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ABSTRACT

Men have traditionally dominated the electrician occupation. In this article the authors study the attitudes and beliefs of men currently working with women as electricians and the role that they believe that women will occupy in the future in the electrical occupation. Semi-structured interviews were conducted with 12 men employed as electricians in New York City. Thematic analyses found that men have concerns with women who work as electricians, including that women are weaker in strength than men. Men still believe that men dominate the electrical industry. The authors also found that men feel comfortable and safe with those women who are working as electricians. Also, men believe that the electrical work force will change in the future with more women being employed. Managers and human resources professionals can use these findings to help implement any necessary educational training. They also can monitor compliance with corporate policy and any relevant laws to ensure that the electrician workforce is a non-discriminatory workplace.

INTRODUCTION

In the United States in 2008, there were approximately 694,000 individuals employed as electricians. Approximately 65% of electricians worked for electrical contracting firms. A small percentage of just 9% of electricians were self-employed. The typical training for an electrician involves four years in an apprenticeship program. A typical apprenticeship program includes both formal classes and also practical work training (Bureau of Labor Statistics, 2009).

An experienced electrical worker has acquired skills of reading technical diagrams and using various tools including more sophisticated tools such as ammeters, conduit benders, and harmonic testers (Bureau of Labor Statistics, 2009). The typical electrical worker works with live circuits (Parson, 2005). Although electrical workers have formal training and practical experience, this occupation is the most dangerous as compared to other occupations within the utility sector (i.e., water, gas, and sewer). For example, electricians even with their experience had 47% of the electrical fatalities in the construction industry (Brenner & Cawley, 2009).

The electrician occupation is strongly dominated by men with a very small percentage of women employed as electricians (Hegewisch, Liepmann, Hayes, & Hartmann, 2010). In general, occupations that are often dominated by one sex group are not fully explained by just a sex-specific trait requirement such as physical strength. There is also the expectation from both the employer and employee about the particular abilities and traits needed to successfully perform well on the job (Miller & Hayward, 2006). Although there are laws in the United States with regard to fair workplace practices, sexism and negative reaction towards women especially in male-dominated workplace settings still exists (Ciccocioppo, 2009). Also, there are still disparities in many occupations with women receiving lower wages than men for similar work (Ortiz & Roscigno, 2009).

Women work in a large portion of different types of blue-collar occupations (Griffin-Blake, Tucker, & Liburd, 2006). Blue-collar work is typically divided into four categories of construction, installation/maintenance and repair (which includes electrical workers), production workers, and transportation operatives (Sum, Khatiwada, McLaughlin & Palma, 2010). In general for blue-collar occupations, men receive higher compensation than women due to being employed in the more skilled type blue-collar jobs (O'Farrell, 1999). Although there are laws and other programs that attempt to eliminate occupational disparities and discrimination for women, this has not typically benefited women in the traditional male-dominated blue-collar occupations. Women in these positions can experience sexual harassment, sexual discrimination, and an overall stressful atmosphere at work (Ericksen & Schultheiss, 2009).

Women and Blue-Collar Literature Review

A recent analysis found that women have increased their presence in many male-dominated jobs requiring professional degrees. However, for many working-class occupations including those traditionally known as blue-collar jobs, this has not occurred. For working-class occupations, gender segregation is similar to what occurred in 1950 (England, 2010). One author suggests that for male-dominated blue-collar jobs, there is a lack of training and/or educational opportunities for women to enter these blue-collar jobs. One example cited is that many unions control the apprenticeship training process. The unions typically reserve these apprenticeships for sons of their union members (Bergmann, 2011).

There are a few studies on sexual harassment among women working in blue-collar jobs. One study of workers in a manufacturing plant compared women in white-collar jobs to those of women in blue-collar jobs. Women in blue-collar jobs were more likely to believe a number of behaviors in the workplace were acceptable while women in white-collar jobs believed that it was sexual harassment. For example, the topic of “a supervisor asking an employee to have sex with the promise that this will help on the job” was interpreted by 90% of white-collar women as always sexual harassment while only 56% of blue-collar women believed that it was always sexual harassment. Also, 22% of blue-collar women believed that it was never sexual harassment while 0% of white-collar women believed that it was never sexual harassment (Icenogle, Eagle, Ahmad, & Hanks, 2002).

Another study of members of a small blue-collar manufacturing organization found gender differences for certain sexual-harassment behaviors and no differences for other sexual-harassment behaviors. Women reported greater occurrence than men of 1) staring or leering, 2) sexually suggestive comments or jokes, and 3) pressure for dates. There were no gender differences reported for 1) touching, patting, or fondling, 2) persistent invitations or requests for sex, 3) showing sexually explicit material, 4) unnecessary familiarity, 5) sexual assault, and 6) sexual coercion. Also, there were no significant gender differences for scales measuring attitudes toward sexual harassment and perceptions of sexual harassment (McCabe, & Hardman, 2005).

Another study of workers in the blue-collar building trades found that women used different informal approaches to respond to sexual harassment in the workplace. One common approach consisted of relief measures that were used to thwart or circumvent this harassment. Another common approach consisted of more direct requests to the offending person to change his behavior (Denissen, 2010).

Besides the topic of sexual harassment among women working in blue-collar jobs, there are a few other studies on varying topics. One study compared women working in blue-collar occupations, women in-training studying to enter blue-collar occupations, and those working in clerical jobs. There were no differences between the groups with regard to self-efficacy and assertiveness. However, those in-training had greater problem-focused coping skills than the other two groups. Also, most of those women currently employed in blue-collar jobs reported sex-related stressors such as initially not being respected by their men coworkers until they had proved themselves after some time on the job (Nash & Chrisler, 2000).

Another study was conducted with blue-collar civilian employees of the Navy. There were significant differences in attitudes between men and women. Supervisors reported that women were less likely than men to develop into good workers after 3-6 months training and also that women were less likely to be assigned to hazardous duties. Men coworkers reported that women were less likely than men to be asked to help a coworker with hazardous duties, to be able to lift a 40-50 pound object, less likely to object to shift work with coworkers, and less likely to object working irregular hours with coworkers. Men coworkers reported that women were more likely than men to know when they need more information and also better able to identify tools needed. Unlike by supervisors, men coworkers did not report any differences between men and women with regard to developing into good workers after 3-6 months training. Women were not included in this study since at that time there were very few (if any) women civilian employees employed (Palmer & Lee, 1990).

Another study of blue-collar union workers from the manufacturing and service sectors found that there were no differences between men and women with regard to filing grievances. However, when considering specific situations of either abusive supervision or hazardous working conditions, there was a significant interaction effect by gender. As the abusive supervision or the hazardous working conditions increased, women were more likely than men to file a grievance (Bamberger, Kohn, & Nahum-Shani, 2008).

To our knowledge, there is only one reported scholarly work about women in the electrical industry. This is a book that includes historical information and also some interviews, many of which were done in the 1980's and 1990's (Moccio, 2009). Some findings related to gender include that there is overt discrimination against women, management avoids addressing women's concerns about sexual harassment, and that there are financial reasons of not wanting to hire women.

We believe that the negative approach cited above (Moccio, 2009) in the electrical industry towards women may have changed in the past decade. Also, we ask additional questions that were not addressed in the above book

(Moccio, 2009) including perception of men dominating electrical work and also whether men feel comfortable or safe working in the electrical environment with women. Our questions are on the two broad areas of: 1) workplace performance and gender, and 2) gender differences in the workplace. We believe that a current understanding of these topics can help managers and human resource professionals better address any possible concerns to allow women to effectively be employed and work in a safe and tolerant environment.

METHOD

Participants

Participants were 12 men employed as electricians in New York City. The sample was obtained through a snowball sample. Initially, participants were identified as employed in a major electrical company in New York City. These participants recommended other participants.

Procedures

The respondents were recruited off the streets of New York City at different job sites in lower Manhattan. The semi-structured interviews ranged in length from 10 to 15 minutes. All interviews were tape recorded and transcribed afterwards to allow for more formal analysis.

The interview included closed-ended questions asking about demographics (age, race/ethnicity), aspects of women in the electrician workplace [How many women do you know that do this work?, and 2) How many women do you know that currently work with you?] reasons for interest to become an electrician [How did you get interested in electrical work and where did you receive training?], first job as electrician [How did you get interested in electrical work and where did you receive training?], and women in training classes [1) Were there ever women trainers present in any of your training classes?, and 2) Were there women [students] in training alongside of you?

The open-ended questions addressed two broad areas of 1) workplace performance and gender and 2) gender differences in the workplace. The questions are listed below. All interviews were performed in either 2009 or 2010.

Questions

Work performance and gender:

1. Do you think the tasks make it difficult for women to participate in it? If yes, why?
2. It is said that men dominate electrical work. Do you think there is validity to this claim? Is this something you agree with? Why or why not?

3. Do you think the nature of the work requires masculine qualities? If yes, why?

Gender difference in the workplace:

4. Would you feel comfortable or safe working in this environment with women? Why?
5. How many women do you know that do this type of work and that currently work on your job with you? Why do you think this number is so low?
6. Do you think the number of women in electrical work will increase in the future? What is the reason?

Analysis

The qualitative analytic approach used to analyze the data was thematic analysis. Thematic analysis involves classifying the content with codes, analyzing for semantic themes, and finally reviewing the obtained themes so that the obtained themes relate to the coded content (Braun & Clarke, 2006). Prior to the analysis, the two coders met to ensure that their analytic style and approach were coding using similar style. The two coders had different research experience backgrounds. One coder had 11 years of experience conducting research while the other coder had 1 year of experience conducting research. Next, all transcribed content obtained from the taped interviews were carefully read, identified, and then independently coded using line-by-line coding by the two authors. Weekly meetings were used to allow the coders to discuss content and themes for their coded data. Any uncommon codes or themes that were disagreed upon were reviewed and discussed. After this iterative approach, there was 100% consensus on all the coded content and themes.

RESULTS

As shown in Table One below, the mean age of the electrical workers was slightly over 30 years. With regard to race/ethnicity, Italians were the majority at more than 40% while the category of African American and German were tied at 1 person each representing 8% each. Both women who do electrical work and also women currently working with you were on average slightly above 4 women. None of the electrical workers were interested in electrical work in high school, while friends, family, and the military were sources of interest in pursuing this occupation for at least more than one-quarter of the sample. Slightly below half reported that it's their first job doing electrical work. Slightly above half reported that they had women trainers in their training classes and also slightly above half reported attending training classes where women were present.

Table One: Descriptive statistics of the sample of 12 electricians

Variable	M (SD)	% (Frequency)
Age (years)	31.17 (10.82)	
Race/Ethnicity		
Irish		25.0% (3)
Italian		41.7% (5)
Jamaican		16.7% (2)
African American		8.3% (1)
German		8.3% (1)
Women you know that do this work	4.67 (4.33)	
Women you know currently work with you	4.75 (4.39)	
Interest in electrical work (High School)		
No		100% (12)
Yes		0% (0)
Interest in electrical work (Friend)		
No		66.7% (8)
Yes		33.3% (4)
Interest in electrical work (Family)		
No		66.7% (8)
Yes		33.3% (4)
Interest in electrical work (Military)		
No		75.0% (9)
Yes		25.0% (3)
First job doing electrical work		
No		58.3% (7)
Yes		41.7% (5)
Women trainers present in training classes		
No		41.7% (5)
Yes		58.3% (7)
Women students in training classes		
No		41.7% (5)
Yes		58.3% (7)

Note: M=mean, SD=standard deviation

Table Two: Themes for tasks make it difficult for women to participate as electricians

Theme	Number
Challenging for both men and women	3
Women not “real” electricians	2
Women weaker	2
Ambivalent about women’s role	1
Not difficult	1

Note: 3 of the 12 participants chose not to answer this question

As shown in Table Two above, there were 5 different themes with regard to the question of “Do you think the tasks make it difficult for women to participate in it?” One theme was that being an electrician is challenging for both men and women. For example, one participant said, “It’s tough, it’s a physical job. So it’s hard for us so I know it’s hard for them.” Another theme was that women were not “real” electricians. For example, one participant said, “Ok in the experience that I’ve seen personally I, she, it just they, she (sic) takes certain steps around what she has to do and it’s not getting done the right way it’s supposed to be getting done.” Another theme was that women were weaker. For example, one participant said that, “Women are weaker.” Another theme was ambivalence in regards to women’s roles. For example, one participant said:

“Ummm, depends on the woman and it also depends on the man. If you are someone who is not physically strong, it’s tough. But there is nothing stopping anyone from physically doing it. If the average woman you pulled off the street, you ask them to pick up, ya know a 100 pound piece of equipment, they may have a problem with it. More so maybe than the man, but there’s nothing stopping them from doing it. If they could, ya know practice and train at it.”

The last theme was that the tasks were not difficult for women to participate in electrical work. This participant did not give a reason for his opinion. Also, three participants did not give a response.

Table Three: Themes for men dominate electrical work

Theme	Number
Man's job	5
Statistics to prove men dominate	2
No, there are women	2
Women scared of job	1
Common sense	1

Note: 1 of the 12 participants chose not to answer this question

As shown in Table Three above, there were 5 different themes with regard to the question, "Do you agree that men dominate electrical work, why or why not?" One theme was that it's a man's job. For example, one participant said, "This is definitely like ah, I'd say a man's job in a sense. Because of everything you do. Because of the conditions outside the things associated with it also." Another example for the same theme is when one participant said, "I, I, I (sic) believe it's a male-dominated field. I don't necessarily agree with it though. Because my job where I am, people work in my department are really good in my job. But the opportunities are there from more women. I would like to see more women, but the ones that are there are great at the job. They have courage. And umm, I don't know if, if (sic) women are intimidated by the job." Another theme was that there are statistics to prove men dominate electrical work. For example, one participant said, "Yes there's definitely, uh it's definitely true. Uh I'd say about, somewhere 90 percent or higher of people I work with are men." Another theme was that women are scared of the job. For example, one participant said, "I think umm maybe women a little bit scared. I don't know that's what I really think cause people don't understand electrical and it can be dangerous if you don't understand." Another theme was that it's common sense that men dominate electrical work. For example, one participant said, "It's just common sense. You see more men in the field. There are certain departments women can work in. Down here in the field it takes a toll on your body. We are working in the man hole, servicing boxes, manholes takes a toll on your body physically. You splicing for so many years, it takes a toll on your body. It's a physical job, ya know." Another theme disagreed and believed that there are women in electrical work. For example, one participant said, "Dominate has a connotation that we try and keep it for ourselves. I don't think we really go out of our way to hold on to it. This particular company is EEO friendly. They hire in addition to minorities but they also do hire a lot of women. They are very conscientious to women. Some of the older gentlemen may take offense to that." Also, one participant did not give a response.

Table Four: Themes for nature of electrical work requires masculine qualities

Theme	Number
Mannish traits	3
Work is physically challenging	3
Masculine and feminine qualities	2
Women can't handle dirty work	2
Knowledge of specific techniques	2

As shown in Table Four above, there were 5 different themes with regard to the question of “Do you think the nature of the work requires masculine qualities?” One theme was that you must possess mannish traits to do the work. For example, one participant said, “Definitely I’d say the few women that I have seen doing this work they are not very womanly, exactly they are more on the masculine side.” Another theme was that the work is physically challenging. For example, one participant said, “Yeah I do, for this job, yeah. It’s pretty physical on your body. I’m like in certain. (sic) I’m not saying that you need, that guys are stronger than girls or whatever. But you need certain types of muscles to move some of the cable around.” Another theme was that both masculine and feminine qualities were required to do the work. For example, one participant said,

“Uhhh, I don’t think...ya know. It has a negative connotation to it to say that strength has a masculine quality. I wouldn’t necessarily say that. There is a certain element where you do need some physical ah, strength to it but a lot of it is also mental. You do have to figure, in a sense you’re project planner. You have to figure how am I going to do something weeks in advance and figure out how it’s going to work. So ya know, it’s not necessarily, some may say it’s more a feminine quality multi-tasking, and forethought and whatnot so I don’t think it has any (sic), any necessarily masculine or feminine qualities.”

Another theme was that women can’t handle dirty work. For example, one participant said,

“No, not totally, well ah there’s certain uh, not to sound sexist or anything, but I started off reading meters and some of these basements can be real nasty. Rats, waterbugs, (sic) same thing with manholes you come across that as well. And a lot of women let’s be honest can not handle that, or the smell or just the dust. Or whatever so, and I, me (sic) personally, I don’t see nothing wrong with a woman doing what we are doing. But the same thing with a guy there are one or two guys who can’t stomach the things that we see, but mostly women can’t handle this. The physical part um, it’s, I’m not saying women can’t do it, but again, most, most (sic) likely, uh,

you'll see less women doing what we are doing because of the physical. Some women tend to be a little more stronger than most women."

The last theme was that the knowledge of specific techniques must be followed in order to do the job. For example, one participant said, "Not really, just require that you follow procedures, very very, very close, ummm, not, (sic) well, I'm not saying women is afraid, but, ya just, ya know, (sic) we were taught from we were a kid that it was dangerous and I think, think (sic) they less likely to experiment with it."

Table Five: Themes for feel comfortable or safe working in this environment with women

Theme	Number
No problem since already worked with women	4
No problem working with women	3
No problem as long as women remember the training	2
No problem as long as she is comfortable	1
Prefer working with men since there is physical work involved	1

Note: 1 of the 12 participants chose not to answer this question

As shown in Table Five above, there were 5 different themes with regard to the question, "Would you feel safe or comfortable working in this environment with women?" One theme was that there was no problem working with women because they have done it already. For example, one participant said, "I ahh, I feel comfortable. As a matter of fact last year I worked with this particular woman and I prefer working with her over my male partners." Another theme was that it simply was no problem working with women. For example, one participant said, "If I felt comfortable with it? Yeah. My girl may not, but I, (sic) but I don't see nothing wrong with it." Another theme was that there was no problem as long as the women remember their training. For example, one participant said,

"Oh yes I would because in this company everyone goes through the same training. You all have the basic training and it the number one thing is safety first, so a woman or a guy they have the same training it depends, just depends on how they apply it. Some people don't apply the training and some really pay attention and apply the training very well. So a woman, I wouldn't care if it was a woman or whoever I'm working with."

Another theme was that there was no problem as long as the woman is comfortable. For example, one participant said,

“No just as long as she’s comfortable doing her job, period. She has to do her job. If I need her to lift something, I’m gonna need her to lift it. Because if I have to now do her job and my job, then it defeats the purpose. And at that point that’s where the, the separation comes in, where they are like why am I here. And from there it’s more like uh, well maybe I should go in the office. Do a little bit more lighter work. Because it’s strenuous you will feel the aches and pains in your back in your arm and everything. And if you ain’t trying to look cock diesel then you don’t need to be out here.”

Another theme was that working with men was more preferable, since there is physical work involved. For example, one participant said, “Umm, as far as this job goes, I’d rather work with a man because of the physical aspect of it. But at the same time there are woman in the company performing the same uh, ya know job. So, (sic) and they’ve done it for years. And so, as far as that, it is possible. But if I had personally a preference I would definitely say a man though as far as the job goes.” Also, one participant did not give a response.

Table Six: Themes for number of women that do electrical work and currently work with you is low

Theme	Number
Challenging physical aspects	6
Task and type of work	1
Change occurs slowly	1
Intimidated	1
Male dominate the environment	1
Not a low number working	1

Note: 1 participant shared two of the 6 themes listed; 2 of the 12 participants chose not to answer this question

As shown in Table Six above, there were 6 different themes with regard to the question, “Why do you think the number of women that do electrical work and that currently work with you is so low?” One theme was that the nature of the work was the challenging physical aspects to the job. For example, one participant said,

“I mean like I said it’s just the condition of the work and, you know it’s just such a a (sic) filthy dirty job and umm a lot of heavy lifting and stuff and maybe women ya know, they don’t, they don’t (sic) have facilities, like, like, (sic) from my experience, lot of the women like I said earlier, they use the bathroom as an excuse cause sometimes you have to work in the freezing cold.

Another theme was that the task and type of work is the reason why the number of women in electrical work is low. For example, one participant said, “because of the work task, because of the type of work it is.” Another theme was that change occurs slowly. For example, one participant said, “by, (sic) by default maybe, because women have only started entering into the work, in our work place maybe within the past 15 to 20 years a lot of the instructors in the school are 30 year and over veterans. So, I think you will see in the coming years women will start to work their way into the position.” Another theme was that women are intimidated by electrical work. For example, one participant said, “I just feel that women are intimidated. I feel that they think they can’t perform this job. They should give it a shot cause they could. It’s the nature of the work...ya know.” Another theme was that the males dominate the environment. For example, one participant said, “Uh, I don’t know just, I guess it’s been dominated by men for a long time. I guess it’s hard. I don’t think women really want to work in an environment where they gonna be surround, (sic) totally surrounded by nothing but men. And also like I said the physical tolls they’re a little demanding.” The last theme was that it’s not a low number of women working in the electrical field. For example, one participant said, “I’m just looking at what I see in the yard. I haven’t actually worked with them, but I know they are there.” Also, two participants did not give a response.

Table Seven: Themes for number of women in electrical work will increase in the future

Theme	Number
Recession changing work role	3
Certain type of woman	3
No increase	2
Industry evolving	2
Reason you work	1

Note: 1 of the 12 participants chose not to answer this question

As shown in Table Seven above, there were 5 different themes with regard to the question, “Do you think the number of women in electrical work will increase in the future and what is the reason?” One theme was that the recession is changing the work role. For example, one participant said, “Uh it can. I mean I think it will because of the way the job market is now. People are just taking more jobs that are out there. They are not so picky at what you can. You just pretty much taking what you can get.” Another theme was that it takes a certain type of woman to do this work. For example, one participant said, “Yeah but not by that much, it takes a special kind of woman to go into this job. To I mean, to deal with harassment, and to deal with, not harassment. But guys will be guys in the way they speak.” Another theme was that the industry is evolving. For example, one participant said, “Yeah I think the physical work might become less. Because as time goes by they introduce and umm they

come up with certain machines that make the work more easy.” Another theme was that the increase would depend on the reason you work. For example, one participant said, “It could, it could but it once again it’s this, these are those types of jobs that question you? Why am I there and if the purpose for why you’re there isn’t strong enough you’re gonna leave whether male or female.” Another theme disagreed and believed that there would be no increase of women in electrical work. For example, one participant said, “I would like to say it would, but it has not as of now.” Also, one participant did not give a response.

DISCUSSION

We found that there are still some concerns among men with having women work as electricians, including the belief that women were weaker in strength than men. Men still believe that men dominate the electrical trade. There were mixed opinions about whether one needs mannish traits to be a successful electrician. However, we also found changing attitudes. Men do feel comfortable and safe with those women who are working as electricians. Also, men believe that the electrical work force will change in the future with more women being employed.

We found women-specific negative attitudes of men that women are not real electricians and also that women are physically weaker. The negative stereotype that women are weaker is similar to the often reported negative stereotypes about women in a variety of construction occupations. Women are often reported about not being able to “hack it.” They also are accused of receiving special privileges and even of trading sex for favors (Moccio, 2009).

There were mixed results about whether an electrician requires mannish traits as some individuals agreed that the work could use traditional feminine traits too. This is a somewhat different pattern from prior work which only reports one approach where electricians believe that mannish traits are critical for success as an electrician. This previous work also reports that electricians believe that women do not belong in the electrical industry. They also believe that women have to lose their feminine identity and adapt to male culture in order to succeed as an electrician (Moccio, 2009). There appears to be some progress over time in the electrical industry where some men are now accepting of women.

There was a consistent opinion from many that the reason why there are a low number of women electricians is because the work has challenging physical aspects. We are not aware of any previous literature discussing this viewpoint. Our personal observations are that the electrician job requires tasks such as working in cramped and often dirty and damp conditions. Workers are required to work in awkward positions such as stooping, squatting, or bending. It could be that the men that we interviewed were

aware of these working conditions and had more traditional views about women and did not believe that women would be satisfied working in such conditions. We did not interview women and we do not know what the opinion of women would be about this topic.

Many men believed that in the future there will be an increasing number of women working as electricians. Their reasons included that the current recession is encouraging women to look for other non-traditional women jobs and that a certain type of woman will choose to do so. This is similar to what has been previously reported by an electrician that some women do not want to have a family and that they should be given the opportunity to work as electricians and not be denied that opportunity just because they are a woman (Moccio, 2009). We partly disagree with this point as we believe that all women should be given the opportunity to work as electricians. We also believe that part of why we had these findings is that the role of women in the home and at work has changed. At home, a woman is no longer dependent on her husband, or is the primary nurturer or caretaker. Many women are even the sole providers for their families. With this change at home, there also may be a shift among women towards exploring at work other types of occupations that also were previously only traditionally for men.

There was an overall attitude that the electrical field is dominated by men and reasons included that it is a man's job with some even quoting statistics to prove that point. Traditionally, the electrician occupation is strongly dominated by men (Hegewisch et al., 2010). Apparently, the men that we interviewed still believe that their job is a male-dominated occupation because of their perception of a lack of women present working around them at the job. This is not implying that there is sexism present against women and can just be describing the current situation that the electrician occupation is a male-dominated field.

Almost all men stated that they have no problem working with women and that they would feel safe and comfortable working with women. Previous work has quoted reasons for discomfort working with women as electricians including more psychological negative attitudes such as being a threat to the power of the "male brotherhood" (Moccio, 2009). We report here a more positive approach where men recognize that if women are properly trained as electricians, that they are safe to work with and are not promoting a hazardous environment at the job.

Limitations

This study has some limitations. First, this is only a sample from one company in the Northeast region of the United States. There may be different attitudes among electricians at other regions of the United States. Second, we did not interview managers and supervisors. They may have had very different

opinions than those of the workers. Third, our use of a snowball technique, although used for accessing hard to obtain populations, has a possible limitation in that there may be bias in that the individuals may be more similar than those obtained from a random sample. Fourth, one part of our fifth open-ended question with regard to asking “Why do you think this number is so low?” may have suggested a particular approach that the interviewee should have had toward the number of women in the work force. Fifth, it would have been interesting to understand the attitudes of women or even a dialogue between men and women to see if this dialogue with women would modify some of the attitudes of those men who had strong negative attitudes toward women as electricians.

Implications for Managers and Organizations

An understanding of current attitudes of electricians can help management better understand the role of gender issues as viewed by men. Managers and human resource professionals can choose to explore these topics with men who are employed at their organization to understand if there are similar attitudes at their organization. Also, if attitudes toward women are found that are contrary to corporate policy and/or the laws of the location where the organization is located, management should have a role in educating their employees about appropriate attitudes and also enforcing organizational compliance policies at work. Furthermore, it is possible that integration of women into the electrician workplace can also be hindered by managers who are men. Managers should be aware of both their overt and covert approaches toward women electricians. Furthermore, an attention to social cues by managers and coworkers can provide the necessary support towards changing any necessary workplace attitudes that need change.

CONCLUSIONS

Based on the comments of the respondents of the study reported on here, men who are electricians have some concerns about working with women who are electricians, including the belief that women are weaker in strength than men. However, many men feel comfortable and safe working with women who have had appropriate training and are working as electricians. Men also believe that the electrical workforce will change in the future with more women being employed. Managers and human resources professionals can use these findings to better understand the attitudes and beliefs of men toward women in the electrician workforce. As appropriate, they can implement training and also monitor compliance with corporate policy and any necessary relevant laws to ensure that the electrician workforce is a non-discriminatory environment.

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Note: Title graphic was created by Carole E. Scott

