

PSYCHOSOCIAL WORKING CONDITIONS AND OBESITY RESEARCH IN HIGH RISK OCCUPATIONS AND POPULATIONS

Chair: BongKyoo Choi, ScD, University of California Irvine, CA; Presenters: BongKyoo Choi, ScD, University of California Irvine, CA; Marnie Dobson, PhD, University of California Irvine, CA; HyoungRyoul Kim, MD, The Catholic University of Korea, Seoul, South Korea; Nicole Champagne, EdD, University of Massachusetts Lowell, MA; Horacio Tovalin Ahumada, DrPH, National Autonomous University of Mexico, Mexico City, México

It is well known that obesity (usually defined as the Body Mass Index, $= 30 \text{ kg/m}^2$) is a key risk factor for a wide range of chronic diseases and premature mortality. The economic costs of obesity have been estimated to be substantial (e.g., \$ 147-190 billion per year only for obesity-related medical costs in the United States (US)) and now threatening the sustainability of societies like the United States (BPC, 2012) which is the heaviest country among the OECD countries.

Relatively recent experimental and longitudinal epidemiological studies (for a summary, see Choi et al., 2012) have reported that adverse psychosocial working conditions (sedentary work, shift work, low job control, high psychological job demands, low social support at work, and long work hours) could increase the risk for obesity directly or indirectly via unhealthy behaviors (eating and leisure-time physical activity) in general working populations. These findings imply that if we would address adverse psychosocial working conditions as well as health behaviors of workers at the same time, there would be a much higher chance of sustaining success in preventing obesity among workers. This is in line with the rationale and vision of the recent NIOSH Total Worker Health approach for improving workers' health.

However, current US national recommendations for prevention of obesity at worksites (e.g., the 2012 APOP report by the Institute of Medicine and CDC's Lean Work! website) do not fully embrace the aforementioned perspective. The recommendations are made largely based on individual-based health behavior models, usually ignoring social, environmental, and cultural contexts of workers' health behaviors and the possibility that psychosocial working conditions increase the risk of obesity via non-behavioral (e.g., dysfunction of hypothalamus resulting from chronic strain suggested by Dr. Bjorntorp) pathways among workers.

This symposium features several merits: 1) Our presentations collectively make a case that adverse psychosocial working conditions can affect obesity among workers directly and indirectly through health behaviors; 2) All our presentations deal with occupational and behavioral risk factors for obesity in high risk occupations and populations (firefighters and low wage workers in California and Massachusetts and service workers in Mexico City) that have been rarely reported in the literature or hardly captured in general working population surveys; and 3) Our presentations are very rich in terms of work and obesity research methodologies. The findings from our presentations are made based not only on typical self-administered cross-sectional questionnaire surveys, but also on qualitative inquires (focus groups, participatory action research, and open-ended questions) and the use of objective measures of physical activity and food/nutrition (actigraphs and food diary).

The speakers of this symposium and brief introduction of their presentations:

1. Psychosocial Occupational Risk Factors for Obesity in Male Firefighters: Results from the FORWARD Study Survey. Dr. BongKyoo Choi (University of California Irvine) will present preliminary results from the NIOSH-funded project on work and obesity in firefighters (called the FORWARD study). He will present occupational and behavioral risk factors for obesity in 360 male firefighters from a Southern California county. He will analyze the data from the firefighter-specific work questionnaire and the firefighter wellness and fitness medical program (including three different obesity measures) for finding risk factors for obesity.
2. Occupational and Health Behavioral Causes of Obesity in Firefighters: A Qualitative Study. Dr. Marnie Dobson (University of California Irvine) will as part of the FORWARD study present preliminary findings about occupational and behavioral risk factors for obesity from qualitative research methods (focus group methodology, open-ended questions, and participatory action research approach) that have been used in the FORWARD study.
3. Physical Activity and Nutrition in Firefighters. Dr. HyoungRyoul Kim (University of Catholic Korea) will as part of the FORWARD study present preliminary findings about physical activity and nutrition from about 80 firefighters who recorded their food intake using a food diary and wore a physical activity monitor (actigraph) on one duty day and one off-duty day.

4. Obesity/Overweight and the role of working conditions in lower income workers- A qualitative, participatory investigation - Dr. Nicole Champagne (University of Massachusetts Lowell) will present findings from a qualitative research study (focus groups, interviews, and stakeholder meetings) which indicate a set of unique working conditions facing lower income workers that affect their weight status, leisure-time physical activity, and dietary patterns. This participatory research study was a collaborative effort involving UMass Lowell and two worker advocacy groups in Boston, Massachusetts.

5. Work and Obesity in Mexican working population from the service sector. Dr. Horacio Tovalin (the National Autonomous University of Mexico, Mexico City) will present results about obesity-related risk factors in different services sector occupations (firefighters, teachers, and health professionals) from a project on Burnout and cardiovascular risk performed in about 1,500 workers.

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PYSCHOSOCIAL OCCUPATIONAL RISK FACTORS FOR OBESITY IN MALE FIREFIGHTERS: RESULTS OF THE FORWARD STUDY SURVEY

BongKyoo Choi, ScD, University of California Irvine, CA; Peter Schnall, MD; Marnie Dobson, PhD; Leslie Israel, DO; Javier Garcia, MS; SangBaek Ko, MD; Dean Baker, MD, MPH

Background: Among 41 male-dominated occupations in the United States (US), firefighters and police officers have the third highest prevalence rate of obesity. However, few epidemiological studies have examined occupational and behavioral risk factors for obesity in male firefighters. As part of the on-going FORWARD study (Choi et al., 2011) that has examined the occupational and behavioral risk factors for obesity in firefighters, this study aims to investigate whether adverse work organizational conditions and unhealthy behaviors of firefighters are associated with obesity in the survey data of the FORWARD study.

Methods: So far, 284 male firefighters in a Southern California county have volunteered to participate in the survey of the FORWARD study (participation rate = 85%). The study participants were asked to fill out a firefighter specific work and health questionnaire (that was developed through focus groups with firefighters) when they visited a clinic for their wellness and fitness (WEFIT) exams from November 2010 to August 2012. From them, 245 male firefighters who worked at local fire stations and had valid study variables were selected for this analysis. As the key work organization risk factors, we examined the total number of calls on a typical work day, the total number of 24-hr work shifts in the past month, the numbers of two, three, and four consecutive 24-hr shifts in the past month, low decision authority (3 JCQ items), high psychological job demands (3 JCQ items), sedentary work (1 item), organizational culture (6 JCQ items for procedural justice, organizational support, and macro-level decision latitude), exposure to critical incidents (5 items), and workfamily conflict (3 items) in the survey data. As the key health behavior risk factors, we examined physical activity at work and during leisure time, fruit consumption, heavy eating since childhood and health behaviors of coworkers and supervisors (health climate). The adiposity of each of 282 firefighters was assessed at their Wellness and Fitness (WEFIT) exams in three ways with standard protocols by an experienced exercise physiologist: BMI; estimated body fat % based on 3-site skinfolds; and waist circumference. Age, education, marital status, and ethnicity were controlled for in multivariate linear regression analyses.

Results: The obesity prevalence was higher in the ranks of captains and battalion chiefs (n=73) than in the ranks of firefighters and engineers (n=172) in terms of all three measures (e.g., BMI-based obesity prevalence was 32.1% in the higher ranks while it was 16.6% in the lower ranks). Obesity prevalence varied by specific obesity measure. The obesity risk profiles among the firefighters differed by rank. In the ranks of captains and chiefs, frequent three consecutive 24-hr shifts (2 or more in the past month vs. none), sedentary work, and infrequent physical exercise at work and during leisure time were identified as most significant risk factors for obesity consistently with all of the three obesity measures. Interestingly, high daily calls (i.e., more than 7 calls vs. 5 to 7 calls) appeared to reduce the risk for obesity among firefighters (with BMI and waist circumference). In the ranks of firefighters and engineers (n=93), high numbers of total 24-hr shifts in the past (more than 15 24-hr shifts vs. 13 or less 24-hr shifts), emotional demands, exposure to critical incidents, infrequent physical exercise at work and during leisure time, low consumption of fruits, and heavy eating (since childhood) were associated with higher adiposity consistently with all three obesity measures.

FRIDAY, MAY 17 (continued)

- Paper 4** The Influence of Work Characteristics on Return to Work Among Long-Term Sick-Listed Employees With Depression
- Dr. Jenny Huijs, TNO, Hoofddorp, The Netherlands; Dr. Lando Koppes; Prof. Toon Taris; Prof. Roland Blonk

Fresh Perspectives on Workplace Aggression (Symposium)

Palos Verdes

Chairs: Jenna C. Shapiro, BS, and Vicki J. Magley, PhD, University of Connecticut, Storrs, CT

- Paper 1** Coping With Abusive Supervision: Long Term Effects on Employee Attitudes and Intention
- Ismael Diaz, MS, Texas A&M University, College Station, TX; Kathi N. Miner, PhD; Mindy E. Bergman, PhD

- Paper 2** Linking Experienced Incivility to Instigated Incivility for Staff Members and Managers
- Arla Day, PhD, Saint Mary's University, Halifax, NS, Canada; Michael P. Leiter, PhD

- Paper 3** Workplace Aggression Normalization: A Scale Development Piece
- Jenna C. Shapiro, BS, University of Connecticut, Storrs, CT; Zandra Zweber, MA; Anna Young, BA; Vicki J. Magley, PhD

- Paper 4** Testing a Model of Civility Training Effectiveness
- Benjamin M. Walsh, PhD, University of Illinois Springfield, IL; Vicki J. Magley, PhD

Discussant: Julian Barling, PhD, Queens University School of Business, Kingston, ON, Canada

Psychosocial Working Conditions and Obesity Research in High-Risk Occupations and Populations (Symposium)

San Fernando

Chair: BongKyoo Choi, ScD, University of California Irvine, CA

- Paper 1** Psychosocial Occupational Risk Factors for Obesity in Male Firefighters: Results of the Forward Study Survey
- BongKyoo Choi, ScD, University of California Irvine, CA; Peter Schnall, MD; Marnie Dobson, PhD; Leslie Israel, DO; Javier Garcia, MS; SangBaek Ko, MD; Dean Baker, MD, MPH

- Paper 2** Occupational and Health Behavioral Causes of Obesity in Firefighters: A Qualitative Study
- Marnie Dobson, PhD, University of California Irvine, CA; BongKyoo Choi, ScD; Peter Schnall, MD; Erin Wigger, BA; Javier Garcia, MS; Leslie Israel, DO; Dean Baker, MD, MPH

- Paper 3** Physical Activity and Nutrition in Firefighters
- HyoungRyoul Kim, MD, The Catholic University of Korea, Seoul, South Korea; BongKyoo Choi, ScD; Peter Schnall, MD; Marnie Dobson, PhD; Leslie Israel, DO; Pietro Galassetti, MD; Javier Garcia, MS; Dean Baker, MD, MPH

- Paper 4** Obesity/Overweight and the Role of Working Conditions in Lower Income Workers: A Qualitative, Participatory Investigation
- Nicole Champagne, EdD, University of Massachusetts Lowell, MA; Suzanne Nobrega, MS; Marcy Goldstein-Gelb, BA; Mirna Montano, BA; Isabel López, BA; Jonny Arevalo, BA; Suezanne Bruce, BA; Laura Punnett, ScD

- Paper 5** Work and Obesity in Mexican Working Population From Different Occupations
- Horacio Tovalin Ahumada, DrPH, National Autonomous University of Mexico, Mexico City, México; Marlene Rodríguez Martínez, MSc

The Impact of Emotional Intelligence and Emotional Labor on Worker Wellbeing (Paper Panel Session)

San Bernardino

Chair: Jo Linder-Crow, PhD, California Psychological Association, Sacramento, CA

- Paper 1** The Impact of Personality, Trait Emotional Intelligence and Emotional Labour on Burnout Among Human Resource Professionals in Malaysia
- Angeli Santos, PhD, University of Nottingham Malaysia Campus, Semenyih, Selangor, Malaysia; Gwi Terk Chern, BSc

- Paper 2** “Emotionally Intelligent Labor”: A Multilevel Study About the Multifaceted Role of Emotional Intelligence in the Emotional Labor Process



- Sonja Scherer, Intermediate Diploma, Goethe-University Frankfurt, Frankfurt am Main, Hessen, Germany; Dr. Dieter Zapf; Sabine Machowski

- Paper 3** Effects of Emotional Intelligence and Ways of Coping on Work–Family Conflict: Evidence From the Hospitality Industry
- Sarlaksha Ganesh, PhD, Indian Institute of Technology (Madras), India; Mangadu P. Ganesh, PhD

Working Outside the Boundaries of Traditional Time and Place (Paper Panel Session)

San Pedro

Chair: Arturo Juarez-Garcia, PhD, Universidad Autonoma del Estado del Morales, Mexico



Finalist for Best Student Research Award

