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Social avoidance in policing:

Associations with cardiovascular disease and the role of social support

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Abstract

Purpose—The purpose of this paper is to examine the association of social avoidance among police, cardiovascular disease (CVD) (metabolic syndrome (MetSyn)), and social support.

Design/methodology/approach—Participants were officers from the Buffalo Cardio-Metabolic Occupational Police Stress study ($n = 289$). Social avoidance (defined as the tendency to avoid social contact) and other subscales from the Cook-Medley Hostility Scale were analyzed. The mean number of MetSyn components across tertiles of the Cook-Medley scales was computed using analysis of variance and analysis of covariance. Social support was measured with the Social Provisions Scale, categorized as high or low based on the median.

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Findings—The mean number of MetSyn components increased significantly across tertiles of social avoidance (1.51 ± 0.18 , 1.52 ± 0.12 , and 1.81 ± 0.12); the only Cook-Medley subscale that remained significantly associated with MetSyn following adjustment for age and gender. Participants high in social avoidance reported significantly lower social support (79.9 ± 8.5 vs 85.8 ± 8.6 ; $p = 0.001$).

Research limitations/implications—The study is cross-sectional and therefore precludes causality. The authors were unable to determine the direction of associations between social avoidance and MetSyn. The measure of social support was unidimensional, including only perceived support; additional types of social support measures would be helpful.

Practical implications—This study suggests that occupational-based police social isolation is associated with health outcomes and lower support. Several suggestions are made which will help to improve communication between the police and public. Examples are the use of social media, training in communication techniques, and changing the police role to one of public guardians.

Originality/value—Social avoidance is the least studied the Cook-Medley subscale associated with CVD. It is important for the health of officers to maintain a social connection with others.

Keywords

Social support; Police culture; Cardiovascular disease; Metabolic syndrome; Social avoidance

Introduction

Previous research has found police officers to be at increased risk for cardiovascular disease (CVD; Franke *et al.*, 2002; Joseph *et al.*, 2010; Vena *et al.*, 2015; Violanti *et al.*, 1998; Why *et al.*, 2003; Zimmerman, 2012). The metabolic syndrome (MetSyn), a collection of subclinical components known to increase the risk for CVD (Grundy *et al.*, 2005), has been associated among police with dysregulated cortisol secretion (Austin-Ketch *et al.*, 2012; Baughman *et al.*, 2015), depressive symptoms (Violanti *et al.*, 2013), work stress (Hartley *et al.*, 2011), and diet (Wirth *et al.*, 2014).

The Cook-Medley Hostility Scale (Cook and Medley, 1954) has been widely used in CVD investigations (Barefoot *et al.*, 1989, 1991; Bunde and Suls, 2006; Miller *et al.*, 1996; Niaura *et al.*, 2002; Suls and Bunde, 2005). Of particular interest in the present study was the association of the Cook-Medley subscale social avoidance. Social avoidance measures negative behavior with tendencies to avoid social contact and is the least studied Cook-Medley subscale associated with CVD. To the best of our knowledge, only one other study has examined social avoidance and CVD. Berry *et al.* (2007) found that social avoidance was associated with CVD mortality but not with non-CVD mortality in middle-aged men utilizing Western Electric Study data.

The police and social avoidance

The police tend to avoid social interactions as a result of occupational cultural influences. Skolnick (1998) described this tendency as the police “working personality” consisting of the perception of danger, suspicion, and authority which separates them from the rest of society. In a later publication, Skolnick (2008) added that skepticism, cynicism, and mistrust

of outsiders were common among police. Twersky and Glasner (2005) noted that the police perceive themselves as insiders and the rest of society as outsiders (McCartney and Parent, 2015). Reiner and Newburn (2007) commented that police officers may suffer from self-imposed isolation based on their subculture, which emphasized moral conservatism and internal solidarity. Chappell and Lanza-Kaduce (2010) argued that the socialization during basic police academy training is so pervasive that it creates an “us vs them” mentality.

Social avoidance is not police occupation specific, it is seen in many other occupations. Social avoidance is used as a cultural-psychological defensive mechanism to separate members of police profession from those who are not police. The reasons for this defensive stance are based on anxiety associated with the possibility that officers will be impeded in the performance of their duty should they be socially close with those on whom they enforce the laws of society (Cole *et al.*, 1999). In general, this defense mechanism is primarily aimed at those who are not police. Police officers in general do not socially avoid each other and in reality co-workers may be an important source of social support in this cohesive occupation.

Social support is an important consideration in CVD investigations (Chen *et al.*, 2005; Knox and Unvas-Moberg, 1998; Knox *et al.*, 2000; Uchino, 2009; Brummett *et al.*, 2001; Frasure-Smith *et al.*, 2000). Social support has positive effects on health (Reblin and Uchino, 2008). Individuals who have strong social networks are generally better able to resist infection (Uchino *et al.*, 1996). For persons who are isolated, the absence of social support may have an opposite effect, leading to increased risk for mortality or disease (House *et al.*, 1988; Knox and Unvas-Moberg, 1998). Being socially isolated may be associated with impaired immune functioning (Cole *et al.*, 1999). Valtorta *et al.* (2015) conducted a meta-analysis to investigate the association between social relationships and an increased risk of developing CHD and stroke. Their findings suggest that deficiencies in social relationships were associated with an increased risk of developing CHD and stroke.

The present study examined cross-sectional associations of the Cook-Medley hostility subscales, the MetSyn, and perceived social support among police officers. We hypothesized that:

H1. The subscale social avoidance was significantly associated with the number of MetSyn components.

H2. Low levels of perceived social support modified the association between social avoidance and MetSyn.

Materials and methods

Data source

The Buffalo Cardio-Metabolic Occupational Police Stress (BCOPS) study is a cross-sectional study examining associations of police work-related stress with subclinical CVD and metabolic outcomes (Violanti *et al.*, 2006). Participating officers were recruited from Buffalo, NY Police Department. Data collection took place over a five-year period (2004–2009). Information on demographics, lifestyles, and psychosocial components were obtained through interviews and administered questionnaires. Anthropometric measures and

subclinical CVD markers were assessed by clinic examinations. The study was approved by the Internal Review Board of the State University of New York at Buffalo, and the National Institute for Occupational Safety and Health Institutional Review Board.

Sample size

At initiation, a total of 710 officers who were working were invited to the study and 464 chose to participate (response rate = 65.6 percent). Comparisons between participants and non-participants resulted in similar frequency distributions for sex, age, rank, and years of police service (data not shown).

The Cook-Medley Scale, which was used for assessment of social avoidance, was introduced in to the BCOPS study protocol in January 2005. As a result, 90 officers who were examined prior to this date and did not have the opportunity to fill in the questionnaire were excluded from analysis. Among the remaining 346 officers, 57 who had missing values on the Cook-Medley Scale, or did not have blood test or fasted for less than eight hours, and were excluded, resulting in a final sample of 289 officers (213 men and 76 women).

The Cook-Medley measures

The 50-item version of the Cook-Medley Hostility Scale was used (Cook and Medley, 1954) for the present study. The instrument has six subscales including hostile attributions, cynicism, hostile affect, aggressive responding, social avoidance, and other (i.e. a group of miscellaneous items) (Barefoot *et al.*, 1989). Responses were coded as 1 for the true and 0 for the false. A subscale score was the sum of the individual score in the corresponding subset. The total hostility score was the sum of the six subscale scores (present study Chronbach's $\alpha = 0.78$).

Of special interest in this study was the Cook-Medley social avoidance subscale. Social avoidance included four questions related to the tendency to avoid social contact. A score was derived by summing the number of "yes" responses. Social avoidance items were: "I prefer to pass by friends, or people I know but have not seen for a long time, unless they speak to me first," "I am likely not to speak to people until they speak to me," "I have sometimes stayed away from another person because I feared doing or saying something that I might regret afterwards," and "I am quite often not in on the gossip and talk of the group I belong to."

Assessment of MetSyn components

MetSyn components were derived for each participant using the criteria established by the National Cholesterol Education Program Adult Treatment Panel guidelines and modified by the American Heart Association (AHA) and the National Heart, Lung, and Blood Institute (NHLBI) (Grundy *et al.*, 2005). According to the AHA/NHLBI criteria for MetSyn clinical diagnosis, the presence of MetSyn components for each participant was derived using the following cut points: elevated waist circumference (waist circumference ≥ 102 cm in men, ≥ 88 cm in women); elevated triglycerides (triglycerides ≥ 150 mg/dL (1.7mmol/l) or self-reported treatment with nicotinic acid or fibrates); reduced high density lipoprotein (HDL)-C (HDL-C < 40 mg/dL or 1.03 mmol/l in men, < 50 mg/dL or 1.3 mmol/l for women) or self-

reported treatment with nicotinic acid or fibrates; elevated BP (systolic blood pressure ≥ 130 mm Hg, or diastolic blood pressure ≥ 85 mm Hg, or self-reported physician-diagnosed hypertension or antihypertensive treatment); and elevated fasting glucose (fasting serum glucose ≥ 100 mg/dL or self-reported drug treatment for diabetes).

MetSyn components were assessed during the clinic visit. Anthropometric measurements, blood pressure, and blood test were performed by trained and certified staff members. For waist circumference, the staff member used a cloth tape to measure around the abdomen horizontally at the midpoint between the highest point of the iliac crest and lowest part of the costal margin in the mid-axillary line. Two measurements were recorded to the nearest 0.5 cm. If the second waist measurement differed by more than 0.5 cm, a third reading was performed. The waist circumference was the average of the two closest measures. Supine systolic and diastolic blood pressure (SBP for the former and DBP for the latter) was taken for each participant after resting for at least five minutes. The technician used the appropriate sized cuff, with the inflatable inner centered over the area of the brachial artery. Three readings were taken and were recorded to the nearest even digit with rounding up. The average of second and third measure was used in the present analysis. Triglycerides and HDL were derived from a participant's lipid panel, and fasting glucose was derived from the chemistry panel. A certified phlebotomist collected an adequate quantity of blood from each participant to enable quality control. Blood samples were stored at low temperature (-80°C) in the University of Buffalo biological specimen bank. The blood lipid panel and the chemistry panel were analyzed by staff at certified laboratories. The procedure was completed on Beckman Coulter Synchron LX20 (LX20; Beckman Coulter, Brea, CA) using standard laboratory techniques.

Social support

Social support was measured with the Social Provisions Scale (Cutrona and Russell, 1987). The instrument contains 24 items each rated on a four-point scale that indicates the extent to which each statement describes the respondent's current social network. Responses ranged from 1 (strongly disagree) to 4 (strongly agree).

Covariates assessment

Demographic and health behavior-related information were collected through questionnaires and interviews at the clinic. Information on alcohol intake was collected using the Food Frequency Questionnaire (Hutchison Cancer research Center, 2016) (<http://sharedresources.fredhutch.org/services/food-frequency-questionnaires-ffq>) designed by the Fred Hutchinson Cancer Research Center. The number of alcoholic drinks per week was derived for each participant. One drink was defined as a 12-ounce can or bottle of beer, one medium glass of wine, or one shot of liquor. Cigarette smoking status was defined as current, former, or never.

Statistical analysis

Demographic and lifestyle characteristics were compared using *t*-test or χ^2 tests between study participants and those who were excluded from present analysis due to missing values of the Cook-Medley Hostility Scale or MetSyn. Simple linear regression and analysis of

variance (ANOVA) were used to examine the associations of selected covariates with the total hostility score and subscales, social support, and the count of MetSyn components. Social support was categorized as high (\geq median) and low (\leq median) (present study total scale Chronbach's $\alpha = 0.88$). The variables that were associated with both hostility total scale or subscales and MetSyn in the present analysis were considered as potential confounders for adjustment. The unadjusted and adjusted mean number of MetSyn components across the tertiles of the Cook-Medley total score and subscale score were computed using ANOVA and analysis of covariance (ANCOVA). Given the count nature of the outcome variable, generalized estimating equations (Poisson regression) was used as alternative approach to confirm the significance of associations (p -values) obtained for ANCOVA.

Results

Demographic and lifestyle characteristics by gender are presented in Table I. The majority (52.3 percent) of participants were older than 40 years. The percentage of officers who had 12 years or less education was 9.4 percent. More than two-thirds of officers were of European ethnic background. The majority were married and the percentage of single female officers was double than that of men (21.1 vs 10.0 percent), and the percentage of females who were divorced was also higher than that in men (23.7 vs 13.8 percent). Men reported a higher percentage of having at least five drinks per week than women (33.0 vs 26.0 percent). The percentage of current cigarette smokers was 18.7 percent in this study population.

Table II displays results for the six subscales. Three of the six Cook-Medley subscales were positively associated with the mean number of MetSyn (unadjusted). The mean number of MetSyn components across tertiles (low to high) was 1.37 ± 1.39 , 1.64 ± 1.42 , and 1.85 ± 1.36 for cynicism; 1.36 ± 1.36 , 1.80 ± 1.43 , and 1.65 ± 1.36 for aggressive responding; and 1.42 ± 1.49 , 1.54 ± 1.32 , and 1.83 ± 1.42 for social avoidance ($p = 0.024$, 0.041 and 0.010 , respectively). After adjustment for age and gender, only social avoidance remained significantly associated with the mean number of MetSyn components; mean counts across tertiles of the social avoidance subscale were 1.51 ± 0.18 , 1.52 ± 0.12 , and 1.81 ± 0.12 ; $p = 0.014$. All the other subscale measures of hostility were not statistically associated with number of MetSyn components. Participants who reported high social avoidance also reported significantly lower social support (79.9 ± 8.5 vs 85.8 ± 8.6 ; $p = 0.001$) (data not shown). The interaction of low social support and high social avoidance with MetSyn was not significant ($p = 0.422$) (data not shown).

Discussion

We hypothesized that social avoidance was associated with the number of MetSyn components among police officers. Although cynicism and aggressive responding were positively and significantly associated with the mean number of MetSyn in unadjusted analyses, these results were no longer significant after adjusting for age and sex. Age may have had an influence but sex appeared to be a major confounder. Only social avoidance remained significantly associated with the mean MetSyn components ($p = 0.014$). All other

adjusted hostility subscales were not significantly associated with the number of MetSyn components.

Social avoidance does not directly reflect hostile attitudes and behavior. It is more an indirect action brought into play by the police culture. As Skolnick (2008) pointed out, police officers develop a “working personality” which leads to avoidance of those who are not police. Others have suggested that the police become isolated from society, sometimes to the point of isolating their families as well (Reiner and Newburn, 2007). In this sense then, the police occupational culture may contribute in some way to behavior that leads to an increase in the number of MetSyn components.

Other factors may influence associations of social avoidance and CVD. Personality is an example. Berry *et al.* (2007) suggested that social avoidance is in many respects similar to social inhibition as measured by the Type D personality inventory (Denollet, 2005). Social inhibition is associated with increased disturbances and dysregulation of cardiovascular systems, including heart rate variability, increased heart rate, and blood pressure. Socially inhibited persons view the world as threatening which leads to increased sympathetic nervous system activation. The stress of social interaction experienced by socially avoidant persons requires constant adaptation by these systems that may eventually lead to psychological, metabolic, inflammatory, and cardiovascular dysregulation (Denollet, 2005).

The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)* (American Psychiatric Association, 2013) describes similar avoidance traits. Avoidant personality is described by the *DSM-V* as “a pervasive pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation, avoids occupational activities that involve significant interpersonal contact because of fears of criticism, disapproval, or rejection” (p. 672). Interestingly, the *DSM-V* criteria also point out that avoidant personality may vary in the degree to which different cultures regard avoidance as appropriate (p. 674). This may apply in the case of the police culture. The *DSM-V* states that only when avoidance traits are inflexible, maladaptive, persistent, and cause significant functional impairment and distress, do they constitute avoidant personality disorder.

Officers who were high in social avoidance reported significantly lower social support (above median = 79.9 ± 8.5 vs below median = 85.8 ± 8.6 ; $p = 0.001$) (data not shown). Social support predicts adaptation to stress among a wide variety of populations, including post-partum women, spouses of cancer patients, the elderly, and individuals working in stressful job situations (Chen *et al.*, 2005). A systematic review of perceived stress among police officers found that higher levels of social support were consistently associated with lower levels of perceived stress, regardless of the source of support (Webster, 2013). Contrary to our expectations, the interaction of low social support and high social avoidance with MetSyn was not significant ($p = 0.422$) (data not shown). Additional mediational factors involved in CVD not measured here may have influenced this interaction. Berry *et al.* (2007), for example, has suggested that high social avoidance together with low social support could affect CVD through differences in health behaviors and lifestyle such as exercise, diet, etc. Other possible factors involve apparent physiological discomfort and heightened CVD responses during social engagement (Cole *et al.*, 1999; Denollet, 2005).

Social avoidance may affect the level of support among police because it is generally based on social integration and the establishment of networks of helping others. Socially avoidant police officers will likely have less established networks because of the tendency to isolate themselves. Hannson *et al.* (2016), in an analysis of Swedish police, found that low levels of social support were associated with poor health. Other researchers have found that differing levels of social support affected work stress among police officers (Schwarzer *et al.*, 2014; Morash *et al.*, 2006).

A major strength of the present study is the precise measure of MetSyn components utilizing rigorous laboratory protocols. Additionally, this study is unique in the sense that, to our knowledge, it is the first study to examine associations between social avoidance and MetSyn among police. There are limitations to the study. The study is cross-sectional and therefore precludes causality. We were unable to determine the direction of associations between social avoidance and MetSyn. Our measure of social support was unidimensional, including only perceived support; additional types of social support measures would be helpful. Uchino (2009), for example, suggested that receiving social support in various stressful situations may actually be more effective than simply perceptions of support. Future work should consider the change over time of avoidance behavior and its effect on MetSyn. Additionally, studies which examine the relationship between social avoidance and CVD should focus on additional physiological measures which may mediate this relationship.

Finally, as Niaura *et al.* (2002) have suggested, future work should consider investigating the possibility and evaluation of interventions aimed at persons who have high levels of social avoidance as well as traits of hostility.

The present finding suggests that the “us vs them” ethos often seen in police work may actually be harmful to an officers’ health. It follows that changing this cultural mentality may help to reduce the risk of health-related problems. There are many perspectives aimed at improving relations between the police and public. Recent ideas on changing relations with the public have focused on changing the role of the police. The President’s Task Force on 21st Century Policing (2015) recommended that law enforcement should embrace a “guardian mindset” in order to build a better rapport with the public. In this view, the militarization of policing has led to the idea that the police, instead of guarding the public, are “at war” with them.

Hood (2015) commented that officers in the course of their work may have conflicting social identities, moving from one of protecting their own to protecting the public. He added that a balanced leadership can facilitate a more common social identity moving away from an “us vs them” mentality. According to Roberg *et al.* (2005), police behavioral changes may manifest as poor relationships with non-police friends. A British study on police effectiveness and the community pointed out that the police need to connect to the public through methods of shared responsibility in crime prevention. This would increase dialogue between law enforcement and the public and aid in solving crime (British Secretary of State, 2010).

The use of social media may be another method to break down the schism between law enforcement and the public. Harms and Wade (2017) found that social media appeared to be a beneficial tool in police and community relations. Their sample showed the benefits of creating a positive image for the department with the followers on one social media platform. A qualitative study by Gittner (2016) demonstrated that occupational language use by police officers disengages them from the stress of their work. However, this same language often disconnects the police from the public. Gittner suggested that training which improves communication between citizens and police will help to alleviate tensions and facilitate police support.

In sum, the primary focus of this study was to assess the cardiovascular health of officers in association with a cultural aspect which has been previously noted in police work – that of avoidance of public interaction. The findings reinforce the idea that is important for officers to maintain useful dialogue between the police culture and the public in order to not only aid crime prevention and increase trust but also to provide a healthy psychological and physiological balance.

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Table I.

Demographic and lifestyle characteristics of participants by gender, BCOPS study, 2004–2009

Variable	Total (n = 289)		Men (n = 213)		Women (n = 76)	
	n	%	n	%	n	%
<i>Age (years)</i>						
< 30	16	5.5	14	6.6	2	2.6
30–39	122	42.2	90	42.3	32	42.1
40–49	117	40.5	83	39.0	34	44.7
50	34	11.8	26	12.2	8	10.5
<i>Education (years)</i>						
12	27	9.4	24	11.4	3	4.0
College < 4	159	55.6	111	52.9	48	63.2
College 4+	100	35.0	75	35.7	25	32.9
<i>Rank</i>						
Patrol officer	231	81.1	166	79.4	65	85.5
Sergeant/Lieutenant/Captain	31	10.9	25	12.0	6	7.9
Detective/Executive/Other	23	8.1	18	8.6	5	6.6
<i>Race/Ethnicity</i>						
European-American	215	76.2	160	77.7	55	72.4
African-American	67	23.8	46	22.3	21	27.6
Hispanic-American	2	0.7	2	1.0	0	0
<i>Marital status</i>						
Single	37	12.9	21	10.0	16	21.1
Married	202	70.6	160	76.2	42	55.3
Divorced	47	16.4	29	13.8	18	23.7
<i>Alcohol consumption (drinks/week)</i>						
Never	54	19.2	37	17.7	17	23.3
1–5	139	49.3	102	48.8	37	50.7
5+	89	31.2	70	33.5	19	26.0
<i>Smoking status</i>						
Current	53	18.7	31	14.7	22	30.1
Former	58	20.4	39	18.5	19	26.0
Never	173	60.9	141	66.8	32	43.8
		Mean (SD)		Mean (SD)		Mean (SD)
Social support (global score) ^a	279	83.4 (9.0)	213	83.2 (9.1)	76	84.1 (8.6)

Notes: BCOPS, Buffalo Cardio-Metabolic Occupational Police Stress. The difference between men and women was not statistically significant ($p = 0.443$ from t -test).

^aA global score was derived from the Social Provisions Scale which consists of 24 questions

Table II.

Unadjusted and adjusted number of MetSyn components across tertiles of the Cook-Medley scales in police officers, BCOPS study, 2004–2009

Cook-Medley Scale	No. of participants (<i>n</i> = 289)	Unadjusted mean (SD)	Age-adjusted mean (SE)	Age- and sex-adjusted mean (SE)
<i>Total score</i>				
1st (3–14)	102	1.49 (1.41)	1.49 (0.14)	1.54 (0.13)
2nd (15–20)	94	1.68 (1.45)	1.68 (0.14)	1.69 (0.14)
3rd (21–41)	93	1.75 (1.33)	1.75 (0.14)	1.69 (0.14)
<i>p</i> -Value		0.004	0.005	0.049
<i>Subscales</i>				
<i>Cynicism</i>				
1st (0–3)	83	1.37 (1.39)	1.36 (0.15)	1.42 (0.15)
2nd (4–6)	107	1.64 (1.42)	1.66 (0.13)	1.69 (0.12)
3rd (7–13)	99	1.85 (1.36)	1.84 (0.14)	1.76 (0.13)
<i>p</i> -Value		0.024	0.024	0.112
<i>Hostile attributions</i>				
1st (0–2)	109	1.42 (1.36)	1.44 (0.13)	1.49 (0.13)
2nd (3–4)	98	1.77 (1.47)	1.74 (0.14)	1.71 (0.13)
3rd (5–10)	82	1.77 (1.34)	1.78 (0.15)	1.76 (0.15)
<i>p</i> -Value		0.066	0.067	0.129
<i>Hostile affect</i>				
1st (0)	58	1.33 (1.47)	1.36 (0.15)	1.40 (0.17)
2nd (1–2)	160	1.65 (1.37)	1.65 (0.13)	1.63 (0.10)
3rd (3–5)	71	1.86 (1.37)	1.84 (0.14)	1.86 (0.16)
<i>p</i> -Value		0.161	0.168	0.274
<i>Aggressive responding</i>				
1st (0–2)	73	1.36 (1.36)	1.37 (0.16)	1.51 (0.16)
2nd (3–4)	115	1.80 (1.43)	1.80 (0.13)	1.80 (0.12)
3rd (5–9)	101	1.65 (1.36)	1.64 (0.14)	1.54 (0.13)
<i>p</i> -Value		0.041	0.075	0.531
<i>Social avoidance</i>				
1st (0)	52	1.42 (1.49)	1.45 (0.19)	1.51 (0.18)
2nd (1–1)	119	1.54 (1.32)	1.54 (0.13)	1.52 (0.12)
3rd (2–4)	118	1.83 (1.42)	1.82 (0.13)	1.81 (0.12)
<i>p</i> -Value		0.010	0.013	0.014
<i>Other</i>				
1st (0–1)	107	1.56 (1.42)	1.53 (0.13)	1.59 (0.13)
2nd (2–2)	87	1.52 (1.31)	1.54 (0.15)	1.52 (0.14)
3rd (3–7)	95	1.83 (1.43)	1.85 (0.14)	1.79 (0.14)
<i>p</i> -Value		0.219	0.147	0.372

Notes: BCOPS, Buffalo Cardio-Metabolic Occupational Police Stress; MetSyn, metabolic syndrome. *p*-Values were obtained from Poisson regression with GEE methods