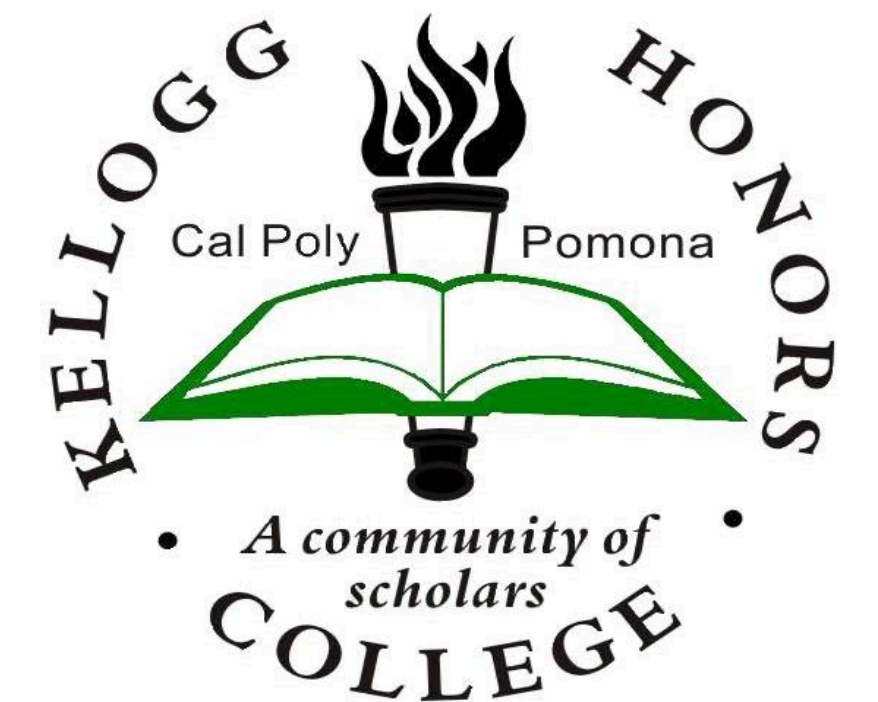# The Influence of Occupation Segregation and Personality on the Wage Gap

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INTRODUCTION

The Wage Gap
Today, on average, women make 81 cents to every man's dollar (U.S. Bureau of Labor Statistics, 2018.
❖ Multiple factors can contribute towards this disparity, such as:
  ➢ **Occupation segregation**, which is the disproportionate representation of women or men in an occupation. For example, in the healthcare support occupations (such as nurses or physician's assistants) there is currently an overrepresentation of women. Research has illustrated when an occupation is overrepresented by females, less promotions are awarded and there are less opportunities to increase wage. (Averett, Argys, & Hoffman, 2018; Conti et al. 2018).
  ➢ **Personality** traits, which can be rewarded or punished through wage. These rewards or punishments can rely heavily on one's gender – women who display more neurotic tendencies in the workplace are firmly punished through their wages (Nyhus & Pons, 2005; Young & Beaujean, 2011; Jonason et. al, 2018).

Personality (OCEAN) and the Wage Gap
❖ **O**penness: the willingness to participate in new experiences, engage with new ideas, and be open to one's own feelings
  ➢ Women who are open to new experiences tend to have increased wages (Gelissen & Graaf, 2006; Heineck, 2011).
❖ **C**onscientiousness: being reliable, responsible, and having strong self-control
  ➢ Conscientious women are associated with having higher wages (Heineck, 2011; Jonason et. al, 2018)
❖ **E**xtraversion: enthusiastic towards life circumstances, outgoing, and surgency
  ➢ Despite not being a prominent predictor, women who display more extraverted traits tend to have lower wages and/or are at more risk of being demoted (Nyhus & Pons, 2005; Gelissen & Graaf, 2006)
❖ **A**greeableness: inclination toward submission to others, passivity, and subduedness - tend to be liked more by others
  ➢ Although not a strong predictor, agreeable women tended to earn less compared to those who were less agreeable (Nyhus & Pons, 2005; Judge, Livingston, & Hurst, 2012)
❖ **N**euroticism: emotional instability and anxiety in contrast to being placid and emotionally stable
  ➢ Past research strongly suggests that women who are higher in the trait of neuroticism have lower wages (Nyhus & Pons, 2005; Young & Beaujean, 2011; Jonason et. al, 2018)
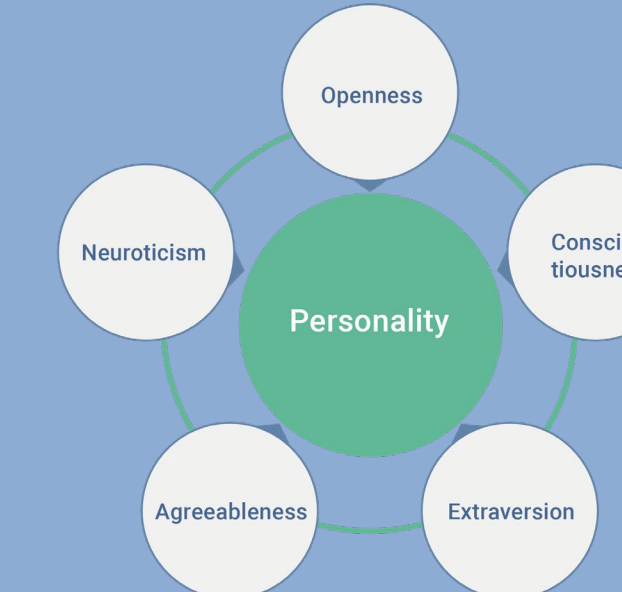
PRESENT STUDY

❖ The present study expands on research regarding the connections between men and women's personality traits (openness, conscientiousness, extraversion, agreeableness, and neuroticism) and wages across different occupations.
❖ The two main research questions are:
  ➢ How do personality traits influence wages across occupations?
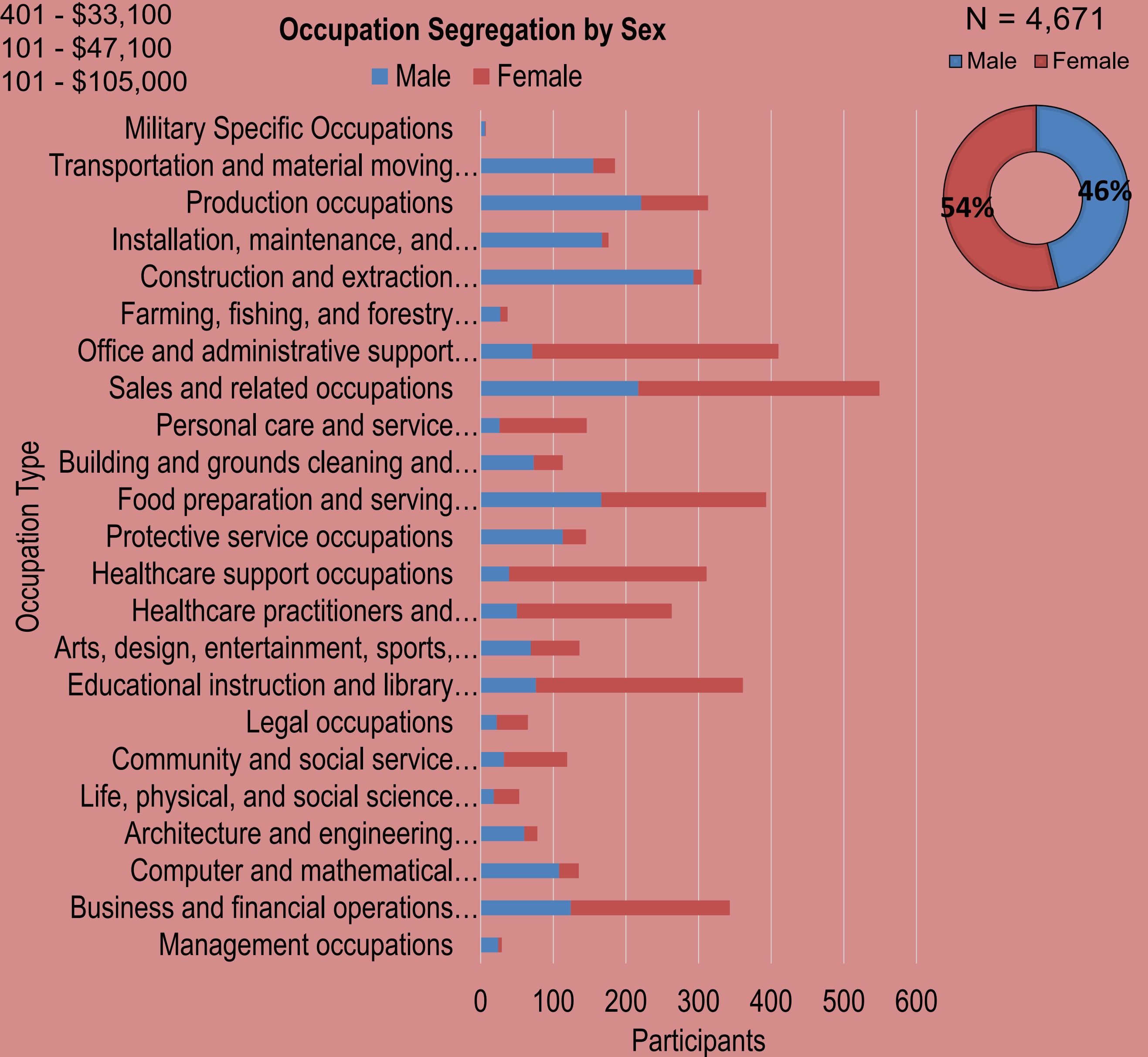 ➢ How does occupation segregation impact the wage gap?

PARTICIPANTS

❖ Using survey data from the National Longitudinal Study of Adolescent to Adult Health (ADD Health), 4,671 participants were selected for this study.
❖ Participants ranged from 23 different occupations (seen in the chart below).
❖ The participants were grouped into four categories based on their earnings
  ➢ $0 - $25,400
  ➢ $25,401 - $33,100
  ➢ $33,101 - $47,100
  ➢ $47,101 - $105,000

Occupation Segregation by Sex

PARTICIPANTS N = 4,671
54% / 46%

MEASURES

❖ The Mini International Personality Item Pool (Mini – IPIP) was used to measure the five personality traits.
❖ There are 20 items, four for each personality trait.
❖ *reverse coded

Wages	Scale				
How much income did you receive from personal earnings before taxes?	$1	$2	...	$999,994	$999,995

Personality Traits: The 20-item Mini International Personality Item Pool (Mini – IPIP) was used to measure the five personality traits.		Strongly Agree				Strongly Disagree
Openness (Cronbach's Alpha = .653)	I have a vivid imagination.* I am not interested in abstract ideas.	1	2	3	4	5
Conscientiousness (Cronbach's Alpha = .653)	I like order.* I make a mess of things.	1	2	3	4	5
Extraversion (Cronbach's Alpha = .714)	I am the life of the party.* I don't talk a lot.	1	2	3	4	5
Agreeableness (Cronbach's Alpha = .699)	I feel others' emotions.* I am not really interested in others.	1	2	3	4	5
Neuroticism (Cronbach's Alpha = .633)	I have frequent mood swings.* I am relaxed most of the time.	1	2	3	4	5

RESULTS

❖ Research Question #1: How do personality traits influence wages across occupations?
  ➢ Multiple regression analyses across four different brackets of salary were conducted (include brackets in the table)
  ➢ For men in the lowest salary bracket, **extraversion** (p = .028) was a significant predictor of an increase in wage.
  ➢ For men in the lower – middle salary bracket, once again, **extraversion** (p = .044) related to a higher wage. For women in this bracket, those who reported higher tendencies of **neuroticism** (p = .001) were associated with having lower wages.
  ➢ In the upper – middle salary bracket, it was found (again) that men who tended to be more **extraverted** (p = .036) were associated with having higher wages. Also, men who scored more **neurotic** (p = .006) were associated with having lower wages.
  ➢ In the highest salary bracket, women who scored more **agreeable** (p = .016) and **conscientious** (p = .030) were related with higher wages. However, women who tended to score higher on **neuroticism** (p = .002)
❖ Research Question #2: How does occupation segregation impact the wage gap?
  ➢ A chi – square independent samples test found that women are proportionally overrepresented in occupations making the least amount of money ($16,000 - $26,000).

DISCUSSION/IMPLICATIONS

What does this mean?
❖ Research Question #1:
  ➢ For men in three out of the four salary brackets, **extraversion** mattered the most.
  ➢ Comparing these results to the women, the results displayed that personality (**conscientiousness**, **agreeableness**, and **neuroticism**) only mattered when women were in the highest earning salary bracket.
  ➢ This poses new research ideas for further study, such as what specific occupations' wage are impacted by personality.
❖ Research Question #2:
  ➢ Consistent with literature, the results illustrated that there was a significant overrepresentation of women and men in many career paths.
  ➢ Also, results expressed that women were overrepresented in the lowest salary bracket. This emphasizes the downfalls of overrepresentation – this is consistent with literature that states that there are less opportunities to increase wage in female dominated occupations.

Table 1
Multiple regression results for men and women [unstandardized betas (standard error)] predicting wages.

	Open Male:	Female:	Conscientious Male:	Female:	Extraversion Male:	Female:	Agreeable Male:	Female:	Neuroticism Male:	Female:
Lowest Salary ($0 – $25,400) Male: n = 346 Female: n = 947	3647.48 (3079.64)	- 219.36 (1302.09)	3271.46 (2702.45)	- 1323.64 (1056.61)	**5063.24*** **(2289.78)**	1198.14 (972.49)	- 1044.35 (3269.11)	1907.37 (1439.60)	- 2670.23 (2674.01)	- 1549.706 (1032.59)
Lower – Middle Salary ($25,401 - $33,100) Male: n = 519 Female: n = 738	- 1104.01 (2535.89)	- 1059.53 (2916.48)	3728.65 (2236.29)	2845.31 (2308.69)	**4140.97*** **(2053.43)**	3598.98 (2124.12)	947.65 (2493.86)	3237.79 (3189.95)	- 1783.535 (2535.67)	**- 7440.01*** **(2307.41)**
Upper – Middle Salary ($33,101 - $47,100) Male: n = 836 Female: n = 359	302.92 (1880.33)	310.05 (4734.64)	1155.09 (1717.54)	- 2668.50 (4319.34)	**3301.76*** **(1569.86)**	838.63 (3831.46)	- 402.97 (1960.77)	4603.965 (5948.98)	**- 4837.04*** **(1763.76)**	1879.44 (4330.62)
Highest Salary ($47,101 - $105,000) Male: n = 347 Female: n = 338	- 8038.84 (9043.03)	- 3602.86 (3229.18)	- 4609.605 (8447.095)	**5891.84*** **(2695.153)**	11378.25 (6889.14)	2281.63 (2499.10)	- 5524.75 (8738.82)	**9572.08*** **(3969.06)**	- 5443.61 (8076.79)	**- 8315.95*** **(2704.03)**

***p < .05**