of the questionnaires.

Your participation in this study is completely voluntary. Should you wish to terminate your participation, you are welcome to do so at any point in the study. There is no risk or discomfort involved in completing the study.

If you have any questions or comments about this study, feel free to ask the experimenter. If you have any additional questions, please contact Amanda L. McCarthy, 620-794-8085.

Thank you for your participation.

I, _____, have read the above information and have decided to participate.
(please print name)

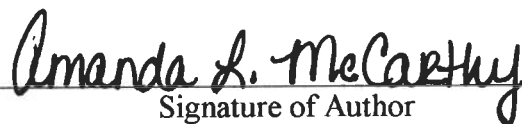
I understand that my participation is voluntary and that I may withdraw at any time without prejudice after signing this form should I choose to discontinue participation in this study.

(signature of participant)

(date)

**THIS PROJECT HAS BEEN REVIEWED BY THE EMPORIA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD FOR TREATMENT OF HUMAN SUBJECTS.**

I, Amanda L. McCarthy, hereby submit this thesis/report to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, digitizing or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author. I also agree to permit the Graduate School at Emporia State University to digitize and place this thesis in the ESU institutional repository.



Signature of Author

July 29, 2013

Date

An Examination of How Gender, Generational Differences, and Team Setting Will Affect Burnout Subscales

Title of Thesis

Signature of Graduate Office Staff Member

Date Received