DEPRESSIVE SYMPTOMS IN ADOLESCENCE AS A PREDICTOR OF YOUNG ADULT EMPLOYMENT OUTCOMES

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Acknowledgements

The Transitions RTC aims to improve the supports for youth and young adults, ages 14-30, with serious mental health conditions who are trying to successfully complete their schooling and training and move into rewarding work lives. We are located at the University of Massachusetts Medical School, Worcester, MA, Department of Psychiatry, Systems & Psychosocial Advances Research Center. Visit us at:

http://labs.umassmed.edu/transitionsRTC/index.htm

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Adolescents with depression

Adolescence and young adulthood:

- Unique psychosocial developmental period
- Career exploration activities are age-typical and have lasting impact on long-term career trajectory

Depression is common:

- 1 in 10 have at least one depressive episode by age 14
- Between ages 15-18 depression prevalence of 14%
- Relapse rates of major depression are high

Effects of adolescent depression

- Depression or other mental illness can negatively affect later life outcomes:
  - Low education attainment
  - Low employment rates
  - Low self-efficacy or other psychosocial traits
  - Poor physical health

  (see Needham, 2009; Breslau et al, 2008; Keenan-Miller et al, 2007; Bandura et al, 1999)

National Longitudinal Study of Adolescent to Adult Health

Nationally representative survey of high school students that began in 1994-95 academic year

Stratified random sampling of U.S. schools (n=80)

Wave 1: 84% of sample between 14-18 years old
Wave 4: participants between 24-32 years old

Questions on health and well-being, including depressive symptoms and education/employment, parent questions

Unweighted sample size ~15,700
Complex Sampling Weights Added

Previous Add Health findings

- Adolescent Depression:
  - Lower employment rates,
  - Lower earnings (Fletcher, 2013)
  - Lower education attainment (Fletcher, 2008; Needham, 2009)
- Did not address quality of employment

“Quality” of employment

Secondary Labor Market: jobs that are unstable, that offer low wages and benefits, and limit opportunities for advancement

Nonstandard work arrangements: part-time, short-term, or temporary employment, often associated with low wages and benefits, lack occupational complexity, job instability

Standard work arrangements: high wages/stable wages, good benefits, good working conditions, autonomy & control

Individuals with Mental Illness

Most of this research has been cross-sectional with older adults with SMI who were returning to workforce

Adults with serious mental illness (SMI) often hold secondary labor market jobs

- Jobs that require little to no skill
- Service or labor industry
- Few benefits
- Part time
- Low occupational rankings

Frequently report low satisfaction with job

(see Harnois & Gabriel, 2000; Baron & Salzer, 2000; Cook et al., 2014; Lancetot et al., 2011)

Research Questions

What is the impact of adolescent depressive symptoms on various indicators of employment quality in young adulthood?

- Relationship to career goals
- Satisfaction
- Health benefits
- Repeated tasks

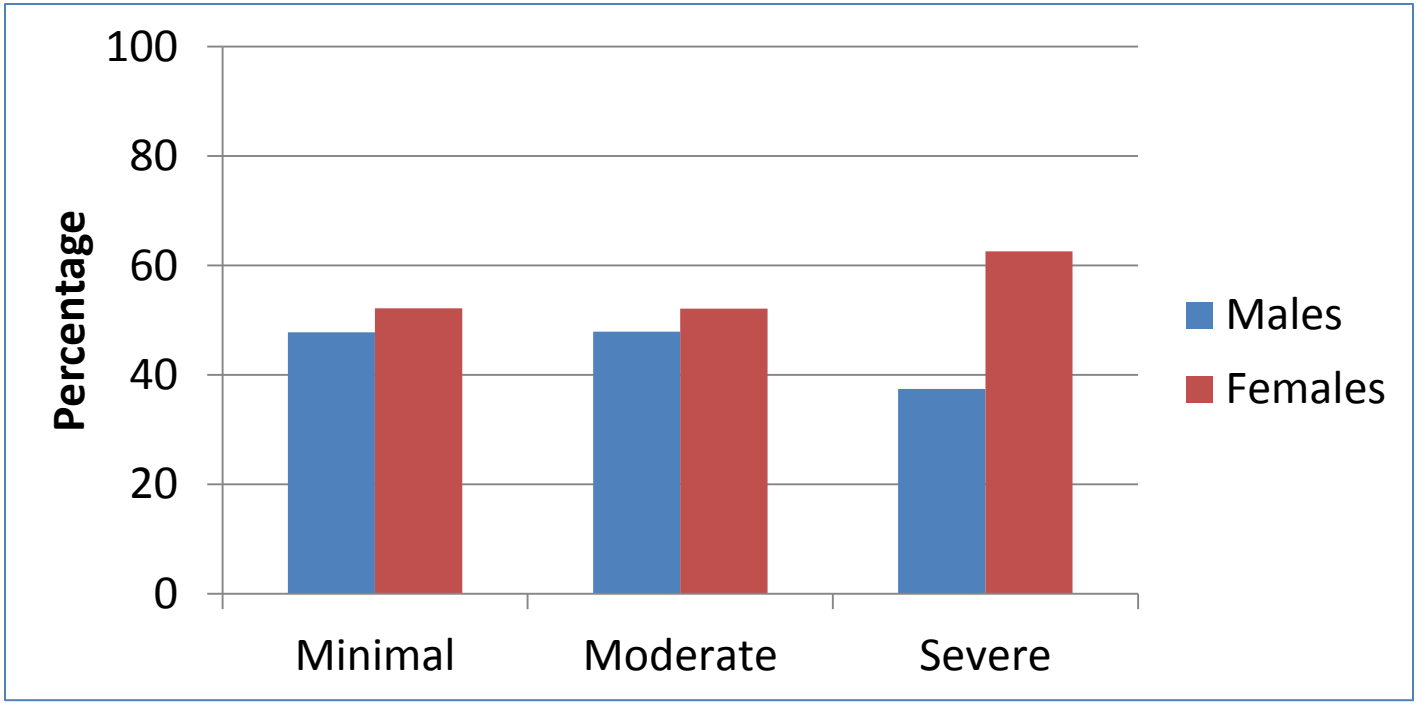
Significance:

- Inform teachers, parents and service workers
- Highlight importance of continued focus on career trajectories for young people with depression
- Add to limited longitudinal picture

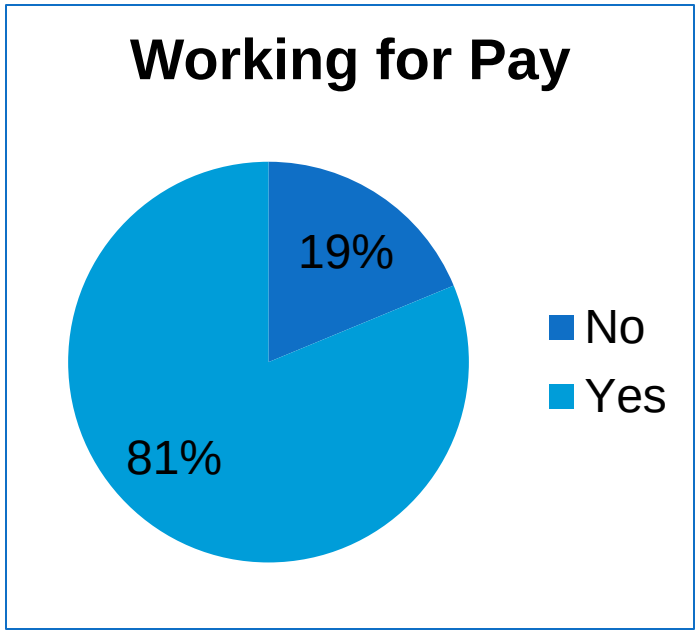
METHODS AND DATA

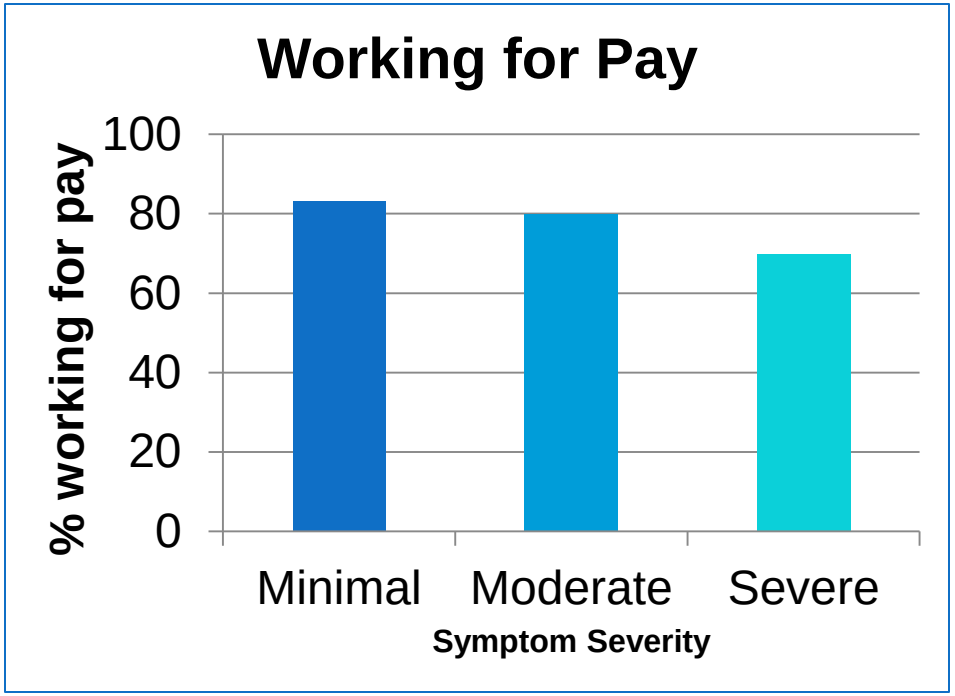
Adolescent Depression: Wave 1

- CES-D-19 measure of depressive symptoms
- Imputed means for missing items
- More than 3 items missing, excluded
- Cut-off measures different for boys and girls



Working for Pay: Wave 4





Analysis Plan

- Bivariate and multivariate regression predicting several indicators of employment quality in young adulthood:
  - Job Satisfaction
  - Relationship to Career Goals
  - Availability of Healthcare Benefits
  - Frequency of Repeated Tasks

Limited to those working 10 hours a week or more

Two stage multivariate modeling:

1. Wave 1 (adolescent) variables only
2. Wave 4 (young adulthood) variables added

STATA v.13 used for all analyses

Wave 1 Demographic Data

- Gender
- Race: White non-Hispanic, Black non-Hispanic, Hispanic, Other
- Age

- Add Health Picture Vocabulary Test (AHPVT)
  - Measure of verbal IQ
  - Translated into percentile scores

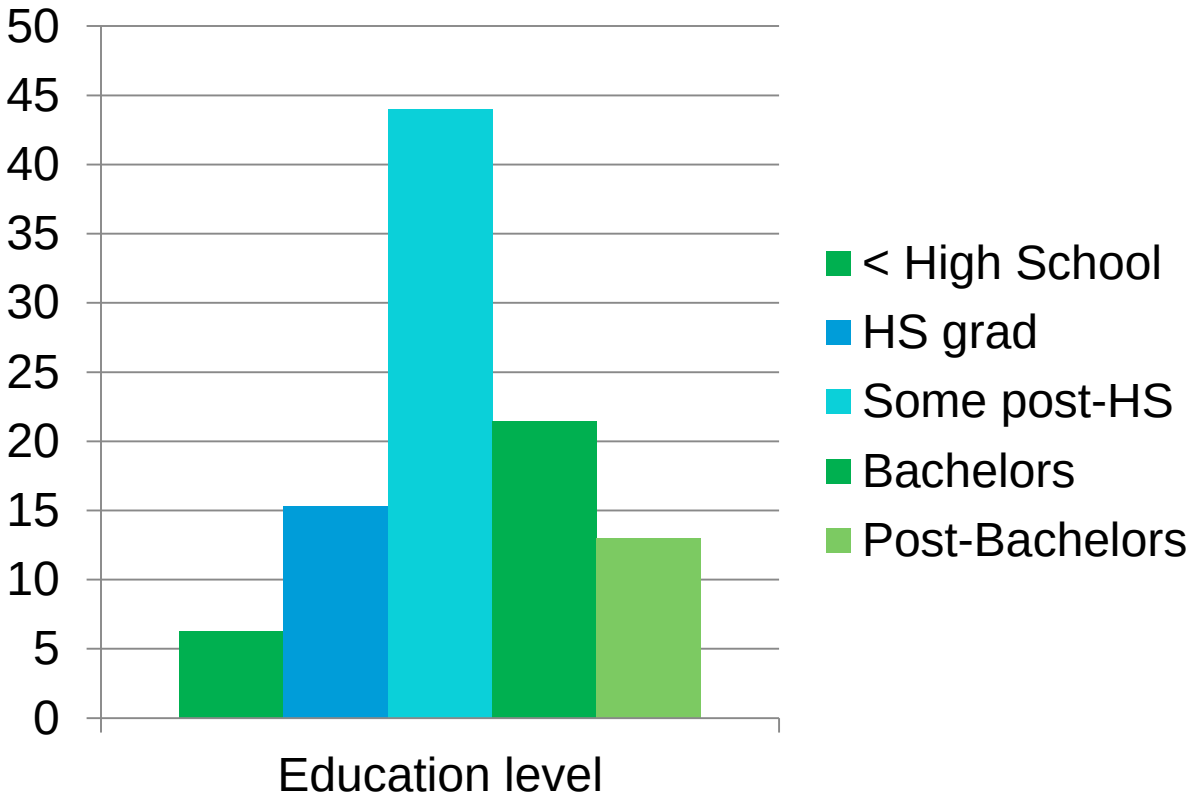
- Maternal Education: Biological or in-house mother

- Poverty level: computed from income, household size based on 1994 poverty level data

- Family Structure: 2 Biological Parents, 1 Bio/1 Step, Single Parent, Other

Wave 4 data

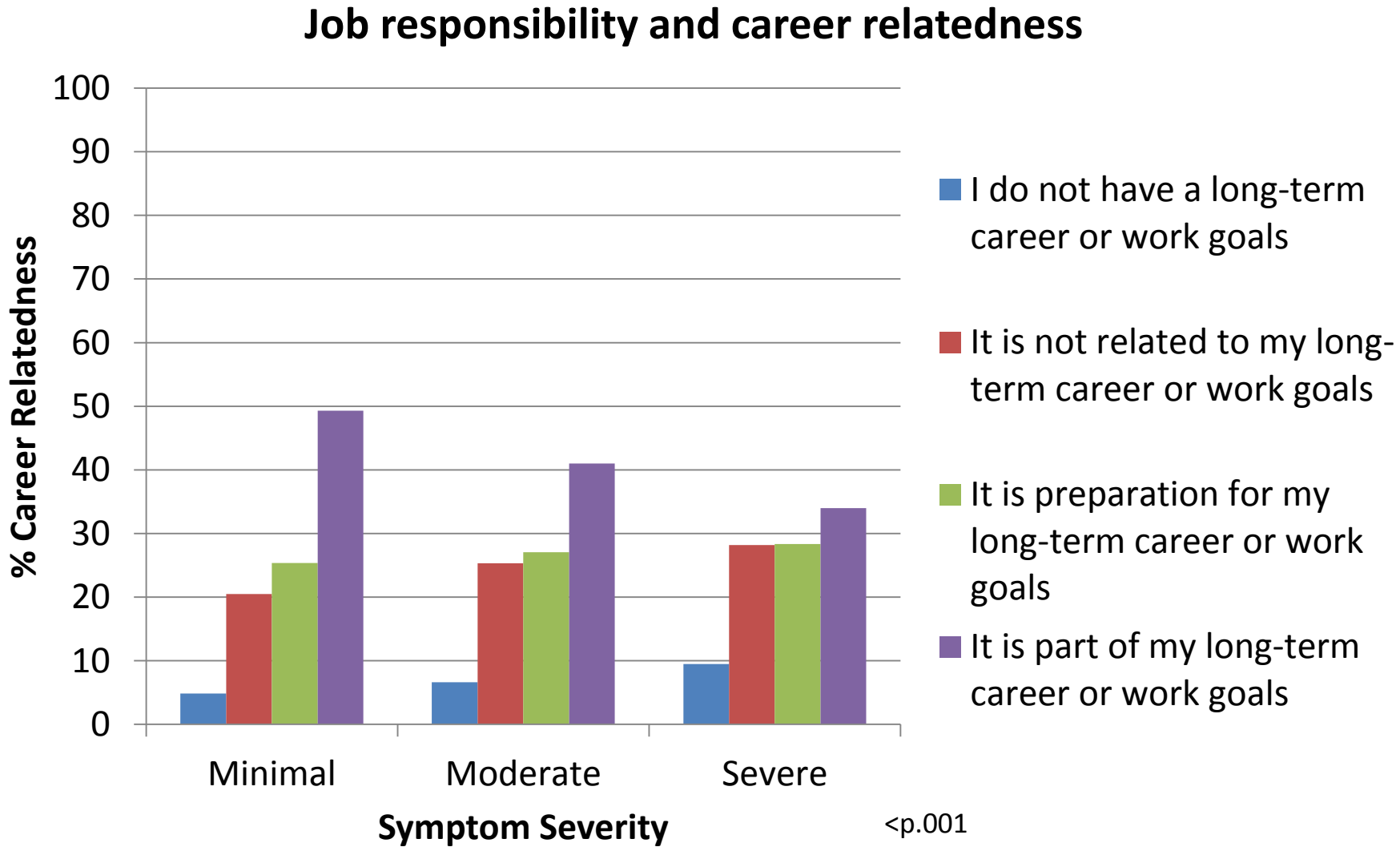
- Wave 4 Depression
  - Modified 10 item CES-D
  - Continuous variable
- Wave 4 Education attainment
- Wave 4 Number of hours working



RESULTS

Outcome #1: Satisfaction with Job

Outcome #2: Relationship to Career Goals



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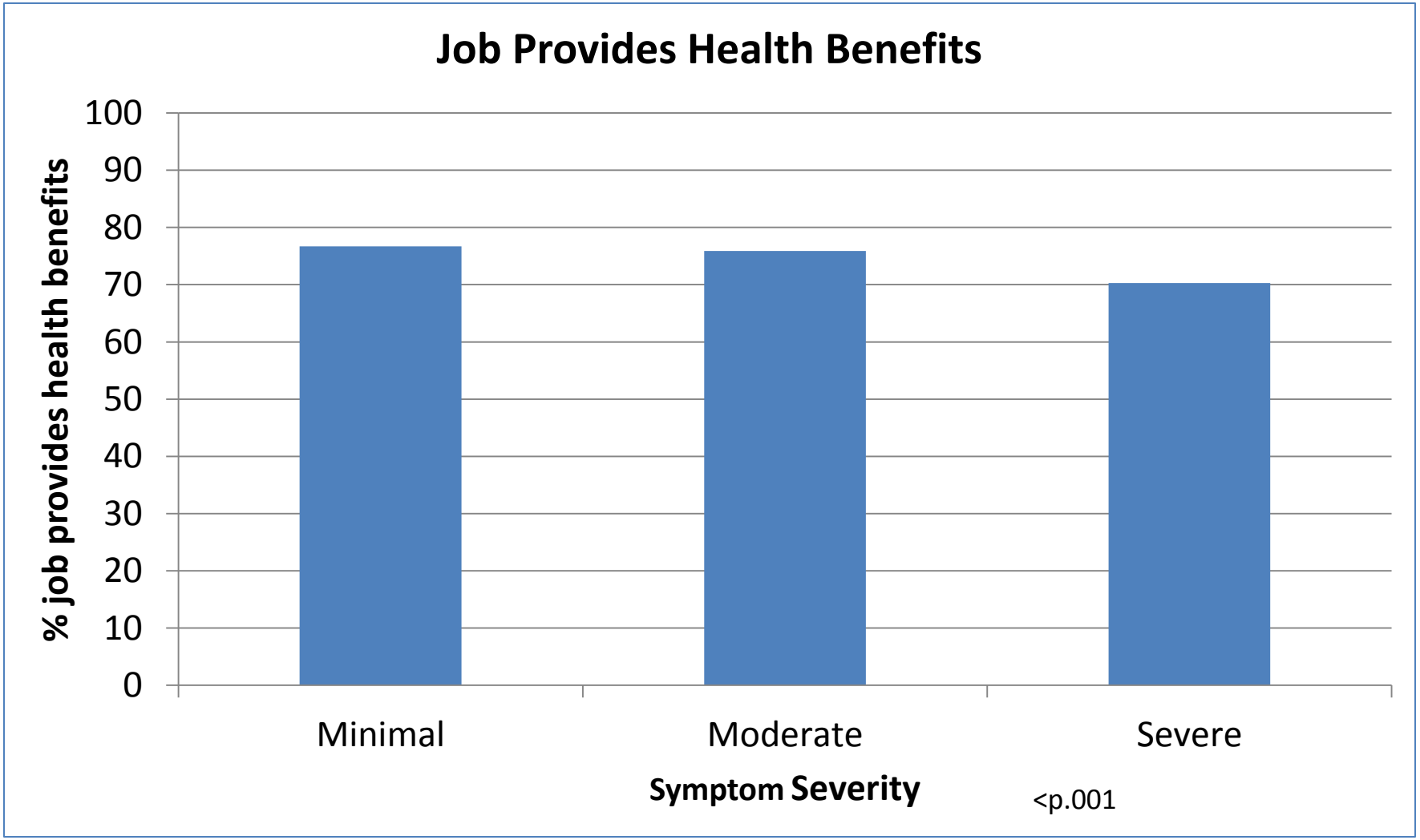
Outcome #3: Health Benefits



Outcome #3: Health Benefits Model 1

		OR (SE)
Race (ref= white)	Black Hispanic Other	1.23 (.13)* 1.28 (.14)* 1.32 (.21)
Maternal Education (ref=<HS grad)	HS grad Some post HS Bach or higher	1.44 (.12)** 1.25 (.11)* 1.47 (.15)**
Family Structure (ref=2 bio)	2 parents Single Parent Other	.75 (.06)** .71 (.06)** .69 (.08)*
Poverty (ref=>400% pov)	300-400% poverty 200-299% poverty 100-199% poverty <100% poverty	.90 (.12) .77 (.08)* .76 (.08)* .89 (.10)
PVT score (ref=<25%)	26-50th percentile 51-75th percentile >75th percentile	1.19 (.13) 1.36 (.14)* 1.37 (.15)*
Depression (ref=minimum)	Moderate Severe	.91 (.05) .74 (.08)*

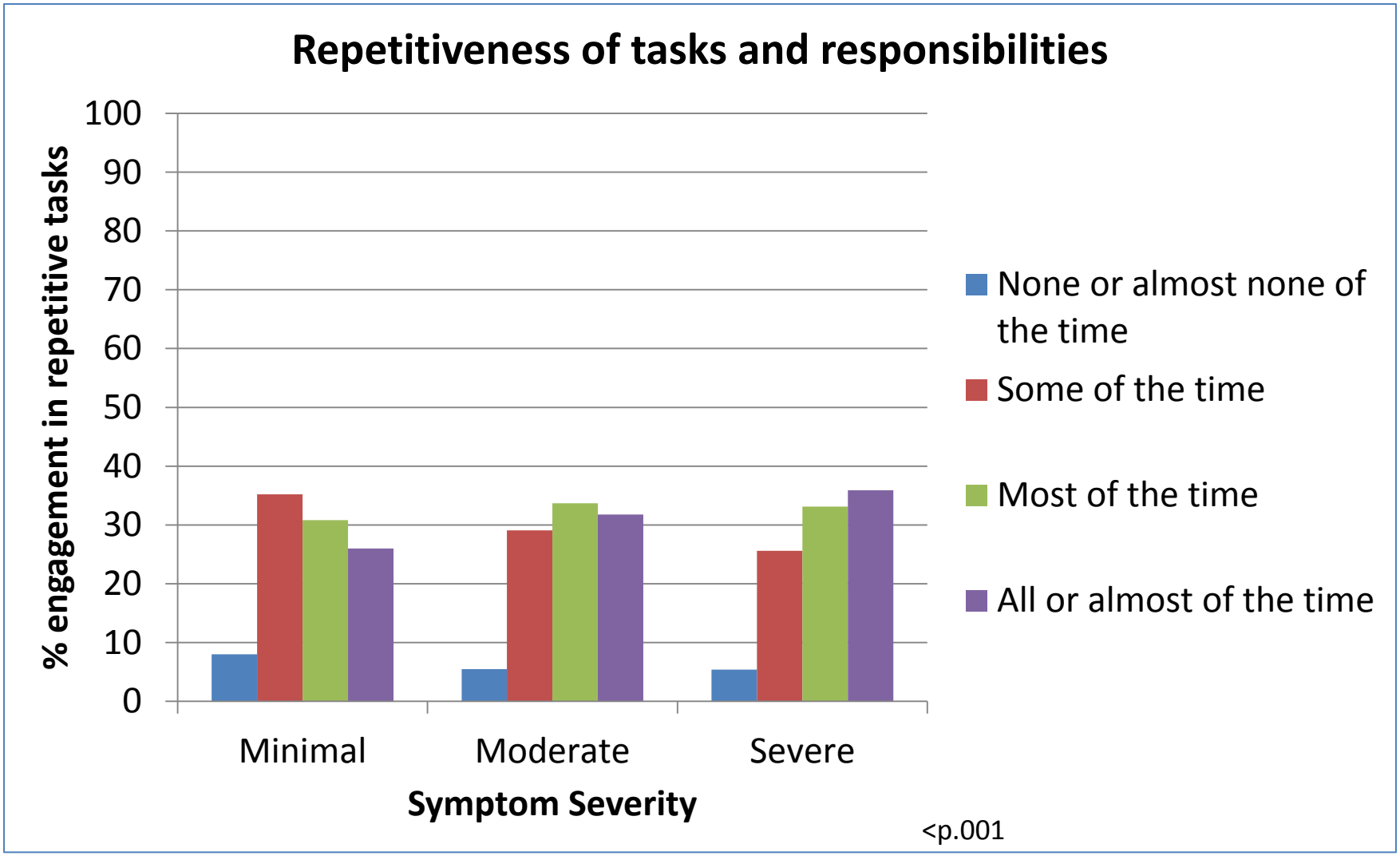
*p<.05
**p<.001

Outcome #3: Health Benefits Model 2

		OR (SE)
Race (ref=white)	Black Hispanic Other	1.20 (.13) 1.25 (.14)* 1.25 (.23)
Maternal Education (ref=<HS grad)	HS grad Some post HS Bach or higher	1.33 (.11)** 1.04 (.10) 1.07 (.11)
Family Structure (ref=2 bio)	2 parents Single Parent Other	.87 (.08) .81 (.07)* .80 (.10)
Poverty		NS
PVT score		NS
W1 Depression		NS
W4 Education (ref=<HS grad)	HS grad Some post HS Bachelors Post-Bachelors	1.91 (.20)** 2.72 (.31)** 4.45 (.59)** 6.78 (1.08)**
W4 depression		.98 (.01)
W4 #hrs worked		1.05 (.01)**

*p<.05
**p<.001

Outcome #4: Tasks repeatedly



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Outcome #4: Repeated Tasks Model 1

		OR (SE)
Gender (ref=male)	Female	1.22 (.06)**
Race (ref = white)	Black Hispanic Other	1.61 (.15)** .90 (.07) 1.14 (.12)
Maternal Education (ref=<HS grad)	HS grad Some post HS Bach or higher	.88 (.07) .72 (.06)** .59 (.05)**
Family Structure (ref=2 bio)	2 parents Single Parent Other	1.21 (.08)* 1.34 (.08)** 1.18 (.14)
Poverty (ref=>400% pov)	300-400% pov 200-299% pov 100-199% pov <100% pov	.99 (.09) 1.23 (.08)* 1.39 (.12)** 1.57 (.15)**
PVT score (ref=<25%th)	26-50th percentile 51-75th percentile >75th percentile	.95 (.07) .64 (.05)** .48 (.04)**
Depression (ref=minimum)	Moderate Severe	1.21 (.06)** 1.22 (.10)*

*p<.05
**p<.001

Outcome #4: Repeated Tasks Model 2

		OR (SE)
Gender	Female	1.32 (.07)**
Race (ref=white)	Black Hispanic Other	1.68 (.16)** .93 (.07) 1.19 (.13)
Maternal Education (ref=<HS grad)	HS grad Some post HS Bach or higher	.94 (.08) .85 (.07)* .80 (.07)*
Family Structure (ref=2 bio)	2 parents Single Parent Other	1.05 (.07) 1.20 (.08)* .99 (.12)
Poverty (ref=>400% poverty)	300-400% poverty 200-299% poverty 100-199% poverty <100% poverty	.94 (.08) 1.06 (.07) 1.14 (.09) 1.31 (.13)*
PVT score (ref=<25th%)	26-50th percentile 51-75th percentile >75th percentile	1.03 (.08) .75 (.05)** .62 (.04)**
W1 Depression		NS
W4 Education (ref=<HS grad)	`1	.75 (.10)* .63 (.07)** .33 (.05)** .21 (.03)**
W4 depression		1.07 (.01)**

*p<.05
**p<.001

Conclusions

- High depressive symptoms in adolescence have impact on quality of employment in young adulthood
- Implications for service workers working with adolescents in real time
- Largely mediated by acquired education

Limitations

CES-D measures depressive symptoms only

High depressive symptoms are not representative of serious mental illness

Other mental illnesses may be present in the sample but not measured

Take home message:

- Accumulation of human capital is important for adolescents with high depressive symptomatology, not just in terms of having a job, but also for quality of that job

- More work to do!

THANK YOU!

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