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Are there differences between male versus female Emergency Medical Services professionals on emotional labor and job satisfaction?

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ABSTRACT

Background: The research question investigated was: Do female Emergency Medical Services (EMS) professionals exert less emotional labor (less surface acting and deep acting) than male EMS professionals, and do females report higher job satisfaction? Surface acting involves displaying emotions that are not felt, for example, an EMS professional who "puts on" a sympathetic face for a patient's problem but she/he is actually irritated. Thus, surface acting focuses on one's outward behavior, such as regulating or modifying one's emotional expression. Deep acting focuses on modifying inner feelings, where one attempts to "actually feel" the emotions one wishes to display, such as compassion for a patient's problem. **Methods:** A large sample of 24,586 (33.9% response rate) nationally certified EMS professionals filled out a short paper and pencil survey in the Fall, 2011 to test the research question. Gender, surface acting, deep acting, and job satisfaction were measured. **Results:** The results showed that while female EMS professionals had statistically significant lower surface acting and deep acting, and higher job satisfaction than EMS males, the mean differences in scale scores were practically or clinically trivial. However, the results also showed that for all EMS respondents, as surface acting increased, job satisfaction decreased. **Conclusion:** Very small, non-meaningful differences in female versus male surface acting, deep acting, and job satisfaction were found. However, surface acting had a substantial negative relationship to job satisfaction while deep acting did not. Continued research into emotional labor, including its impact on EMS professionals is recommended, as well as role play training to help EMS professionals increase their deep acting skills.

KEY WORDS: Emotional labor, Emergency Medical Services professionals, gender differences

INTRODUCTION

People's lives can depend on the competent and quick reaction of Emergency Medical Services (EMS) professionals. EMS providers deal with a broad array of patient incidents, including heart attacks, falls, driving accidents, and firearm wounds, which often require empathy and compassion for those affected [1]. Since, EMS operations function 24 h/day, 7 days/week, EMS professionals often have irregular work hours and can be required to work more than 40 h/week. Cydulka *et al*. [2] found that 88.7% of paramedics reported their jobs to be stressful and were psychologically worn out, or exhausted. Emotional exhaustion involves being emotionally overextended and depleted of energy, [3] and is often due to extensive job-required interpersonal contact [3].

Emotional labor is defined as displaying socially desirable emotions [4] in the context of interpersonal interactions in which a worker is providing some type of service to another individual. Hochschild [5] introduced the terminology for two types of emotional labor, *surface acting* and *deep acting*. Grandey's [6] definition of emotional labor, as "the process of regulating both feelings and expressions for organizational goals", is also supportive of the *surface acting* versus *deep acting* distinction. *Surface acting* involves displaying emotions that are not felt, for example a hotel clerk who "puts on" a sympathetic face for a customer's problem,

but she/he is actually irritated. Thus, surface acting focuses on one's outward behavior, such as regulating or modifying one's emotional expression. *Deep acting* focuses on modifying inner feelings, where one attempts to "actually feel" the emotions one wishes to display, such as compassion. Both *surface acting* and *deep acting* require "labor" or effort. However, when one *genuinely or naturally* feels whatever emotion is service-required, such as compassion or empathy, then *no* emotional "labor" is involved [7].

To the best of our knowledge, no previous EMS research has specifically assessed differences on surface acting or deep acting with respect to gender. However, prior research has suggested that in general women are better than men at expressing genuine emotions [8]. This suggests that female EMS providers may require less emotional labor, which is lower surface acting and deep acting, to carry out their job activities. Other general research [9] suggests that the people-oriented nature of service work is more closely related to women's traditional care-taking roles, so the authenticity more naturally felt by women involved in such roles contributes to their positive feelings about service work. This would also suggest that female EMS providers could have higher job satisfaction. Greater congruence between felt and expressed emotions means that female EMS professionals may not need to do as much surface acting or deep acting as male EMS professionals to match the compassion and empathy often required by patients in an emergency-related situation. *The research question investigated was: Do female EMS professionals have lower surface acting and deep acting, and higher job satisfaction than male EMS professionals?*

METHODS

Sample and Procedure

The National Registry of Emergency Medical Technicians (NREMT) maintains the most comprehensive national database of United States EMS professionals (www.nremt.org). The NREMT is a non-profit certification entity that provides a psychometrically sound measure of both cognitive and psychomotor competency to multiple levels of EMS professionals. In the fall of 2011, 133,720 nationally certified EMS professionals were eligible for recertification, and were mailed materials to complete the recertification process. A short survey was included in this mailing. Individuals willing to participate were asked to voluntarily complete and return this anonymous recertification survey, which had no bearing on their national certification renewal. Institutional Review Board survey approval was given by the American Institutes of Research (Project EX00190). Of those eligible for recertification, 72,520 individuals completed the process and were eligible to participate in this study. The survey yielded 24,586 (33.9% response rate) respondents. This response rate is lower compared to previous recertification surveys [10,11].

Measures

Gender was measured as 1 = male and 2 = female.

Two *emotional labor* variables were measured *surface acting* and *deep acting*, each with a 3-item scale. These scales were based on prior work by Brotheridge and Lee, [12] Grandey, [13] and Blau *et al*. [14,15] Given their study importance all items are reported. The *surface acting* items are "I often pretend to have the compassion I need to show patients"; "I often put on an act in order to deal with patients" and "I often find myself faking to patients that I am sympathetic to their situations." The *deep acting* items are "I work at feeling the empathy I need to show to patients"; "I try to feel the compassion that I consistently show to patients" and "I work hard to internalize the sympathy that I need to display to patients." All items were measured using a 6-point Likert response scale, from 1 = strongly disagree to 6 = strongly agree.

Job satisfaction was measured using a previously validated 3-item scale from Cammann *et al*. [16] Items are: "all in all I am satisfied with my job"; "in general I like my job"; and "overall I like what I do." Items were answered from 1 = strongly disagree to 6 = strongly agree.

Data Analysis

Statistical Package for the Social Sciences – PC (SPSS, IBM, Armonk, New York, USA) version 19 [17] was used to analyze the data. There were no significant demographic differences between the incomplete versus complete sample suggesting the missing data was random [18]. Likert scales are commonly used with interval-level statistical procedures as long as a scale item has at least five response categories [19]. In addition, a histogram plot of the data for each scale against a normal curve [17] showed that normality was not severely violated. Prior to the main analysis, the assumptions of multivariate analysis of variance (MANOVA) were examined. Box's M test of homogeneity of variance-covariance matrices was examined, $F = 43.01$ (6, 7.54E8), $P < 0.01$. This result suggested that the uneven male–female sample size invalidated the appropriateness of using a MANOVA [19]. We then used an independent samples *t*-test for each variable. Given that Levene's test for equality of variances between each male-female group was significant, we report the *t*-test value for not assuming equal variance [19].

RESULTS

Participating Sample Characteristics

The 24,586 respondents were broken down into the following three EMS certification levels: Emergency Medical Technician (EMT)– Basic, $N = 10,996$ (47%); EMT – Intermediate, $N = 1835$ (8%), and paramedic, $N = 10,613$ (45%). The top four categories describing the type of EMS in which participants worked included: 37% fire-based; 15% private for profit; 13% county or municipal, and 11% hospital-based. For community size where EMS work was performed, the top five categories were: 28% small town (2500-24,999 people); 21% medium town (25,000-74,999 people); 15% rural area (<2500 people); 11% large city (500,000 or more people), and 11% mid-size city (150,000-499,999 people). Although response rates to previous recertification surveys have been higher, [10,11] the present sample breakdown on these three background items

that is, certification level, type of EMS, and community size, are consistent with other EMS recertification cohorts, [10,11] suggesting representativeness of this sample compared to prior recertification survey cohorts. The gender breakdown of $N = 17{,}890$ (73%) male and $N = 6526$ (27%) female is also representative when compared with previous cohort samples of nationally certified EMS professionals [10,11]. Missing data reduced the sample size to 22,498 using list-wise deletion for subsequent data analyses.

Study Variable Descriptive Statistics, Correlations, and Test of Research Question

Table 1 shows the means, standard deviations, reliabilities, and correlations among study variables. Results indicate a lower mean level of surface acting (mean = 1.79 out of 6) than deep acting (mean = 3.15 out of 6), and a high level of job satisfaction (mean = 5.31 out of 6) across respondents. All scales are reliable that is, the coefficient alphas are over 0.70 - surface acting (0.90), deep acting (0.81), and job satisfaction (0.94). As expected, there is a positive correlation between surface acting and deep acting ($r = 0.21$); however, these results also show that they are distinct dimensions of emotional labor. Surface acting has a stronger negative correlation to job satisfaction ($r = -0.37$) than deep acting to job satisfaction ($r = -0.02$). This indicates that while deep acting is not related to job satisfaction, higher surface acting leads to lower job satisfaction. These findings are consistent with prior research [7,14,15].

Table 2 shows the *t*-test results comparing male versus female EMS professionals on surface acting, deep acting, and job satisfaction. The results show that female EMS professionals exhibit statistically significant less surface acting ($t = 11.09$) and deep acting ($t = 13.04$), and higher job satisfaction ($t = -2.92$) than male EMS professionals. These results provide statistical support for the research question.

Table 1: Means, standard deviation, reliabilities, and correlations for study variables

Variable name	M	SD	1 (SA)	2 (DA)	3 (JS)
SA	1.79	0.97	0.90[a]		
DA	3.15	1.43	0.21**	0.81	
JS	5.31	0.83	−0.37**	−0.02**	0.94

$N = 22{,}498$. **A correlation of at least. 02 is significant at $P<0.01$. Scale means are based on 1 = strongly disagree to 6 = strongly agree. [a]Reliability estimate (coefficient alpha). SA: Surface acting; DA: Deep acting; JS: Job satisfaction; M: Mean; SD: Standard deviation

Table 2: Independent sample *t*-test results comparing male versus female EMS professionals on surface acting, deep acting, and job satisfaction

	Mean	SD	*t*-value	df	Significance
Surface acting					
Male	1.83	1.00	11.09	11504.17	0.000
Female	1.67	0.88			
Deep acting					
Male	3.22	1.41	13.04	9890.52	0.000
Female	2.93	1.46			
Job satisfaction					
Male	5.30	0.85	−2.92	11302.85	0.003
Female	5.34	0.76			

Male, $N = 16{,}517$; female, $N = 5837$. SD: Standard deviation; df: Degrees of freedom

DISCUSSION

While statistically significant, the absolute differences in variable means between female versus male EMS professionals of −0.16 for surface acting (1.67 vs. 1.83), −0.29 for deep acting (2.93 vs. 3.22), and +0.04 for job satisfaction (5.34 vs. 5.30) have little practical or clinical significance. The large sample sizes made such small differences between male versus female EMS professionals statistically significant [20]. Further stratified analyses by EMS certification level (basic, intermediate, and paramedic) comparing surface acting, deep acting, and job satisfaction by gender were consistent with these results. Given the lack of prior research on EMS professional gender differences in emotional labor, finding non-meaningful gender differences is an important finding. Recent EMS research using a smaller sample [21] did not find a gender difference on job satisfaction. Summarizing across gender, the results show that EMS professionals exhibit lower surface acting than deep acting and that they have high job satisfaction. These findings are consistent with prior research [15]. In addition, there were no significant variable differences between complete data versus incomplete data responders suggesting that missing data were random [18]. Given the sample size and population size, there is a small margin of error with a 95% confidence level [19].

Two important findings are the significant negative relationship between surface acting and job satisfaction across all EMS professionals, and that deep acting is not as strongly associated with job satisfaction. The stronger correlation between surface acting and job satisfaction ($r = -0.37$) would be considered a large effect [20]. These findings are consistent with prior research using others samples [7,14]. Research using EMS samples have shown job satisfaction to be an important antecedent of intention to stay in the EMS profession [22,23]. Thus, it is recommended to make EMS professionals more aware of the distinction between surface acting versus deep acting when dealing with patients, as well as the potential negative impact of surface acting on job satisfaction, during their initial training. Furthermore, on-going EMS professional development through voluntary or state-required continuing education should reinforce the importance of continually monitoring one's emotional labor awareness. At the same time, such professional development could help EMS professionals to further refine their deep acting skills that is, creating the necessary feelings needed to effectively deal with a crisis situation, without a negative impact on their satisfaction. One approach to developing deep acting is "cognitive change," which involves reappraisal of a situation, for example, thinking about how a patient would feel [6]. Role play training could help EMS professionals to further develop their deep acting skills, and at the same time lessen their need to suppress felt emotions by surface acting.

Limitations

When all the data are collected at one time, as in this study, the causal relationship between emotional labor and job satisfaction cannot be determined. Either direction is possible, that is, that emotional labor causes job satisfaction or that job satisfaction causes emotional labor. However, prior research, based on non-EMS samples, [7] suggests that emotional labor is more likely to cause job satisfaction than vice-versa. Perceived authenticity is one mechanism for explaining this causal relationship [24] since surface acting or faking one's displayed feelings leads to decreased feelings of perceived authentic self-expression, while deep acting permits increased authentic expression of self. Decreased authentic self-expression is more likely to lead to job dissatisfaction. Another research design limitation was due to survey length constraints. Potential mediating variables such as perceived authenticity [24] or occupational identity [4] were not measured. When all study variables are self-report than method variance or finding relationships due to the method rather than theory-based is a concern. However, a test for the importance of method variance that is, the Harman one-factor test, [25] indicated that method variance was not creating the results found. Additional limitations to acknowledge include the lower response rate and that the associations between emotional labor dimensions and job satisfaction could be affected by unmeasured variables, including: Age, duration of service, and hours worked.

The higher self-reported mean for job satisfaction and lower means for surface acting and deep acting suggest that overall this was a generally "happy" respondent set. Sample self-selection is clearly a methodological concern with any type of survey research, [26] and can limit generalizability. The sample should not be considered as nationally-representative since it was based solely on currently nationally certified EMS professionals. Those individuals who have allowed their national certification to lapse and only maintain their state license may differ from those who have maintained national certification. Thus, caution should be used when generalizing these results to all EMS professionals. However, key demographics of this sample (i.e. certification level, type of work, community size, and gender) indicate present sample representativeness to previous samples of nationally certified EMS professionals [10,11].

Future EL research with this sample could benefit from a qualitative research design, for example in-depth structured interviews of 15-20 female versus male EMS professionals comparing their answers to specific trauma situations, for example, self-inflicted injury; homicide; child versus adult clients. Length of service needs to be assessed in future research since this may affect EMS professional responses to job satisfaction and emotion labor items. Finally, comparing the EL by gender of EMS professionals to other health care professionals, for example, female versus male nurses or medical technologists, may also be interesting.

CONCLUSION

Results did not support the research question. Female EMS professionals do not have meaningfully lower surface acting and deep acting, or higher job satisfaction than male EMS professionals. EMS professionals perform a critical, but also stressful job, which includes extensive job-required interpersonal contact that can lead to emotional exhaustion [2,3]. This job-required interpersonal contact can also necessitate emotional labor. Study results indicate a substantial negative association between surface acting and job satisfaction, but not deep acting and job satisfaction. Prior research has indicated that surface acting has a more harmful impact than deep acting [7]. Continued research into emotional labor, including its impact on EMS professionals is recommended, as well as role play training to help EMS professionals further develop their deep acting skills.

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