

# Are women elders paid less than men? A brief report from the North Carolina Statewide Longitudinal Survey of United Methodist Clergy

Religion and Social Change Lab at Duke  
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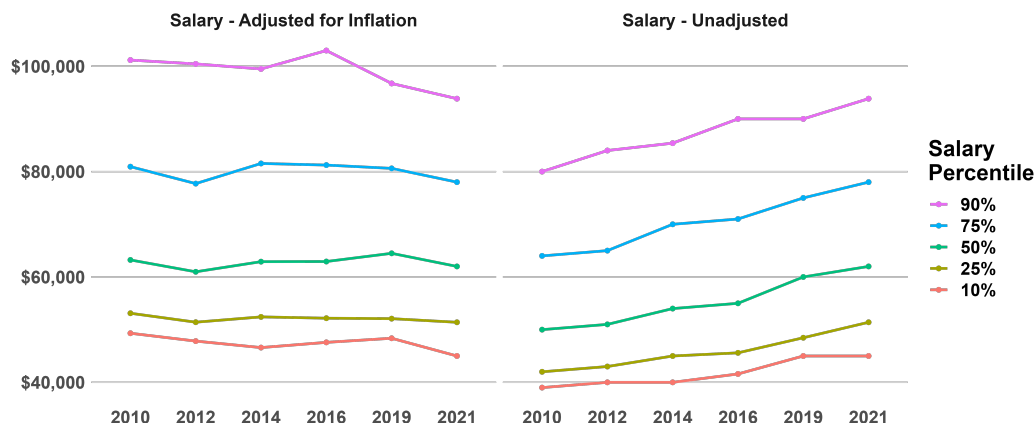
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## 1 Purpose of this Report

In this report, we explore systematic salary differences between men and women elders in the North Carolina and Western North Carolina Annual Conferences of the United Methodist Church.

## 2 The Data

This report uses six rounds of survey data the Duke Clergy Health Initiative collected as part of the Statewide Longitudinal Study of United Methodist clergy serving in



**Fig. 1** Inflation-adjusted United Methodist elder salaries in North Carolina by percentile since 2010

North Carolina between 2010 and 2021. The survey was sent to all currently appointed elders and local pastors serving in the two Annual Conferences of the United Methodist Church. Data was collected in 2010, 2012, 2014, 2016, 2019, and 2021. We asked pastors to self-report the salaries they received for their work as an elder. They reported their housing allowance separately, which we did not include in our analysis. Unless specified otherwise, this report focuses on the salaries of elders serving in active, full-time appointments.<sup>1</sup>

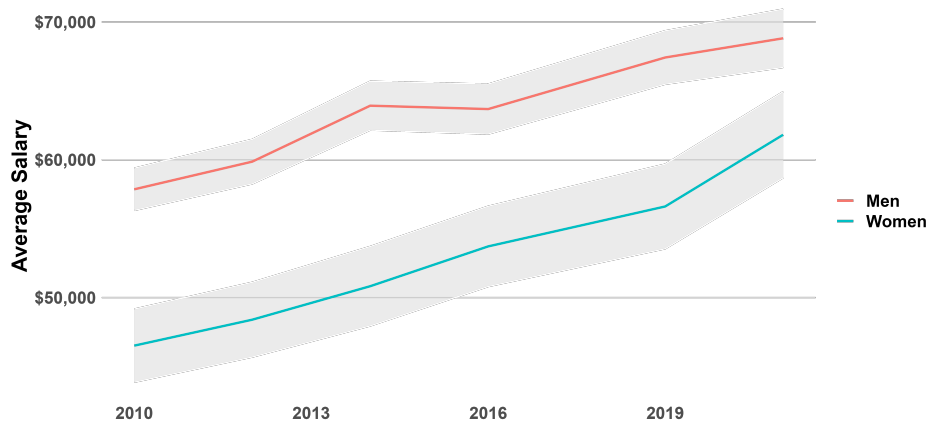
### 3 Overview of Declining Salaries

Before exploring gender differences in salaries, it is helpful to look at the overall trends in compensation among this group of clergy. From 2010 to 2021, elders in the two North Carolina Annual Conferences of the United Methodist Church have seen modest declines in their salaries. After adjusting for inflation, the average salary of full-time elders declined from \$69,600 in 2010 to \$66,600 in 2021.<sup>2</sup> We can attribute two factors to this phenomenon. First, inflation spiked in 2011 to 3.2%, which led to a strong decline in inflation-adjusted salaries between 2010 and 2012. Although UMC salaries increased nominally, they did not keep pace with the rising cost of living, causing the average inflation-adjusted salary to decline by \$1,600 from 2010 to 2012.

Second, from 2012 to 2021, the average adjusted salary declined by \$1,400. However, most elders did not feel this drop. Figure 1 shows how salaries remained steady among pastors earning salaries between the 25th and 75th percentiles. By contrast,

<sup>1</sup>Salaries only include yearly pre-tax income from the United Methodist Church. They do not include housing stipends, spouse salaries, or any other source of income. Missing data on salaries and experience were imputed using the MICE package in R. In particular, we used predicted mean matching using respondents' previous and subsequent salaries, gender, race, year, and appointment changes to impute data for these two variables.

<sup>2</sup>Inflation was computed using the US Bureau of Labor Statistics' Consumer Price Index inflation calculator (<https://data.bls.gov/cgi-bin/cpicalc.pl>).



**Fig. 2** Average salaries of full-time United Methodist elders in North Carolina by year and gender

the highest and lowest-earning elders saw substantial declines. The adjusted salaries among the denomination’s 90th percentile earners declined by \$6,600 – a 7% decrease. The denomination’s 10th percentile earners saw a decrease of \$2,800 to their salaries during this period – a 6% decline.

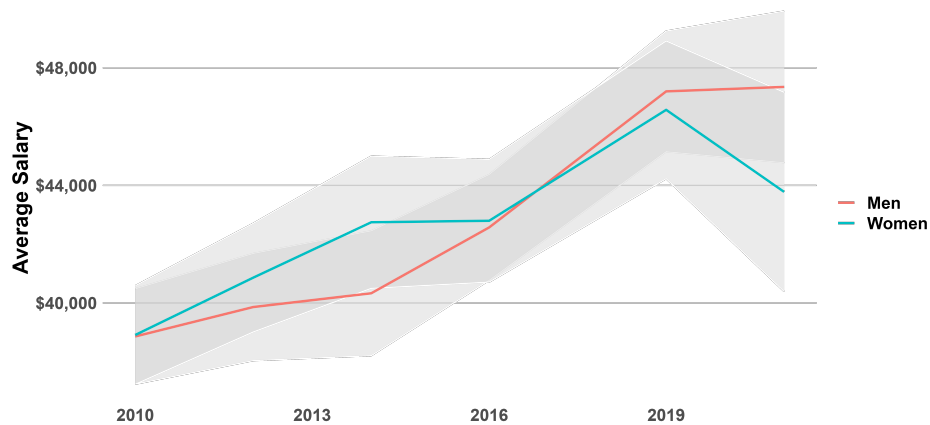
## 4 Gender Differences in Salaries

If we examine the average salaries of men and women elders working full-time, a clear picture emerges. While there is a gender salary gap – women do not earn as much as men – the gap is slowly closing. Between 2010 and 2021, the difference between the average salaries of men and women decreased from \$11,300 to \$7,000 (see Figure 2).

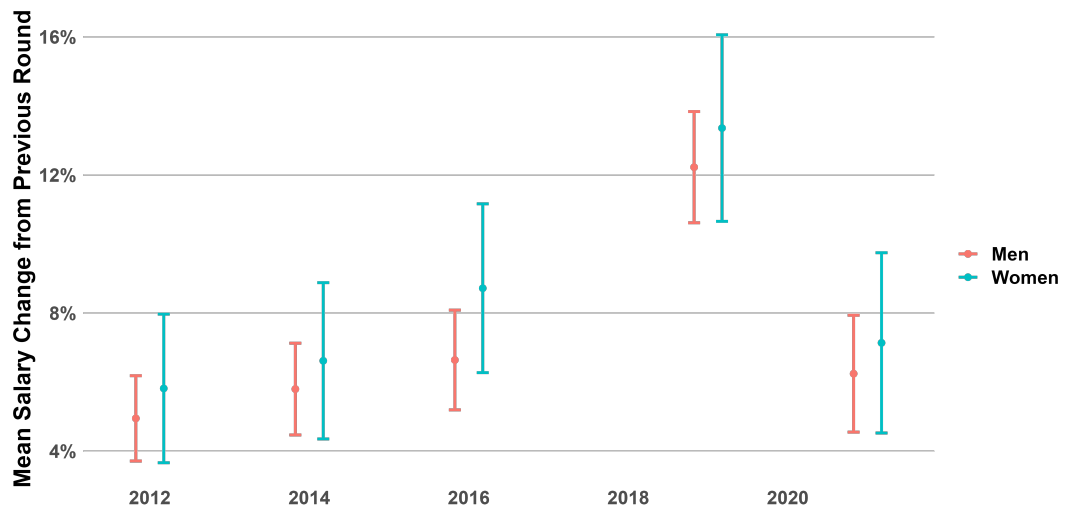
What this figure does not tell us is what is the source of these disparities. Do the salaries of women grow slower than men’s salaries? Do early-career men earn more than women? Or, is it some combination of these two? First of all, the gender gap does not arise from salary differences in early career stage elders throughout the period covered by our data. Looking at the salaries of elders with five or fewer years of experience by gender in Figure 3, there does not appear to be a significant difference between the salaries of early-career men and women from 2010 onward. Note that the considerable overlap of the grey bars indicates that the differences between men and women are not statistically significant.

Moreover, when we consider the average salary growth respondents experienced from one survey wave to the next, we find that, on average, women receive slightly larger (albeit insignificant) increases than men (see Figure 4).<sup>3</sup> Most of these differences can be attributed to the fact that women on average earn less than men. The data indicate that among this group of pastors, people with higher salaries receive

<sup>3</sup>Salary growth is calculated as the percent increase from the respondent’s salary from the previous survey round. Most of this difference can be attributed to the fact that women earn less than men. This is because the salary growth rates are slower among those who earn more. After adjusting for baseline salaries, there is no significant difference between the wage growth rate of men and women during this timeframe.



**Fig. 3** Average salaries of full-time United Methodist elders in North Carolina with five or less years of experience by year and gender



**Fig. 4** Average salary of United Methodist elders in North Carolina since previous survey round

smaller increases. After adjusting for salaries from the previous survey round, there is still no significant difference between the wage growth rate of men and women during this timeframe.

The upshot of this analysis is that the salary gap between men and women is not being driven by either early-stage male elders being paid more or because men's salaries are growing at a faster rate. In the period covered by our data, it appears that men's and women's salaries are being treated equitably. If these factors do not



**Fig. 5** Salary trajectories of United Methodist elders in North Carolina by years of experience and first year of ministry

explain the gender salary gap, what does? How can there be such a stark difference in the average salaries between these groups? To answer this, we constructed a statistical model projecting the salary trends of men and women based on the year in which they started in ministry and how many years of experience they have.<sup>4</sup> We can then project how the career trajectories of men and women in the UMC vary depending on when they started their careers.

What the statistical models reveal is that salary disparities between men and women were more prominent several decades ago. Assuming a career span of 30 years, the model projects that, for a woman starting in ministry in 1990, she will have earned an average of \$6,200 a year less than a man starting in the same year. This gap

<sup>4</sup>Specifically, we used the following model:

$$Salary_i = (\alpha_{1g}\beta_{1g}^{SY_i})(\alpha_{2g} + \beta_{2g}SY_i)^{E_i} + \epsilon_i,$$

where  $g$  represents gender,  $SY$  represents one's first year in serving as an elder in the UMC, and  $E$  represents the number of years of experience. Three other similar models were tested alongside this one: **Model 1** – Starting salaries and salary growth not varying by gender:

$$Salary_i = \alpha\beta_1^{SY_i}\beta_2^{E_i} + \epsilon_i$$

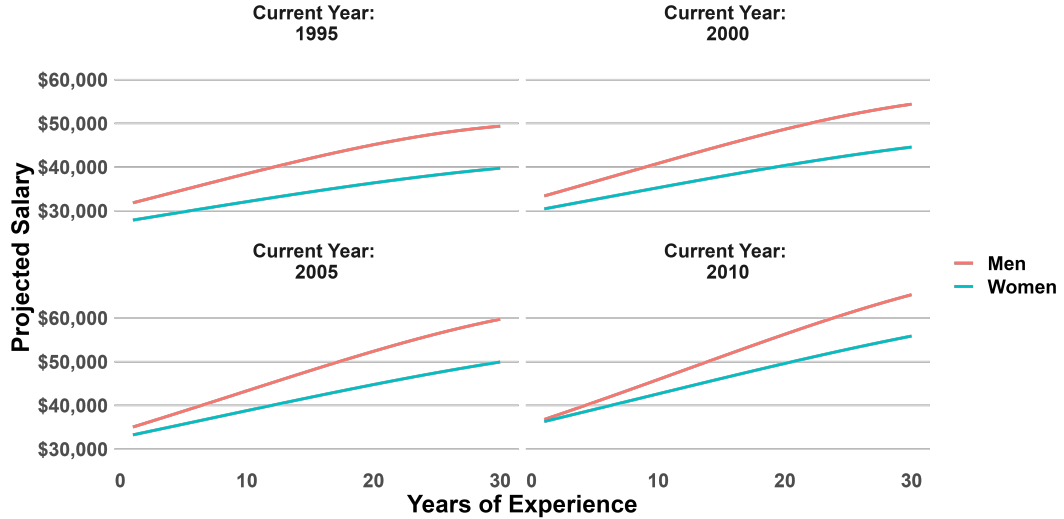
**Model 2** – Starting salaries vary by gender, but salary growth does not:

$$Salary_i = \alpha_{g_i}\beta_{1g_i}^{SY_i}\beta_2^{E_i} + \epsilon_i$$

**Model 3** – Salary growth varies by gender, but starting salaries do not:

$$Salary_i = (\alpha_1\beta_1^{SY_i})(\alpha_{2g_i} + \beta_{2g_i}SY_i)^{E_i} + \epsilon_i$$

All four models were run in Stan. Their performance was compared using Watanabe-Akaike information criterion (WAIC) and Pareto smoothed importance sampling (PSIS). The model used in this paper performed the best according to these two metrics.



**Fig. 6** Salaries of United Methodist elders by gender and years of experience in a given year

narrowed to \$3,600 among those starting in 2000 and disappeared completely by 2010 (see Figure 5).

And yet, the same model predicts that salary disparities still exist between men and women in the United Methodist Church – a decade after the denomination reached a point where there were no gender disparities between the salary trajectories of new pastors (see Figure 6).

These two phenomena can both exist because past gender disparities reverberate long into the careers of women clergy. This is because, even though salaries across genders may be treated equally now, they are not making up for lost ground. For example, women starting in ministry in 1990 may have experienced the same rate of salary growth as men from 2010 to 2020, but earned less during this timeframe because they entered this period with lower initial salaries than men. For this reason, our model predicts that, although the salary trajectories for men and women were equal starting in 2010, it may be another decade before the average salaries of men and women pastors are equal. Nevertheless, this projection assumes that recent trends continue – something that remains to be seen. Although the data suggests that the salaries of women and women who started in 2010 are being treated equally, only time will tell if this trend continues or if women will hit a glass ceiling as their careers unfold.

## 5 Conclusion

While the starting salaries and salary growth of men and women clergy have been equal since 2010, there still exist gender disparities in the salaries of Methodist clergy in North Carolina. Since 2016, women have been less likely than men to be lead pastors of congregations (85% versus 88%), and among those who are head pastors, the median

attendance of the churches women serve is smaller than those of men pastors (80 versus 111). However, not all women in the UMC experience these disparities similarly. These inequities stem from decades earlier and have reverberated through the careers of more experienced women clergy. For this reason, the disparities that exist today are primarily between men and women who started ministry at least a couple of decades ago. At the current rate, it will be another decade before the average salaries of all United Methodist men and women clergy in North Carolina are equal.

## **Declarations**

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