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Marital Satisfaction and Family Dynamics

1. Introduction

The dependent variable I will be analyzing is HAPMAR. Respondents who are currently married are asked “Taking things all together, how would you describe your marriage? Would you say that your marriage is very happy, pretty happy, or not too happy?” I will be treating this as a continuous variable following satisfaction with marriage (with a lower number meaning more satisfied and a higher number meaning less satisfied). This variable is interesting to me because I find familial relationships fascinating, and I find that marriage is often at the core of these dynamics.

I want to explain marital satisfaction because there are a lot of factors that we think of as causal or correlated with happiness/unhappiness in marriage, so I’d like to explore if these associations can be confirmed by the data. For example, people tend to assume that marital problems arise out of having children. Additionally, in heterosexual relationships, we can observe a difference in the expectations for women and men in their marriages, especially if they are parents. These are some of the factors I’d like to explore with this dependent variable. I think these dynamics are important to explore because, in the United States, according to the NIH, about 40% of first marriages end in divorce (Sbarra, 2015). Why are people so dissatisfied with their marriages in the United States? I intend to begin to explore this question by exploring the relationship between marital satisfaction and a few other variables in the 2022 GSS.

2. Description of HAPMAR

In the GSS, respondents who are currently married were asked “Taking things all together, how would you describe your marriage? Would you say that your marriage is very happy (1), pretty happy (2), or not too happy (3)?” I will be treating this variable, HAPMAR, as a continuous variable given the associated numbers (with a lower number meaning more satisfied and a higher number meaning less satisfied).

The histogram of the variable HAPMAR (see below) shows a strong right skew. The majority of respondents rated their marriage as “very happy” (1), which is reflected in the mode and the median being 1. In other words, the most popular response was choice 1, and over half of the data falls into this category. In fact, approximately 60.58% of respondents reported being “very happy” with their marriages. The mean score is 1.47, slightly above 1, suggesting that while most respondents are very happy, a notable proportion fall into the “pretty happy” (2) category. The standard deviation of 0.599 suggests relatively low variability, meaning most responses are clustered around the first 2 categories, with only a small fraction rating their marriage as “not too happy” (3). This distribution suggests that marital satisfaction is generally high among respondents, with fewer individuals expressing significant dissatisfaction.



3. Hypothesis

Independent variable 1: CHILDS

The number of children in a household is likely to influence marital happiness in complex ways. On the one hand, children can bring joy, fulfillment, and a sense of shared purpose to a marriage, which could enhance relationship satisfaction. On the other hand, raising children can introduce financial strain, increased responsibilities, and reduced time to spend alone. This could potentially decrease marital happiness. Previous research has shown that marital satisfaction often declines after having children, particularly when parental responsibilities become overwhelming or unequally distributed between partners (Kowal, 2021). In the 2022 GSS, the variable CHILDS is measured as a count of the respondent's total number of children, allowing us to examine the relationship in the data between reported marriage happiness and number of children. My hypothesis is that as the number of children increases, marital happiness will decrease.

Independent variable 2: SEX

Gender differences in marital happiness could arise due to differing societal roles, expectations, and emotional experiences within marriage. Research suggests that men and women often experience marriage differently, with women frequently bearing a greater share of household and caregiving responsibilities, which can contribute to stress and dissatisfaction (Gelman, 2024). Additionally, some studies suggest that marriage provides more emotional health benefits for men than for women. In the 2022 GSS, SEX is coded as a binary variable (1 is Male, 2 is Female), which will be dummy coded (using Male as the reference category) to assess whether men or women report higher levels of marital happiness. My hypothesis is that men tend to have higher marital happiness than women.

Independent variable 3: HRS1

Time spent working can significantly impact marital happiness by influencing work-life balance, financial stability, and time available for family. Higher work hours may provide financial benefits that alleviate stress and improve overall marriage satisfaction. However, they may also reduce quality time spent with a spouse, thus leading to emotional distance or conflict. The effect of working hours on marital happiness could also depend on gender, given differing societal expectations for careers and caregiving. In the 2022 GSS, HRS1 measures the total number of hours the respondent has worked in the past week, making it a useful variable for assessing the relationship between workload and marital happiness. My hypothesis is that, as work hours increase, marital happiness will decrease.

4. Regression Models

Model 1

Dependent Variable: HAPMAR,

Independent Variable: CHILDS

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Call:
lm(formula = hapmar ~ childs, data = data)

Residuals:
    Min       1Q   Median       3Q      Max
-0.5493 -0.4686 -0.4417  0.5314  1.5583

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  1.441670   0.024469   58.918  <2e-16 ***
childs       0.013448   0.009568    1.406    0.16
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5977 on 1717 degrees of freedom
(2430 observations deleted due to missingness)
Multiple R-squared:  0.001149, Adjusted R-squared:  0.0005675
F-statistic: 1.975 on 1 and 1717 DF, p-value: 0.16
```

The b coefficient associated with the variable CHILDS (number of children) in model 1 is 0.013448. This tells us that, for every additional child that a married person has, their

dissatisfaction in their marriage is expected to increase by 0.013448. That said, the p-value for CHILDS is 0.16, which is greater than the common significance threshold of 0.05. This means the relationship between the number of children and marital happiness is not statistically significant, implying that we do not have sufficient evidence to conclude that the number of children meaningfully impacts marital happiness in this dataset. Thus, we fail to reject the null hypothesis. The R-squared value is 0.001149. This means that CHILDS explain only about 0.115% of the variation in marital happiness. This is an extremely small proportion, indicating that the number of children has almost no explanatory power in predicting marital happiness in this model. Other factors, which are missing, likely play a role in determining marital satisfaction.

Model 2

Dependent Variable: HAPMAR,

Independent Variables: CHILDS, SEX, HRS1

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Call:
lm(formula = hapmar ~ childs + sex + hrs1, data = data)

Residuals:
    Min       1Q   Median       3Q      Max
-0.6469 -0.4538 -0.4106  0.5321  1.6466

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  1.289727   0.090492   14.252  <2e-16 ***
childs       0.028736   0.012236    2.348   0.019 *
sex          0.035127   0.037674    0.932   0.351
hrs1         0.001426   0.001308    1.090   0.276
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5792 on 1014 degrees of freedom
(3131 observations deleted due to missingness)
Multiple R-squared:  0.006669, Adjusted R-squared:  0.00373
F-statistic: 2.269 on 3 and 1014 DF, p-value: 0.07896
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Comparison with Model 1

In Model 1, the coefficient for CHILDS was 0.013448 with a p-value of 0.16 (not significant). In Model 2, the coefficient for CHILDS increased to 0.028736 with a p-value of 0.019 (now significant at the 95% confidence level). The increase in coefficient suggests that,

when controlling for SEX and HRS1, the effect of CHILDS on marital happiness becomes stronger and statistically significant. This could mean that the initial Model 1 had confounding effects - perhaps the relationship between CHILDS and marital happiness was being masked by gender or work hours in the first model. Since the coefficient remains positive, it still suggests that more children are associated with lower marital happiness, but now the findings are significant. Thus, we can reject the null hypothesis and conclude that, as the number of children increases, marital happiness decreases.

Independent Variables

The coefficient of SEX is 0.0351 with a p-value of 0.351. Since Male is the reference category, the coefficient suggests that being female decreases marital satisfaction by 0.0351 on average. However, since the p-value is not significant (>0.05), we cannot conclude that gender has a real effect on marital happiness. Thus, we fail to reject the null hypothesis, meaning that there isn't enough evidence to conclude that sex has a significant impact on marital happiness. The coefficient of HRS1 is 0.0014 and the p-value is 0.276. The coefficient suggests that working more hours is associated with a decrease in marital happiness. However, since the p-value is not significant (>0.05), we cannot say with confidence that working hours affect marital happiness. Once again, we fail to reject the null hypothesis based on the model.

Accounting for Variation

The R-squared value in Model 1 was 0.001149. The R-squared value in Model 2 is 0.006669. This means that 0.67% of the variation in the dependent variable can be explained by the independent variables. So, adding SEX and HRS1 increased the amount of explained variation, but not by much. This tells us that sex and work hours do not strongly explain marital happiness, since the R-squared remains low. The fact that CHILDS became significant suggests

that it may play a small role, but the low R-squared value indicates that there are likely many other factors (perhaps financial stress, age, social class, etc.) that better explain marital happiness.

Homoskedasticity and Normality of the Errors

When running the Breusch-Pagan test for homoskedasticity, the p-value is 0.1012 which is greater than 0.05, so we fail to reject the null hypothesis. This suggests that there is no evidence of heteroskedasticity in the residuals, meaning the assumption of homoskedasticity holds. When running the Shapiro-Wilk normality test, the p-value is $2.2e^{-16}$, which is extremely small (less than 0.05). So, we reject the null hypothesis of normality and assume that the residuals of the model do not follow a normal distribution. A violation of the normality assumption in linear regression can impact the validity of the model. Due to the large sample size in the GSS, this violation may not be as problematic because even if the residuals aren't perfectly normally distributed, the sampling distribution of the estimates will tend to be approximately normal. However, this doesn't entirely negate the issue - it just lessens its impact on the reliability of the regression estimates. If I were to conduct a more robust research report/analysis on these variables, I would definitely try to account for this key assumption.

5. Conclusion

In this analysis, I aimed to explore factors that might influence marital happiness using data from the 2022 GSS. Specifically, I examined the relationship between marital happiness (HAPMAR) and three independent variables: the number of children (CHILDS), gender (SEX), and work hours (HRS1). My initial hypothesis that an increase in the number of children would lead to decreased marital happiness was supported, as the relationship became statistically

significant when controlling for gender and work hours. However, the effect size remained small, and the low R-squared value in the models suggested that other unmeasured factors may play a more significant role in explaining marital satisfaction. These findings highlight the complexity of marital happiness and suggest that, while children may have an impact, gender and work hours alone are insufficient to explain variations in marital happiness.

A key limitation of this analysis is the relatively low explanatory power of the models, as indicated by the low R-Squared values, suggesting that many factors influence marital happiness are unaccounted for in the analysis. Other variables such as income, education, mental health, and relationship dynamics (e.g., communication, conflict resolution) might provide more insight into the variability of marital satisfaction. Additionally, the assumption of normality was violated in the residuals, though this issue was somewhat mitigated by the large sample size. Future research could address these limitations by including more explanatory variables and exploring alternative models that account for non-normal residuals.

Works Cited

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