Exercise Among Commercial Truck Drivers

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RESEARCH ABSTRACT

This study examines the exercise habits and perceived barriers to exercise of a convenience sample of 300 commercial truck drivers. Participants reported minimal amounts of exercise, with nearly 20% not exercising in the past week. A high prevalence of obesity was found in this sample: 93.3% of study participants had a body mass index (BMI) of 25 or higher. Drivers with BMIs of greater than 30 were significantly more likely to rate the exercise environment as terrible/bad. Drivers who had at least one health condition engaged in significantly less aerobic exercise, used fewer strengthening exercises, did not exercise for 30 minutes continuously, and had a higher BMI. Drivers who spent most of their off-duty time in their truck while their partner drove were also significantly more likely to not exercise regularly. Most drivers cited lack of time and place as the primary barriers to exercising. This study adds to the limited knowledge about exercise behaviors among commercial truck drivers.

The National Occupational Research Agenda (NORA, 2007) has identified the health of commercial truck drivers as a priority research area. Commercial truck drivers are permitted to spend up to 11 hours driving per 24-hour period, and up to 14 hours on-duty (U.S. Department of Transportation, Federal Motor Carrier Safety Administration, 2010). Truck drivers must spend 10 consecutive hours off-duty before driving again. Some drivers team with a partner, and they may spend their entire off-duty time in their truck. With so much of their day devoted to their job, it may be difficult for truck drivers to find the time, energy, and location to exercise. Little is known about how truck drivers spend their off-duty hours, the feasibility of spending a portion of these hours exercising, or accessibility of exercise facilities during off-duty hours. Exercise has been shown to improve health among overweight and obese adults (Shaw, Gennat, O'Rourke, & Del Mar, 2006; U.S. Department of Health and Human Services, 2008). The purpose of this cross-sectional, non-experimental study was to examine the exercise habits and perceived barriers to exercise of a sample of commercial truck drivers.

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BACKGROUND AND SIGNIFICANCE

Benefits of Physical Activity

The U.S. Department of Health and Human Services (2008) Physical Activity Guidelines recommend that adults accumulate 150 minutes of exercise per week, or 30 minutes of exercise 5 days a week. These guidelines report that regular physical activity reduces the risk of

Applying Research to Practice

Commercial truck drivers work and live in an environment they perceive as not promoting a healthy lifestyle and placing them at risk for health conditions such as obesity and cardiovascular disease. The leading obstacles to exercising in this study were finding the time and place to exercise. Drivers showed interest in improving their lifestyles if more exercise options were available. Occupational health nurses can advocate for truck drivers by encouraging trucking companies and truck stops to offer a wider selection of facilities and safe areas for drivers to exercise and by providing exercise counseling to drivers.

many adverse health outcomes, that some physical activity is better than none, and that exercise-related health benefits occur for all ages and racial groups.

In a review of 43 studies, Shaw et al. (2006) found that exercise, especially when combined with diet, reduces body weight and cardiovascular disease risk factors among overweight or obese individuals. However, exercise alone was found to improve cardiovascular risk factors, even when no weight loss occurred. Individuals who participated in exercise interventions that did not include a diet component had statistically significant reductions in systolic and diastolic blood pressure, cholesterol, triglycerides, and fasting serum glucose. This is especially salient for truck drivers, whose cardiovascular health is poor as evidenced by elevated proportionate mortality ratios for ischemic heart disease and acute myocardial infarction (Robinson & Burnett, 2005).

The Obesogenic Environment

Built Environment. Environments may restrict physical activity by lacking access to safe recreation and recreation facilities (Booth, Pinkston, & Poston, 2005; Troped, Wilson, Matthews, Cromley, & Melly, 2010). Many studies have examined the association between the built environment and physical activity (Lovasi, Hutson, Guerra, & Neckerman, 2009; Troped et al., 2010). Improving access to exercise facilities and the conditions of environments where people spend their leisure time may increase the time spent in physical activity. However, these studies have focused on land-use mix in cities and neighborhoods more than in work environments. It is unclear how the built environment may influence individuals (e.g., truck drivers) who spend extended periods in their work environments and drive from community to community on a daily basis.

Truck drivers may identify several safety concerns in their work environment. Anderson, Westneat, and Reed (2005) noted that 67% of female drivers had feared for their personal safety during work time during the previous year. Although drivers could obtain exercise by walking around their trucks or in parking lots, the ability to do so in an environment that is safe (i.e., well-lit, monitored by security) often does not exist. Such safety concerns could result in drivers feeling uncomfortable leaving their trucks to exercise.

Worksite Exercise Programs. Worksites have begun offering on-site exercise programs, with some indications that this approach improves employees' health (Kashima, 2003; Sorensen, Stoddard, Ockene, Hunt, & Youngstrom, 1996). Several trucking companies offer employee wellness programs to their drivers (Associated Press, 2007; Kashima, 2003; Marketwire.com, 2009; Roberts & York, 1997; Truckinginfo.com, 2008). Some companies report that these wellness programs have reduced health care costs and lost workdays (Associated Press, 2007). Olson, Anger, Elliott, Wipfli, and Gray (2009) piloted a health promotion intervention for 6 months with a sample of 29 truck drivers from four companies. The researchers reported a statistically significant reduction in body mass index (BMI) from pre- to post-intervention, as well as improvement in dietary and exercise behaviors and knowledge. They noted a significant decrease in the consumption of fast food, sugary snacks, sugary drinks, and percentage of calories from fat and a significant increase in time spent in physical activity. Identifying the types of exercises truck drivers actually use and find feasible could improve worksite exercise programs.

Truck Drivers and Physical Activity

Initial steps to make exercise more feasible for truck drivers have been taken; however, the results of such steps are unclear. Beginning in the early 1980s, select truck stops began offering exercise rooms (Bontz, 1998; Hatfield, 1997; Shim, 2000). However, some of these truck stops reported that drivers did not use the facilities (Shim, 2000); the factors that deterred drivers from using these facilities were not reported. One article in an industry magazine highlighted exercises that could be used anywhere by truck drivers (Penny, 2005). More research is needed regarding the availability of exercise rooms and equipment and their use by truck drivers.

Truck Driver Health

The working conditions of truck drivers may predispose them to obesity, cardiovascular disease, diabetes, and other health conditions, including the risk of developing venous insufficiency and deep venous thrombosis (National Institutes of Health, 2010). Many studies that examined the health of truck drivers noted the prevalence of these health conditions (Korelitz et al., 1993; Reed & Cronin, 2003; Solomon, Doucette, Garland, & McGinn, 2004; Stasko & Neale, 2007). Obesity, cardiovascular disease, or diabetes may affect drivers' abilities to work safely (Krueger et al., 2007; Stoohs, Guilleminault, Itoi, & Dement, 1994; Treager, Tiller, & Price, 2007; Wiegand, Hanowski, & McDonald, 2009). Compounding the issue of health risks, truck drivers have difficulty accessing health care while on the road and many drivers have no health insurance (Reed & Cronin, 2003; Renner, 1998; Solomon et al., 2004).

METHODS

It is important to distinguish long-distance hauling from local hauling: long-distance hauling requires drivers to spend nights away from home (U.S. Department of Labor, Bureau of Labor Statistics, 2007), which may influence lifestyle behaviors including exercise. For this study, truck drivers were defined as commercial long-distance drivers who operate heavy trucks or tractor-trailers to transport goods (U.S. Department of Labor, Bureau of Labor Statistics, 2007).

Design

A cross-sectional, non-experimental design was used. A convenience sample of 300 participants was recruited from six truck shows in the United States between 2008 and 2009. This study focused on drivers' exercise habits when they were working away from home. The inclusion criteria limited the participants to drivers who (a) had been working as a commercial truck driver for at least 2 years; (b) were 23 years or older; (c) spoke English; (d) spent a minimum of 2 days overnight on the road per week or 8 days overnight per month; (e) were free of infection and other illnesses within the 2 weeks prior to enrollment; (f) did not have an implanted cardiac pacemaker or other implanted device; and (g) were not pregnant. The study was approved by the university's Institutional Review Board.

Participants who met inclusion criteria met individually with a member of the research team to complete the study protocol. On average, participants spent 20 minutes for their body measurements and self-administered questionnaire. Participants were compensated for their time and given written copies of their body measurements.

Measures and Instruments

A standardized survey of health and physical activity among truck drivers does not exist; the principal investigator developed the Obesity Risk Factor Questionnaire using concepts from environmental theories, health risk behavior surveys, and previous studies on truck drivers (Centers for Disease Control and Prevention, 2006; Korelitz et al., 1993; Kremers et al., 2006; Reed & Cronin, 2003; Renner, 1998; Solomon et al., 2004). This questionnaire, consisting of 30 multiple-choice and fill-in-the-blank questions, assessed physical activity, dietary habits, diagnoses of obesity-related diseases, and feasibility of exercising and eating properly while traveling. Most questions were scaled as ordinal or nominal. A panel of experts reviewed the survey and provided feedback on the appropriateness of variables. The survey was piloted with the first 50 study participants to ensure that it was easy to understand.

Thirteen questions addressed exercise habits and barriers. Drivers were asked to report how many of the past 7 days they engaged in aerobic, stretching, or strengthening exercise for 15 minutes or longer, how often they exercised for 30 continuous minutes in the past week, and if they exercised on a regular basis. Drivers were asked to check all items that applied in a list of possible barriers, with a space to add barriers that were not listed. Drivers were also asked whether exercise equipment was available when they traveled and whether they used the equipment.

BMI was measured for each participant. Body weight was measured using a digital scale (Omron HBF-500, Omron Healthcare, Inc., Bannockburn, IL), and height was measured with a portable stadiometer (Seca 214, SECA North America, Hanover, MD). BMI was calculated using the following formula: weight (lb)/[height (in)]^2 $\times$ 703 (Centers for Disease Control and Prevention, 2009). Measurements were taken without shoes, and scales were calibrated at the beginning of each data collection event.

Data Analysis

Analyses were conducted using SPSS for Windows, version 18.0. All surveys had less than 30% of data missing, so none of the surveys were excluded from the final analysis.

Analysis consisted of a descriptive examination of the variables, including frequency distributions, means, and standard deviations, as appropriate. Chi-square test of association and independent samples *t* tests were used to identify relationships between items on the Obesity Risk Factor Questionnaire. Logistic regression was used to identify factors that predicted exercise.

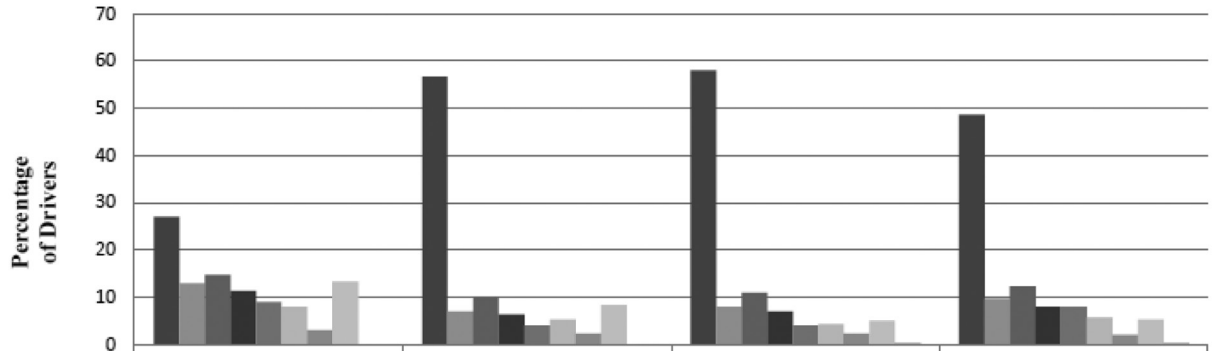
Some variables were re-categorized to fit the assumptions of the statistical test used. When appropriate, BMI was categorized into two groups: drivers with BMI of less than 30 (overweight and below) and drivers with BMI of 30 or higher (obese). Due to the low number of drivers who reported a BMI of less than 25, drivers with a BMI in the 25.0 to 29.9 (overweight) range were grouped with the normal weight group to create a more equal distribution of participants. Exercise habit variables were changed from ordinal to binary when the change was suitable to the test.

For logistic regression, a definition of exercise was identified. The U.S. Department of Health and Human Services (2008) Physical Activity Guidelines recommend that individuals accumulate 150 minutes of exercise per week, or 30 minutes of exercise 5 days a week. A question on the Obesity Risk Factor Questionnaire asked respondents to note how many of the past 7 days they exercised for 30 minutes continuously. A binary variable was created from this question dividing those who had exercised 5 days or more and those who exercised 4 days or less. Another binary variable was created from this question dividing those who had exercised at least 1 day of the past week and those who reported no exercise.

RESULTS

Demographics

The mean age of the sample was 47 years (*SD* = 10.0), ranging from 24 to 71 years. Most of the participants were male (86.3%). The racial and ethnic distribution was White (88.3%), Black (3%), Hispanic (2.8%), other (2.3%), Native American (2.0%), and Asian (0.3%) (no response, 1.3%). Based on BMI, the majority of par-



	Aerobic Exercise	Stretching Exercise	Strengthening Exercise	30 minutes Continuous Exercise
0 days	27	56.7	58	48.7
1 day	13	7	8	9.7
2 days	14.7	10	11	12.3
3 days	11.3	6.3	7	8
4 days	9	4	4	8
5 days	8	5.3	4.3	5.7
6 days	3	2.3	2.3	2
7 days	13.3	8.3	5	5.3
No response	0	0	0.3	0.3

Figure. Physical activity of commercial truck drivers in the past 7 days, expressed as percentage.

ticipants were overweight or obese (93.3% BMI ⩾ 25; mean BMI = 34.5 kg/m^2; *SD* = 7.1). In fact, 20.3% of the participants had BMIs in the overweight category (BMI = 25.0-29.9); 53% were in the obese category (BMI = 30-39.9), and 20% of participants were extremely obese (BMI ⩾ 40).

Reported Physical Activity

Exercise was minimal. Nearly 20% of participants did not engage in any type of exercise during the past 7 days. More than half reported exercising aerobically 3 days or less during the past week. More than one fourth engaged in no aerobic exercise at all during the past week. The majority did no stretching or strengthening exercise in the past week. Nearly half reported they did not engage in 30 minutes of continuous exercise on any of the previous 7 days (Figure).

Some types of exercise were associated with drivers' BMIs. The mean number of days per week that a truck driver with BMI of less than 30 did stretching exercises was significantly higher than that for those drivers with BMI of 30 and greater (t_{124} = 2.38; p = .02). The mean number of days per week that a truck driver with BMI of less than 30 did strengthening exercises was significantly higher than that for those with BMI of 30 and greater (t_{125} = 2.60; p = .01).

Perceived Exercise Environment

Nearly 75% of participants rated the exercise environment in a typical work week as "never available/terrible" (32%) or "usually not available/bad" (40%). Nearly 75% of participants reported that exercise equipment was not available when they were on the road; only 4.7% reported that exercise equipment was readily available while traveling. Most drivers (59%) surveyed said they would use an exercise room with weight-lifting equipment and aerobic machines if it were available at truck stops. However, when exercise equipment was available, most responders said they never used it (59.7%) or used it "some of the time" (30.7%). Only 9% said they used it "always" or "most of the time." Most participants (72.7%) said it was easier to exercise at home than when traveling.

Perceived Barriers to Exercising

Overall, drivers cited lack of time (66.7%) and lack of exercise facilities (45.3%) as the primary barriers to exercising while traveling for work. Concern for safety (7.3%), health limitations (6.3%), and cost (4.3%) were additional barriers drivers identified. Some drivers reported places to exercise were available but were always too crowded (3.7%). Additional reasons drivers had difficulty exercising while traveling are listed in Table 1. When exercise equipment was available, the most popular reason selected for not using it was "not enough time" (71%).

Various exercise barriers were compared to whether a driver was obese (BMI ⩾ 30) or not obese (BMI < 30). Obese drivers were more likely to perceive that exercise equipment was not available (χ^2 (1, N = 297) = 6.22; p = .01), to report no exercise facilities were available (χ^2 (1, N = 297) = 6.39; p = .01), to rate the exercise environment as terrible or bad (χ^2 (1, N = 297) = 11.3; p = .01), and to report difficulty exercising due to personal health (χ^2

(1, N = 297) = 4.84; p = .03). These variables were also compared to whether a driver reported routine exercise. A significant association was found between the presence of one health condition and not exercising routinely (χ^2 (1, N = 297) = 4.76; p = .03). Finally, variables were compared to whether a driver reported at least one health condition. Drivers who reported at least one health condition engaged in less aerobic exercise (t_{292} = 2.63; p = .01) and fewer strengthening exercises (t_{244} = 2.65; p = .01), did not exercise for 30 minutes continuously (t_{258} = 1.93; p = .05), and had a higher BMI (t_{292} = 2.63; p = .01).

Work Intensity. Nearly 40% of the participants responded that they had been traveling for their job every day of the past week, with most of the other participants spending the past 4 to 6 days traveling (4 days, 11%; 5 days, 23%; 6 days, 11%). Only 4% of participants had not been traveling for work during the past week.

Spending non-driving time in the truck while a partner was driving was significantly associated with several variables. The mean number of days per week that a driver did aerobic exercises (t_{297} = 2.90; p < .01), strengthening exercises ($t_{87.14}$ = 2.44; p = .02), or 30 minutes of continuous exercising ($t_{81.21}$ = 2.47; p = .02) was significantly higher for those who did not spend non-driving time in the truck with a partner driving than for those who did. Furthermore, drivers who spent their non-driving time in their trucks while partners drove were less likely to exercise routinely (χ^2 (1, N = 297) = 6.77; p = .01).

Table 1

Reasons Commercial Truck Drivers Have Difficulty Exercising While Traveling (n = 297)

Reason	*%*
Not enough time	66.7
Nowhere to go to exercise	45.3
A place to exercise exists, but concerned about my safety	7.3
My health limits what I can do physically	6.3
A place to exercise exists, but it costs too much to use	4.3
A place to exercise exists, but it is always too crowded	3.7
Other[a]	
"Not motivated"	2.7
"Too tired"	2.3
"No truck parking"	0.7
"Hard to get 18 wheeler to weight gyms"	0.3
"Husband won't let me go"	0.3

Note. *Multiple answers were allowed.* [a]*Reason not listed as an option to select; participant wrote in reason.*

Predictors of Exercise

For the logistic regression, two models were examined. The first, model A, had as its dependent variable the exercise variable that adhered to the U.S. Department of Health and Human Services (2008) Physical Activity Guidelines of exercising 30 minutes a day, 5 days a week. Because this definition of the exercise variable has limited variability, a second model, model B, was developed using a more general variable of any exercise reported in the past week. The independent variables were selected based on the literature and bivariate analysis. In both models, variables were included and removed to distinguish the influence they had on the overall model.

Model A, which included four variables, was significant, χ^2 (4, N = 289) = 30.98, p < .001 (Table 2). Drivers who perceived that exercise equipment was available were 2.58 times more likely to report that exercise equipment was available while traveling. Perceived availability of time to exercise was also a significant predictor; those who reported exercising for 5 days or more were 0.30 times less likely to report not having time to exercise. Finally, number of health conditions was a significant predictor; those who reported exercising 5 days or more were 0.63 times less likely to have multiple health conditions.

Model B included four variables and was also significant, χ^2 (4, N = 294) = 23.77, p < .001 (Table 3). Drivers who exercised were twice as likely to report that exercise equipment was available while traveling. Perceived avail-

Table 2

Logistic Regression Model A for Predicting Likelihood of Exercising 30 Minutes a Day for 5 Days of the Past 7 Days (n = 298)

	OR	*95% CI for OR*	χ^2	p
Perceived availability of exercise equipment	2.58	1.48-4.47	11.27	.001
Perceived availability of time to exercise	0.30	0.15-0.63	10.21	.001
Number of health conditions reported	0.63	0.41-0.98	4.17	.04
Age	1.03	0.99-1.06	1.80	.18

Note. *OR = odds ratio; CI = confidence interval. Analysis conducted only for those participants with complete data on all variables included in the model.*

Table 3

Logistic Regression Model B for Predicting Likelihood of Exercising 30 Minutes a Day at Least 1 of the Past 7 Days (*n* = 294)

	OR	*95% CI for OR*	χ^2	*p*
Perceived availability of exercise equipment	0.54	0.32-0.90	5.50	.02
Perceived availability of time to exercise	0.30	0.15-0.63	10.21	.001
Number of days traveled for work in past week	0.49	0.28-0.84	6.78	.01
Age	0.99	0.96-1.01	1.34	.25

Note. *OR = odds ratio; CI = confidence interval. Analysis conducted only for those participants with complete data on all variables included in the model.*

ability of time was also significant in this model; those who exercised were 0.30 times less likely to report not having time to exercise. Number of health conditions was not significant in this model, being replaced by number of days spent traveling in the past week (odds ratio = 0.49). Those who exercised at least 1 day in the past week were 0.49 times less likely to have been traveling for work for 5 days or more in the past week.

DISCUSSION

Most truck drivers in this study had not exercised at all in the previous week, failing to meet the physical activity recommendations put forth by the U.S. Department of Health and Human Services (2008). Personal physical factors, particularly BMI and the presence of health conditions, influenced exercise. More research is needed regarding which types of exercise are most beneficial for weight loss among long-haul truck drivers. Regardless of weight loss, research indicates that exercise alone still benefits health. In their study of exercise benefits, King, Hopkins, Caudwell, Stubbs, and Blundell (2009) reported that participants who did not meet their expected weight loss goals still had improvements in blood pressure, waist circumference, and resting heart rate. As such, drivers should be encouraged to exercise regularly. Participants in this study did more aerobic exercise than other types of exercise; therefore, drivers may perceive this type of exercise as the most achievable or valuable. Thus, the first step in increasing physical activity among truck drivers may be encouraging drivers to do more aerobic exercise. It would also be beneficial to educate drivers about the positive effects of all forms of exercise.

Obese (BMI = 30+) drivers were more likely to report barriers to exercise. Obese drivers were more likely to report at least one health condition restricting their ability to exercise. In addition to the health risks associated with obesity, obese drivers are at increased risk for unintentional injuries and accidents related to their decreased ability to maneuver in and around the vehicle and fatigue associated with sleep apnea (Krueger et al., 2007; Stoohs et al., 1994; Wiegand et al., 2009). In a review of 15 studies, Cheater et al. (2005) concluded that tailored interventions may improve care and client outcomes. Given the additional risks and barriers, obese drivers may benefit from an intervention tailored to address their needs. A tailored intervention offering a quick workout that required little or no equipment would address this group's perceived barriers to exercising. For example, an intervention could be structured into 10-minute workouts that drivers did three times a day. Such workouts could be as simple as walking, jumping rope, stretching, or using resistance bands.

In the predictive models of exercise, BMI was not a significant predictor. Although exercise is important for health, exercise alone may not directly influence weight. Shaw et al. (2006) noted that exercise alone resulted in only small weight losses, whereas exercise combined with diet resulted in much greater weight losses. These researchers further noted that exercise combined with diet resulted in more weight loss than dieting alone (Shaw et al., 2006). When educating truck drivers about the benefits of exercise, it is important for occupational health nurses to highlight that although exercise alone can improve cardiovascular health, if drivers also wish to lose weight they need to incorporate a calorie-restricted diet into their lifestyles. In addition to cardiovascular benefits, nurses should note other benefits of exercise. For example, exercise improves bone health, reduces back pain, improves insulin sensitivity, relieves stress, anxiety, and depression, and boosts energy levels (Warburton, Nicol, & Bredin, 2006).

Overall, this study demonstrated that truck drivers perceived they worked in an environment that does not promote exercise. Most participants reported that the exercise environment was poor and that exercise equipment was not available while traveling. Unless drivers carried their own exercise equipment, exercise was not easily accomplished. Despite stating they would use exercise rooms if they were available at truck stops, most drivers in this study also said they did not use exercise equipment when it was available to them. The most significant obstacle to exercising was finding time to exercise. The U.S. Department of Labor, Bureau of Labor Statistics (2007) reports that many drivers work to the maximum time permitted because they are usually compensated by the number of miles they drive. Truck drivers may have opportunities to exercise when they are not driving (i.e., trucks are being loaded or unloaded, they are waiting for their next assignments, or trucks are undergoing maintenance).

This analysis indicates that although drivers are interested in exercising more, they do not perceive it as feasible in the current environment. Drivers who spend most of their non-driving time in the truck while their partners drive were also less likely to exercise regularly. Partnered drivers appear to spend the majority of their days in the truck while the truck is in motion, limiting the type and amount of exercise they can feasibly perform. This sedentary and confined lifestyle also increases these drivers' risk for certain health conditions (e.g., obesity, cardiovascular disease, diabetes, venous insufficiency, and deep venous thrombosis) (National Institutes of Health, 2010). Perhaps one way to address this issue would be for the work organization to require team drivers to spend time out of the truck.

Limitations

A convenience sample was used for this study, so results cannot be generalized to the entire truck driver population. Except for body measurements, the data in this study were self-reported by drivers. Because the work environment and equipment were not directly observed, the perception of barriers to exercise may differ from reality. More research is needed to determine if the perceived barriers to exercise match the actual work environment.

IMPLICATIONS FOR OCCUPATIONAL HEALTH NURSES

Commercial truck drivers are an occupational group at high risk for obesity and health problems. Increasing physical activity among truck drivers may improve the health of this work force. Occupational health nurses can address many of the barriers identified in this study, specifically barriers in the physical environment and the work organization, along with education about exercise and its health benefits. Occupational health nurses need to advocate for not only increased availability of exercise equipment at truck stops, trucking hubs, and drop points, but also free or reduced costs when using the exercise equipment.

Occupational health nurses can work with industry to create time blocks devoted to exercise. For example, a 10- to 15-minute time block while trucks are unloaded could be used by drivers for a walk. As noted earlier, the U.S. Department of Health and Human Services (2008) reports that some exercise each day is better than no exercise. Perhaps short periods for exercise could be a first step to increasing physical activity in this population.

Drivers reported a lack of motivation for exercise and being too tired to exercise. Occupational health nurses can provide health education and health coaching to drivers about the benefits of exercise to motivate drivers to increase their physical activity. Puetz, Flowers, and O'Connor (2008) found that exercise improved fatigue; drivers who increase their physical activity may find they are less tired. Fatigue and sleepiness are associated with higher risk for driving accidents (Robb, Sultana, Ameratunga, & Jackson, 2007). Therefore, reducing fatigue through increasing exercise could also improve safety on the road. A tailored intervention for obese drivers may be especially beneficial to assist these drivers in overcoming perceived barriers.

Examining exercise habits and perceived barriers to exercise may enlighten worker health programs. By learning more about how drivers can find time and places to exercise, and about the obesogenic environment for truck drivers, nursing interventions can be developed to reduce drivers' perceived barriers to exercise and promote physical activity.

This research could potentially be broadened to other professions. For a variety of professions, workers' environments could influence their ability to engage in regular physical activity. For example, airline pilots, flight attendants, and railroad workers may experience similar lifestyles and barriers to healthy lifestyle options, including exercise.

This study adds to limited knowledge about the health and lifestyle behaviors of commercial truck drivers, especially pertaining to physical activity while traveling for work, and sets the stage for further exploration into the role of exercise and health in this vulnerable work force. The results of this study will improve researchers' understanding of the exercise habits of truck drivers and their perceived barriers to exercise so that appropriate interventions to increase physical activity in this occupational group can be developed. More research is needed regarding appropriate interventions tailored to increasing physical activity among truck drivers.

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