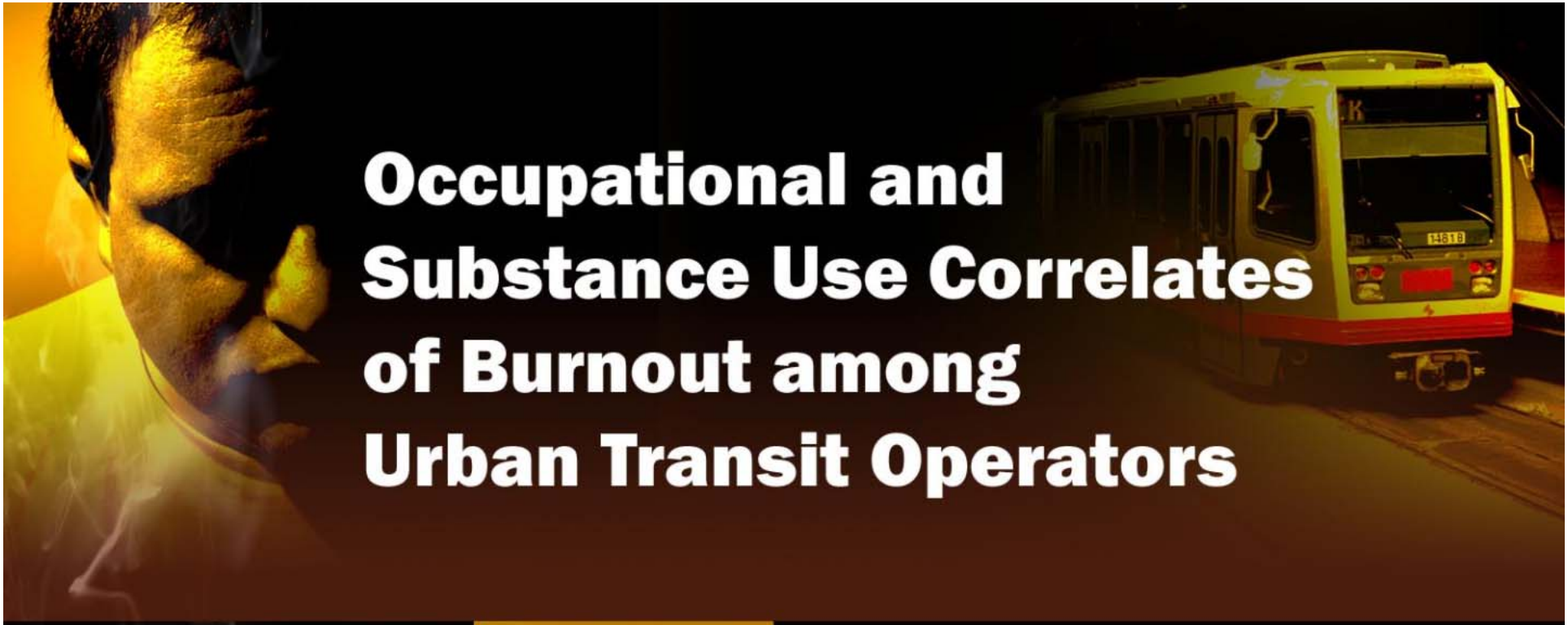

Occupational and Substance Use Correlates of Burnout among Urban Transit Operators

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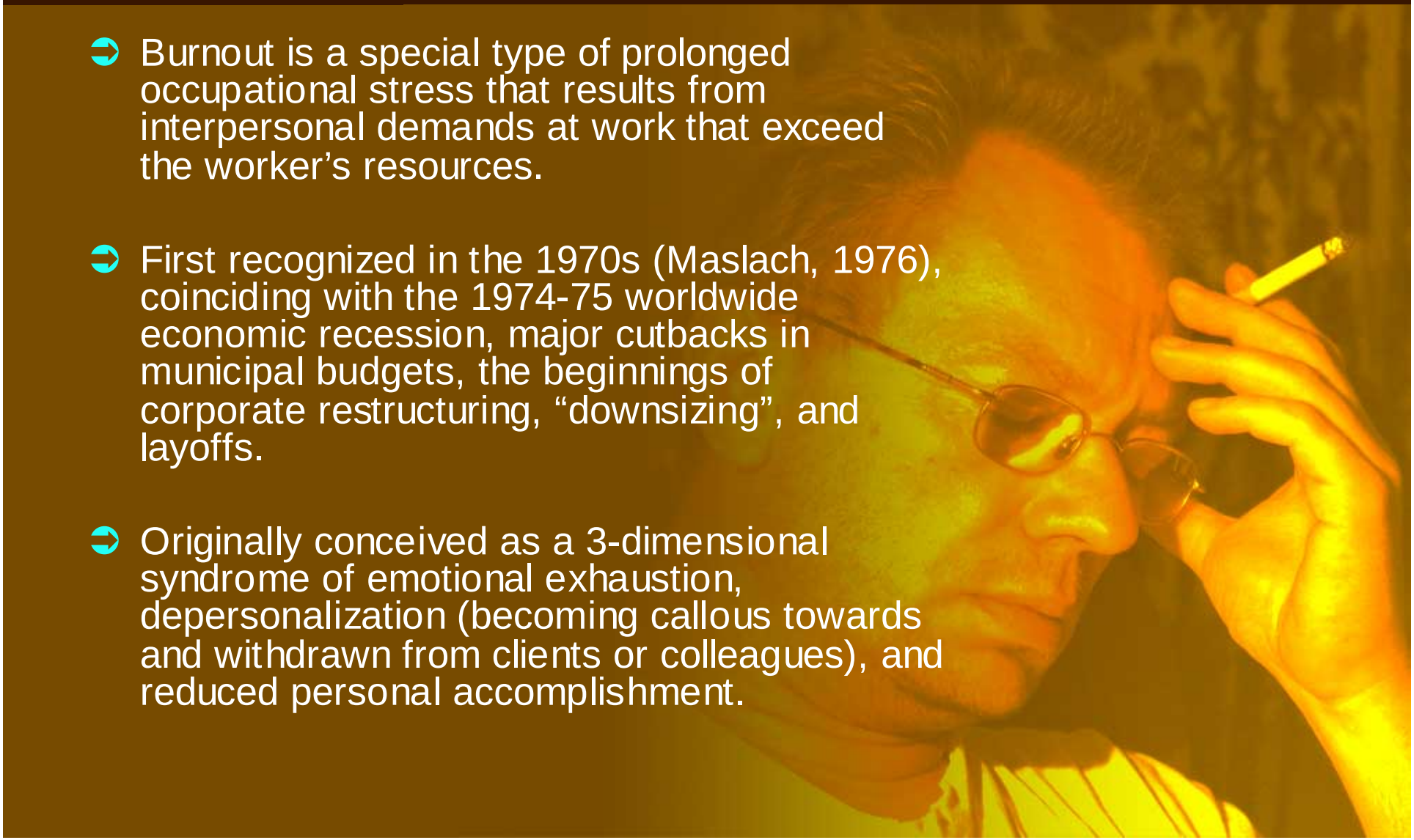
Background: What is Burnout?



- Burnout is a special type of prolonged occupational stress that results from interpersonal demands at work that exceed the worker's resources.
- First recognized in the 1970s (Maslach, 1976), coinciding with the 1974-75 worldwide economic recession, major cutbacks in municipal budgets, the beginnings of corporate restructuring, "downsizing", and layoffs.
- Originally conceived as a 3-dimensional syndrome of emotional exhaustion, depersonalization (becoming callous towards and withdrawn from clients or colleagues), and reduced personal accomplishment.

Background: Relevance of burnout to occupational health

- Burnout has significant consequences for the worker, including:

- Psychosomatic and Psychological Problems (headaches, gastrointestinal illness, hypertension, muscle tension, chronic fatigue, anxiety, depression, sleep disturbances)

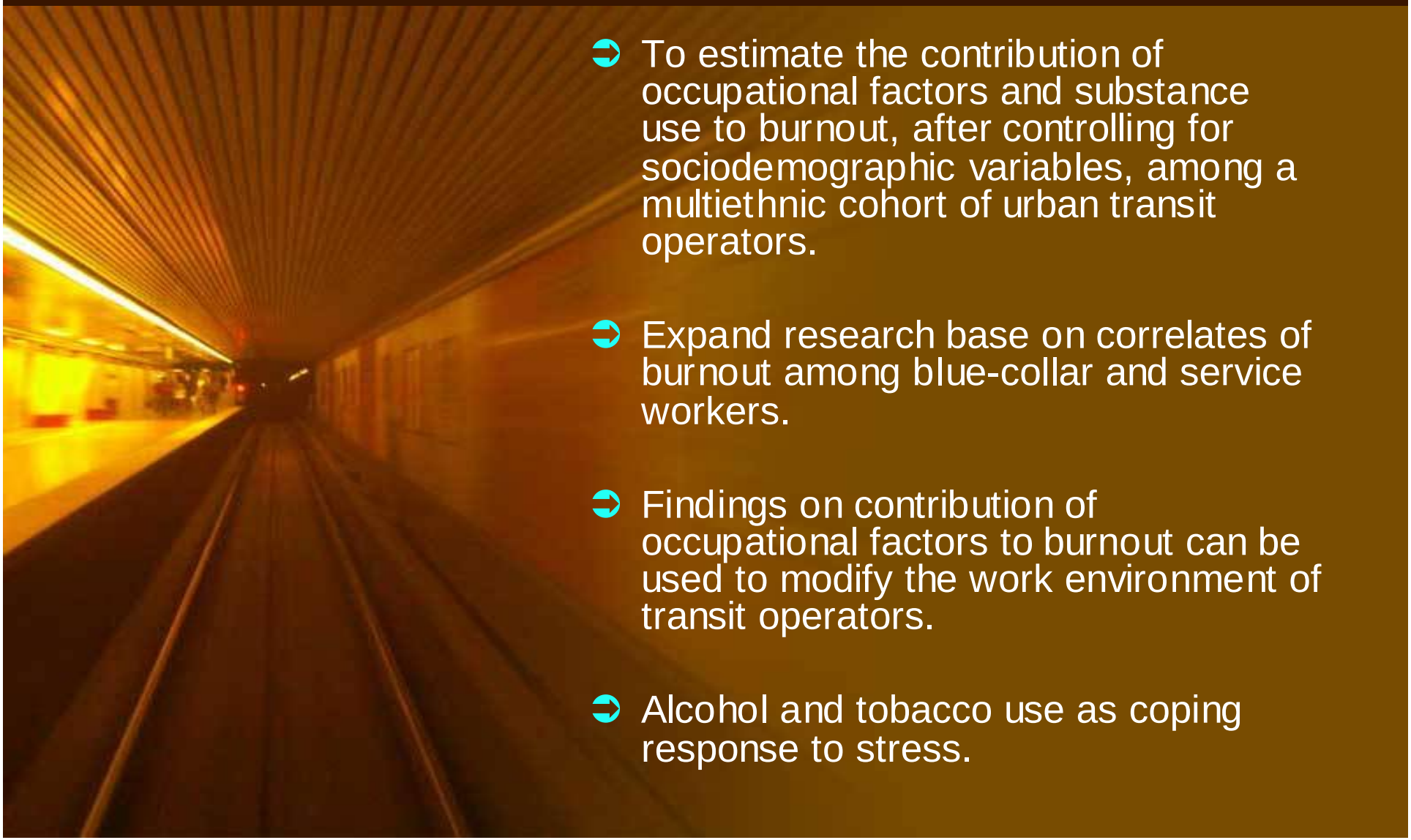
- Negative Job Consequences (absenteeism, job turnover).

Background: Why study burnout among urban transit operators?

- Stressors for bus drivers include poor cabin ergonomics, rotating shift patterns and inflexible running times, and traffic (Tse, Flin and Mearns, 2006).

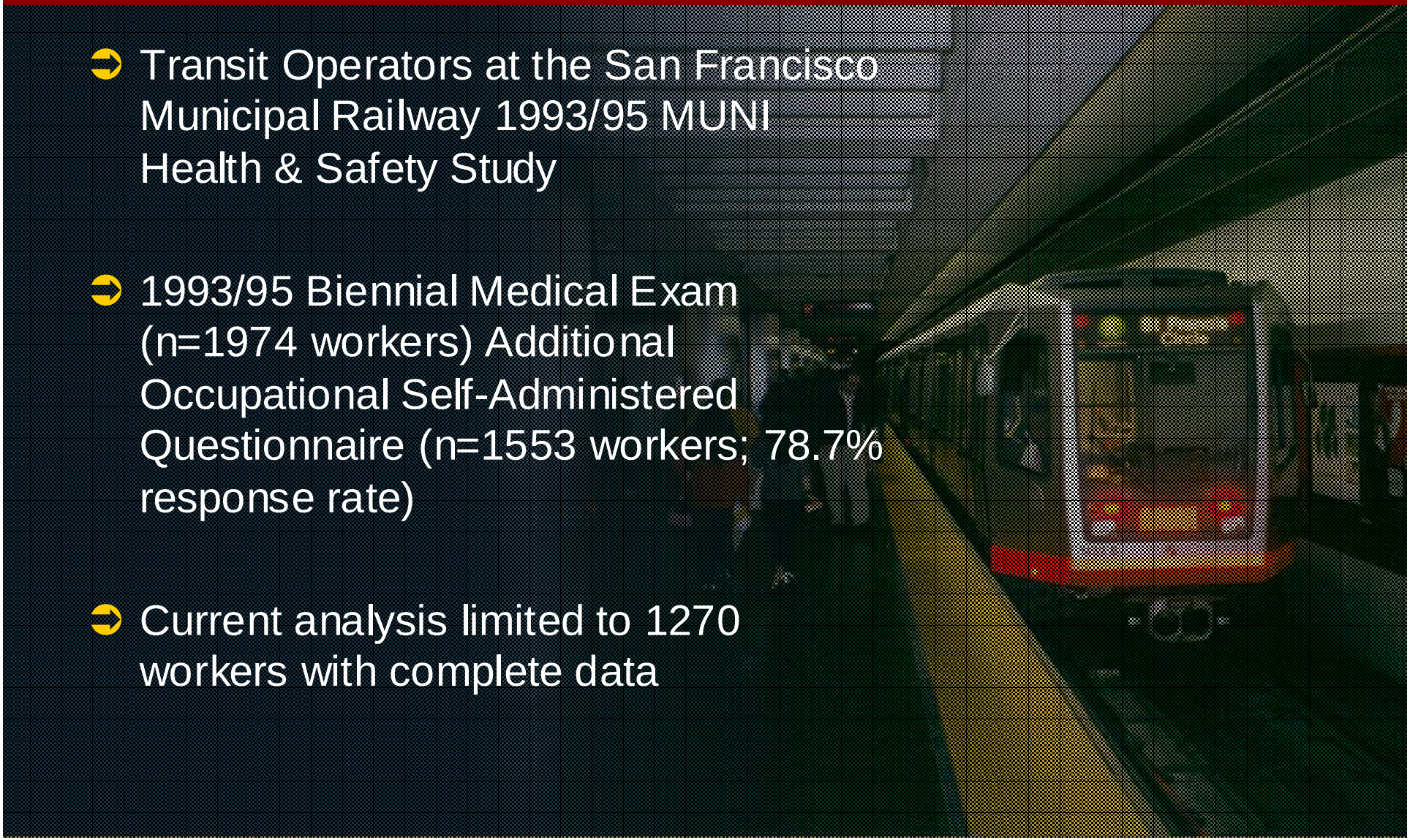
- Increasingly, transit operators are faced with on-the-job interpersonal demands, such as providing assistance to underage, elderly, indigent, or substance-abusing passengers, enforcing security on their vehicles, acting as "ambassadors" to the riding public, and being confronted by hostile or violent passengers.

Study Goal



- To estimate the contribution of occupational factors and substance use to burnout, after controlling for sociodemographic variables, among a multiethnic cohort of urban transit operators.
- Expand research base on correlates of burnout among blue-collar and service workers.
- Findings on contribution of occupational factors to burnout can be used to modify the work environment of transit operators.
- Alcohol and tobacco use as coping response to stress.

Employee setting and sample



- Transit Operators at the San Francisco Municipal Railway 1993/95 MUNI Health & Safety Study
- 1993/95 Biennial Medical Exam (n=1974 workers) Additional Occupational Self-Administered Questionnaire (n=1553 workers; 78.7% response rate)
- Current analysis limited to 1270 workers with complete data

Sample Characteristics

Characteristic	Number (%)
Mean Age (SD)	46.7 (7.8)
African American	681 (53.6)
Other Race/ethnicity	590 (46.4)
Male	1068 (84.0)
Female	203 (16.0)
Married	829 (65.2)
Non-Married	442 (34.8)
Mean Years Employed (SD)	12.4 (7.8)
Drive Full-Time	1138 (89.5)
Drive Part-Time	133 (10.5)
Former Smoker	332 (26.1)
Current Smoker	357 (28.1)
Never Smoker	582 (45.8)
Current Drinkers	805 (63.4)

Outcome Variable: Burnout

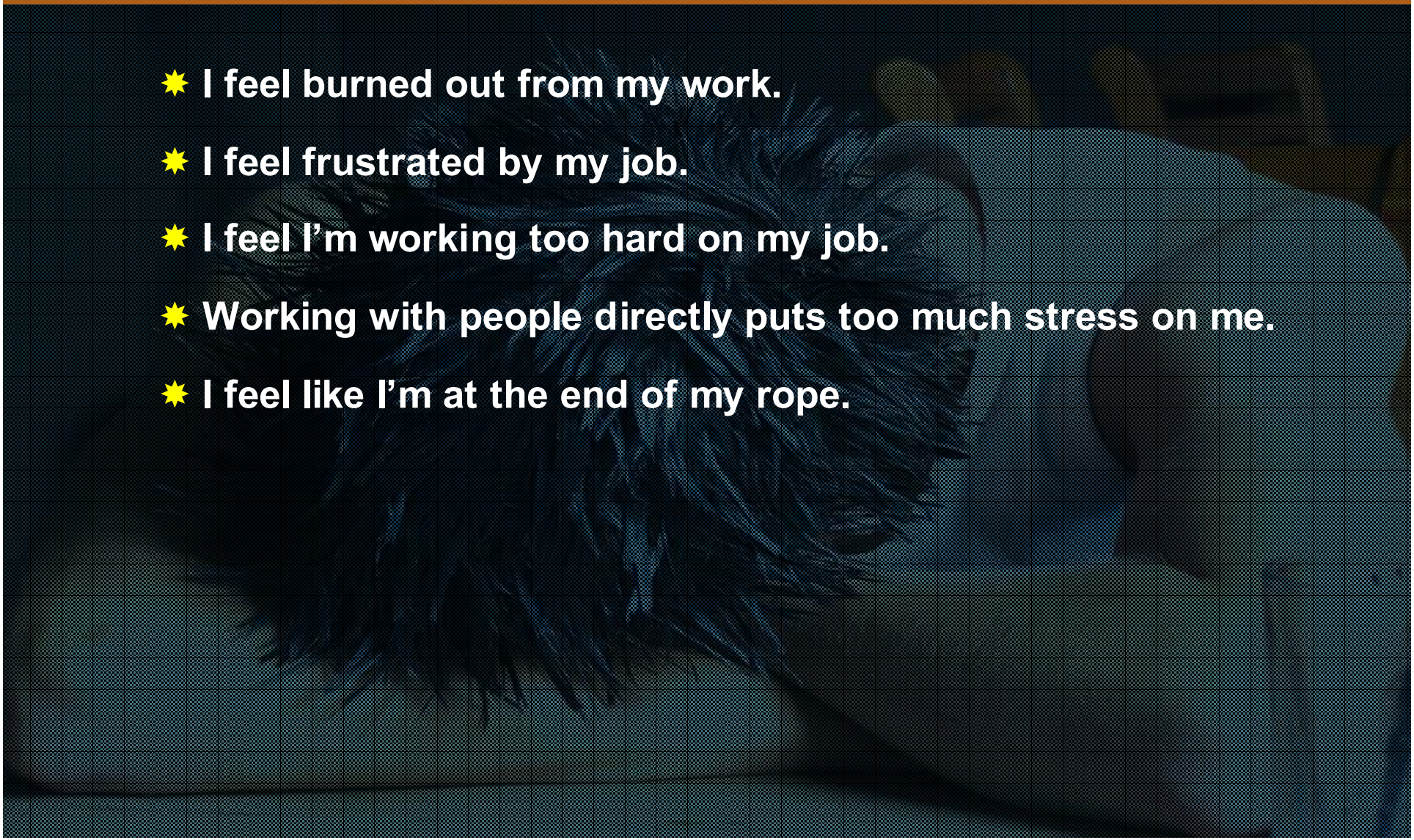
- Emotional Exhaustion scale - Maslach Burnout Inventory.

  "How often do you feel the following?"
  (Every day, a few times a week, once a week, a few times a month, once a month or less, never)

  - **I feel emotionally drained from my work.**
  - **I feel used up at the end of the work day.**
  - **I feel fatigued when I get up in the morning and have to face another day on the job.**
  - **Working with people all day is really a strain for me.**

  Cronbach's α=.94

Outcome Variable: Burnout (Continued)



- I feel burned out from my work.
- I feel frustrated by my job.
- I feel I'm working too hard on my job.
- Working with people directly puts too much stress on me.
- I feel like I'm at the end of my rope.

Independent Variables: Occupational Correlates

- Frequency of Job Problems
- Ergonomic Problems
- Years Driving as a Transit Operator
- Full- or Part-Time Work

Occupational Factors:
Frequency of Job Problems

"How often does this happen to you?"
(Daily, weekly, monthly, yearly or less often, never)

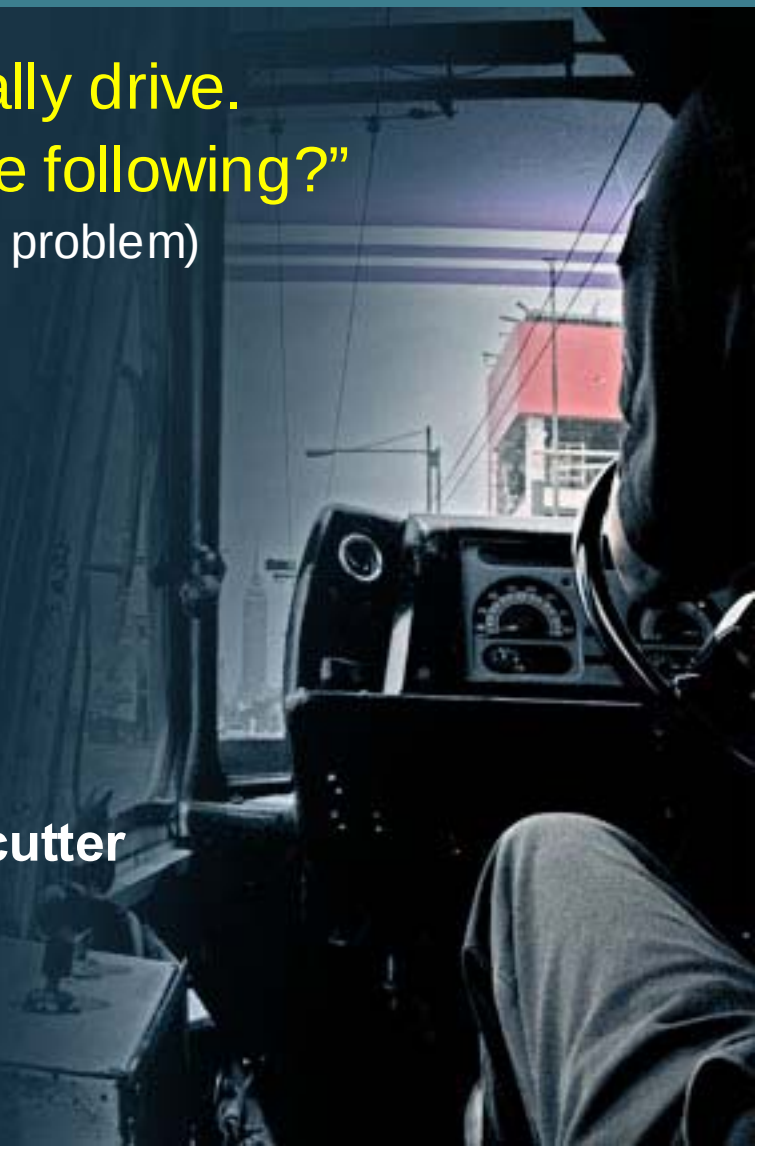
- Equipment problems
- Problems with fares and transfers
- Too many passengers
- Problems caused by passengers
- Problems caused by coworkers
- Problems with supervisor
- Long or odd hours
- Written up for rule violation
- Unfairly written up for rule violation
- Minor accident with no injuries
- Serious accident with injuries
- Accident that is your fault
- Serious traffic or road problems
- Problems with other vehicles
- Crimes against you while on duty
- Crimes against your passengers
- Poor access to restrooms
- Not maintaining run schedule
- Problems communicating with central control

Cronbach's α=.86

Occupational Factors:
Ergonomic Problems

"Think of the type of vehicle you usually drive.
How much of a problem is each of the following?"
(No problem, small problem, some problem, a big problem)

- **Adjusting the seat**
- **Back support**
- **Vibration, rocking, or bouncing of seat**
- **Steering**
- **Reaching across the wheel**
- **Position of the cash box and transfer cutter**
- **Adjusting mirrors**
- **Heat, cold or draft**



Substance Use

- **Smoking**
  Workers were categorized as current smokers, former smokers, or never smokers

- **Alcohol Use**
  Past-year usual quantity and frequency of alcohol consumption

Analytic Strategy

- Linear regression models were developed to estimate the contribution of occupational factors and substance use to burnout.
- Control variables: Gender, race/ethnicity, age, marital status.
- All analyses were conducted with the SPSS 14.0.

Standardized coefficients from linear regression model of burnout among transit operators

	Beta	t	Sig.
Constant		-.070	.944
Age	-.108	-3.608	<.001
African American	-.047	-1.784	.075
Male	.025	.876	.381
Married	-.012	-.484	.629
Former Smoker	-.036	-1.355	.176
Current Smoker	.029	1.078	.281
Alcohol Quantity*Frequency	.075	3.032	.002
Drive Full Time	.059	2.358	.019
Years Driving	.007	.213	.831
Height	.014	.482	.630
Weight	.028	1.038	.299
Job Problems	.435	16.419	<.001
Ergonomic Problems	.122	4.656	<.001
R^2 = .304			

Discussion

- Age was negatively correlated with burnout (Beta=-.108, p< .001), which may reflect a healthy worker effect.
- Quantity/frequency of alcohol consumption was positively associated with burnout (Beta=.075, p= .002), but there was no association for smoking.
- Frequency of job problems (Beta=.435, p< .001) and ergonomic problems (Beta=.122, p< .001), adjusted for height and weight, were positively associated with burnout.
- Driving full-time was correlated with burnout (Beta=.059, p=.02), but there was no association with years driving as a MUNI operator.

Study Limitations

- Missing data
- Cross-sectional study design
- Self-reported measurement of alcohol

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Study Strengths

- Investigation of burnout among an occupational blue-collar cohort
- Psychosocial and physical work environments
- Inclusion of alcohol and tobacco use

Conclusion

- The public health perspective suggests that burnout is not a problem of individuals, but rather a result of the social environment in which people work (Maslach & Leiter, 1997).
- Because aspects of the psychosocial and physical work environments can be modified, these findings have important policy implications for the prevention of burnout among municipal transit operators.
- Environmental policies:
  - Dedicated transit areas
  - Reduction of non-transit vehicles in downtown areas
  - Transit flow strategies
  - Ergonomic evaluation and redesign

Thank You