Dissertation Progress Report

Lin Chen

2018-06-20 07:07:39

### Survey Information

* Survey date: 03/06 – 06/06
* Survey site: WeChat
* Sampling method: Snowball
* Reached: 1587 (7 provincial level district in China)
* Returned: 247 (189 participants are from Anhui Province where the survey started to circulate in WeChat networks)
* Effective sample: 225
* Mean survey completion time: 14mins, 27seconds

### Internal consistency measures of reliability

The questionnaire has six sub-scales. For each of the sub-scales, Cronbach's alpha is used to test its reliability. Below are the sub-scales and their reliability scores.

* 1. mother's status in original family (alpha = 0.92)
  2. mother's status in current family (alpha = 0.92)
  3. life satisfaction (alpha = 0.89)
  4. motherhood satisfaction (alpha = 0.84)
  5. motherhood interferes work (alpha = 0.93)
  6. work interferes motherhood (alpha = 0.95)

In general, Cronbach's alpha indicates great/excellent reliability.

### Regression analysis

In this section, I am using regression techniques to explore the survey data. Education, family status and individualistic thoughts are indicators of women's liberation and empowerment. Models are selected by consideration of AIC and BIC criteria.

#### Education level

The selected model is

education = young\_mother + has\_brothers + mother\_birth\_order + error

where education level (1 - higher school or lower; 2 - college; 3 - university or higher) is positively associated with mother's generation order (p-value = 0.0004). In general, education level is 0.39 higher in younger generation of mothers (age <= 36 years) than older generation (age > 36 years), controlling for whether a participant has brother(s) and her birth order. \* This is the side effect of one-child policy. I understand it as that the policy was designed for population control and economic growth, which would both improve on natioanl education level.

Son-preference effect on education is revealed by the negative association between education level and variable has\_brothers (a mother has brother(s)) (p-value = 0.004). Controlling for the other two varibles, a mother who has a brother is 0.22 lower in education. \* This is effect of traditional culture of son-preference. Having brothers cause unfair allocation of educational resources in families.

Birth order effect (p-value = 0.004) is also significant. Controlling for the other two variables, every one unit increase in mother's birth order is associated with 0.14 decrease in education level. \* This is of more material concern. Bigger children are educated earlier than younger children. When materal resources are limited, bigger children may have advantage in continuing their education.

#### original status exploration

Original status of mothers as a response variable is negatively associated with whether mothers have brothers (p-value = 0.05). Motehrs consider themselves are highly valued (mean score of 3.51 out of 5) in their original families where they grow up. However, when they have brothers, a deduction of 0.29 in status score is expected.

#### current status exploration

* Original status is the most dramatic predictor (p-value < 2e-16) of mothers' status in current family after marrige.
* It is noted that a mother who thinks that her husband ranks higher his identity as a husband than other identities tend to have greater family status.
* Interestingly, the variable has\_brothers is positively associated with current status, but negatively associated wtih original status. In Chinese culture, a women who has brothers has more symbolic support from her original family. Because marriage is more of two families joint together than having independent families.
* Household income is an other determinant of family status. The higher the per-capita income is, the higher a mother's family status is. (I measured per-capita income. I should have measured mother's own income level too. But it is too late now.)

#### self and occupation ranks

Two models are formulated to explore women's self-constual. 1) younger mothers value themselves more than older mothers. I think, the sense of self is aggregating as life experience accumulation.

1. In general, mothers do not value occupation as much as their other identities. Having a job is not much more than gaining material support for the family. However, women having higher education tends to value their occupation more than less educated mothers.

#### Mother's fertility preference

Mother's fertility preference (whether the preference is having only one child) is determined by her own attituce toward only-children and whether her first child is a boy.

1)Mothers who have better view of only-children tend to prefer having only one child. 2) Mothers whoes first child is a boy, are more likely to prefer having a 2nd child. I think this is because they feel less pressure in having a 2nd child, as they have already had a son.

#### Have only one child

Whether mothers have/to have a 2nd child is determined by mothers' own fertility preference and their husbands' intentions. I am surprised to see that parents/in-laws intentions are reported by mothers, but which are not significant factors in their family size planning.

#### inlaws pressure

Weather inlaws press on mothers to have a 2nd child depends on two variables - 1) whether the first child is a boy; 2) the mother's age.

First boy, enough. Older age, forget it.

### content analysis of motherhood perception

The questionnaire asks mothers to provide their own perceptions of motherhood. A content analysis has been undertaken. Two primary codes - modern and traditional mothers are constructed, along with corresponding sets of codes. (should I say the sources of the codes? traditional codes are from <https://baike.baidu.com/item/%E4%B8%AD%E5%8D%8E%E6%AF%8D%E4%BA%B2%E6%96%87%E5%8C%96%E5%A4%8D%E5%85%B4%E5%B7%A5%E7%A8%8B/19483382>, and modern codes are from the content itself.)

Mothers perceptions of motherhood are then analysed using the code book. An external coder coded the content, and the inter-coder reliability is 89.78% (202/225). Top 10 recurrent codes are listed in the table below.

Top ten recurrent codes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Primary code | Codes | Freq | Primary code | Codes | Freq |
| modern | self | 29 | traditional | great | 31 |
| modern | role model | 9 | traditional | caring | 30 |
| modern | strong | 9 | traditional | dedication | 30 |
| modern | friend | 6 | traditional | love | 29 |
| modern | core of family | 5 | traditional | responsibility | 25 |
| modern | enlightenment | 4 | traditional | education | 23 |
| modern | strict | 4 | traditional | selfless | 17 |
| modern | pillar | 3 | traditional | accompany | 13 |
| modern | grow up together with children | 3 | traditional | childbearing | 10 |
| modern | brave | 2 | traditional | not asking for return | 8 |

**Note:** 1 pillar is a word I pick up to represent mothers who are the major supporter in a family; it is similar but slightly different from core of family, which is has more sense of centredness. Depending on mothers expressions, mothers are catogorised into Traditional mother, Transitioning mother and Modern mother (and unknown mother who is not identifiable). In the sample there are 112 traditional, 53 transitioning, 33 modern perceptions of motherhood and 27 unknown types of perceptions. Of known types of motherhood perceptions (198), 56.57 % are traditional, and -55.57 are transitional or modern.

#### Logistic regression: exploration of motherhood perception

I filtered out unknown types of motherhood perceptions (remaining 198 out of 225 effective sample size), constructed the response variable as motherhood\_type (1 = traditional, 0 = other), and did logistic regression for it.

How the mother perceives motherhood is determined by her education level and how much she value her sense of self. I have argued that education is an indicator of empowerment/liberation, and self is more of life experience accumulation.

## Index A

### two sample t test and group mean/difference

## [1] "group by only\_child testing variable fertility\_preference"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.6811, df = 163.65, p-value = 0.0003149  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -1.1752794 -0.3546321  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.678082 3.443038   
##   
## [1] "group by only\_child testing variable self\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.7966, df = 180.07, p-value = 0.005725  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.05220215 0.30240163  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.4178082 0.2405063   
##   
## [1] "group by only\_child testing variable motherhood3"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.0268, df = 153.85, p-value = 0.04441  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.749715374 -0.009604896  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.417808 2.797468   
##   
## [1] "group by only\_child testing variable rank\_daughter"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.1515, df = 152.07, p-value = 0.03302  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.68838655 -0.02931763  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.691781 3.050633   
##   
## [1] "group by only\_child testing variable mother\_birth\_order"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 7.0322, df = 213.26, p-value = 2.716e-11  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.6205275 1.1038877  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.006944 1.144737   
##   
## [1] "group by only\_child testing variable education"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -4.1164, df = 182.61, p-value = 5.822e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.6262793 -0.2204348  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.842466 2.265823   
##   
## [1] "group by only\_child testing variable age"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.7384, df = 213.5, p-value = 0.006695  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.6889518 4.2288564  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 35.9589 33.5000   
##   
## [1] "group by only\_child testing variable has\_brothers"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 14.942, df = 209.04, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.6068345 0.7912928  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.78767123 0.08860759   
##   
## [1] "group by only\_child testing variable one\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -4.1564, df = 202.49, p-value = 4.769e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3516590 -0.1253654  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.6095890 0.8481013   
##   
## [1] "group by only\_child testing variable young\_mother"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.1614, df = 185.37, p-value = 0.001834  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3179362 -0.0736019  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5890411 0.7848101   
##   
## [1] "group by only\_child testing variable high\_edu"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.1785, df = 145.04, p-value = 0.03099  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.27615119 -0.01342745  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.2602740 0.4050633   
##   
## [1] "group by only\_child testing variable childhood"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.0519, df = 168.35, p-value = 0.04173  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.69900079 -0.01350138  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.226027 3.582278   
##   
## [1] "group by has\_brothers testing variable fertility\_preference"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.6049, df = 219.56, p-value = 0.009817  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1285516 0.9276318  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.233010 2.704918   
##   
## [1] "group by has\_brothers testing variable self\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.7494, df = 222.42, p-value = 0.006461  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.29578276 -0.04879786  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.2621359 0.4344262   
##   
## [1] "group by has\_brothers testing variable motherhood1"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.4807, df = 210.86, p-value = 0.0139  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.08099051 0.70780465  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.427184 2.032787   
##   
## [1] "group by has\_brothers testing variable motherhood2"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.3632, df = 215.94, p-value = 0.01901  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.06731186 0.74392481  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.446602 2.040984   
##   
## [1] "group by has\_brothers testing variable motherhood3"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.7787, df = 217.56, p-value = 0.005934  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1417710 0.8335593  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.815534 2.327869   
##   
## [1] "group by has\_brothers testing variable rank\_daughter"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.1356, df = 215, p-value = 0.03384  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.02589257 0.64623858  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.000000 2.663934   
##   
## [1] "group by has\_brothers testing variable mother\_birth\_order"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -5.8805, df = 176.87, p-value = 1.998e-08  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -1.0751542 -0.5348458  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.270 2.075   
##   
## [1] "group by has\_brothers testing variable education"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 4.4068, df = 222.9, p-value = 1.63e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.2466254 0.6456235  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.233010 1.786885   
##   
## [1] "group by has\_brothers testing variable age"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -4.3329, df = 219.39, p-value = 2.24e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -5.826182 -2.183139  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 32.92157 36.92623   
##   
## [1] "group by has\_brothers testing variable only\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 12.808, df = 145.25, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.5426409 0.7406633  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.69902913 0.05737705   
##   
## [1] "group by has\_brothers testing variable has\_son"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.6171, df = 206.85, p-value = 0.009523  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.29175416 -0.04104864  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5631068 0.7295082   
##   
## [1] "group by has\_brothers testing variable one\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.8593, df = 223, p-value = 0.004649  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.05334755 0.28995979  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.7864078 0.6147541   
##   
## [1] "group by has\_brothers testing variable young\_mother"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.5866, df = 222.99, p-value = 0.0004116  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.0988169 0.3398271  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.776699 0.557377   
##   
## [1] "group by has\_brothers testing variable high\_edu"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.2924, df = 205.43, p-value = 0.0229  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.01993554 0.26496021  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.3883495 0.2459016   
##   
## [1] "group by has\_son testing variable fertility\_preference"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 4.4114, df = 161.91, p-value = 1.866e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.5003356 1.3112813  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.538462 2.632653   
##   
## [1] "group by has\_son testing variable self\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.3612, df = 173.44, p-value = 0.01933  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.27860633 -0.02489969  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.2564103 0.4081633   
##   
## [1] "group by has\_son testing variable inlaws\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.0068, df = 163.49, p-value = 0.04642  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.002195012 0.271483691  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.6538462 0.5170068   
##   
## [1] "group by has\_son testing variable child\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.104, df = 184.23, p-value = 0.03674  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.230680451 -0.007414787  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.1666667 0.2857143   
##   
## [1] "group by has\_son testing variable has\_brothers"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.6305, df = 155.2, p-value = 0.009384  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.31930944 -0.04542106  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.4230769 0.6054422   
##   
## [1] "group by has\_son testing variable one\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 5.3631, df = 213.64, p-value = 2.118e-07  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1851730 0.4003843  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.8846154 0.5918367   
##   
## [1] "group by has\_son testing variable first\_son"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -25.473, df = 146, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.8796612 -0.7529918  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.0000000 0.8163265   
##   
## [1] "group by has\_son testing variable con\_2nd\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.641, df = 171.46, p-value = 0.00903  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1013804 0.7013407  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.166667 2.765306   
##   
## [1] "group by first\_son testing variable fertility\_preference"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.4168, df = 217.63, p-value = 0.01648  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.09092363 0.89479066  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.209524 2.716667   
##   
## [1] "group by first\_son testing variable inlaws\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.3798, df = 221.23, p-value = 0.01817  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.02680362 0.28510115  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.6476190 0.4916667   
##   
## [1] "group by first\_son testing variable rank2\_self"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.0976, df = 222.19, p-value = 0.03707  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.79889648 -0.02491305  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.238095 2.650000   
##   
## [1] "group by first\_son testing variable has\_son"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -17.333, df = 104, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.8278445 -0.6578698  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.2571429 1.0000000   
##   
## [1] "group by first\_son testing variable con\_2nd\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.2122, df = 221.5, p-value = 0.02798  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.03612267 0.62578209  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.080952 2.750000   
##   
## [1] "group by one\_child testing variable fertility\_preference"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -5.945, df = 140.93, p-value = 2.072e-08  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -1.5965954 -0.7997256  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.115942 3.314103   
##   
## [1] "group by one\_child testing variable self\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.3979, df = 118.45, p-value = 0.0009255  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1000040 0.3793717  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5217391 0.2820513   
##   
## [1] "group by one\_child testing variable husband\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.76, df = 128.61, p-value = 0.0002569  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1251788 0.4032493  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.6231884 0.3589744   
##   
## [1] "group by one\_child testing variable parents\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.2717, df = 129.65, p-value = 0.02475  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.02104874 0.30503821  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5797101 0.4166667   
##   
## [1] "group by one\_child testing variable child\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.5631, df = 109.83, p-value = 0.01173  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.03855644 0.30146586  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.3623188 0.1923077   
##   
## [1] "group by one\_child testing variable has\_brothers"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.8911, df = 138.43, p-value = 0.004459  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.06334013 0.33744025  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.6811594 0.4807692   
##   
## [1] "group by one\_child testing variable only\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -4.2053, df = 166.85, p-value = 4.245e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3755609 -0.1355874  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.1739130 0.4294872   
##   
## [1] "group by one\_child testing variable has\_son"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 5.4627, df = 185.56, p-value = 1.493e-07  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1992418 0.4245040  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.8695652 0.5576923   
##   
## [1] "group by one\_child testing variable childhood"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.261, df = 127.91, p-value = 0.02545  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.77974083 -0.05192026  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.062802 3.478632   
##   
## [1] "group by one\_child testing variable pro\_2nd\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.5549, df = 136.77, p-value = 0.01172  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.08442622 0.66269381  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.089372 2.715812   
##   
## [1] "group by young\_mother testing variable self\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.3646, df = 139.62, p-value = 0.0009901  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.09462608 0.36430688  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5064935 0.2770270   
##   
## [1] "group by young\_mother testing variable parents\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -1.9782, df = 157.91, p-value = 0.04965  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.2735668837 -0.0002133901  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.3766234 0.5135135   
##   
## [1] "group by young\_mother testing variable inlaws\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.396, df = 150.16, p-value = 0.0178  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.30485586 -0.02929647  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.4545455 0.6216216   
##   
## [1] "group by young\_mother testing variable rank\_self"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.4752, df = 146.2, p-value = 0.01446  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.09731519 0.86828677  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.090909 2.608108   
##   
## [1] "group by young\_mother testing variable rank\_daughter"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.905, df = 155.84, p-value = 0.004207  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.7950183 -0.1514542  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.506494 2.979730   
##   
## [1] "group by young\_mother testing variable mother\_birth\_order"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.5496, df = 103.71, p-value = 0.0005813  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.2840704 1.0032859  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.133333 1.489655   
##   
## [1] "group by young\_mother testing variable education"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -4.88, df = 154.55, p-value = 2.618e-06  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.7298903 -0.3092462  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.649351 2.168919   
##   
## [1] "group by young\_mother testing variable age"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 16.616, df = 104.88, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 10.75437 13.66882  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 43.17105 30.95946   
##   
## [1] "group by young\_mother testing variable has\_brothers"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.627, df = 165.56, p-value = 0.0003814  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1101928 0.3734857  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.7012987 0.4594595   
##   
## [1] "group by young\_mother testing variable only\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.1648, df = 178.48, p-value = 0.001825  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.32168407 -0.07459532  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.2207792 0.4189189   
##   
## [1] "group by young\_mother testing variable high\_edu"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.6787, df = 191.21, p-value = 0.0003047  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3322822 -0.1003258  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.1688312 0.3851351   
##   
## [1] "group by young\_mother testing variable high\_income"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.0904, df = 171.91, p-value = 0.03806  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.254891088 -0.007306174  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.2337662 0.3648649   
##   
## [1] "group by self\_2\_child testing variable fertility\_preference"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 10.034, df = 205.83, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 1.351758 2.012897  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.544828 1.862500   
##   
## [1] "group by self\_2\_child testing variable husband\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.6521, df = 159.1, p-value = 0.0003525  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3825373 -0.1140144  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.3517241 0.6000000   
##   
## [1] "group by self\_2\_child testing variable child\_2\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.8335, df = 128.02, p-value = 0.0001972  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3659691 -0.1167895  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.1586207 0.4000000   
##   
## [1] "group by self\_2\_child testing variable rank\_wife"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.5692, df = 171.91, p-value = 0.01104  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.09068708 0.69207154  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.241379 2.850000   
##   
## [1] "group by self\_2\_child testing variable age"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.7968, df = 150.2, p-value = 0.005836  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -4.936924 -0.849187  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 34.06944 36.96250   
##   
## [1] "group by self\_2\_child testing variable has\_brothers"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.7632, df = 170.29, p-value = 0.006354  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.31997183 -0.05330404  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.4758621 0.6625000   
##   
## [1] "group by self\_2\_child testing variable only\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.7955, df = 183.43, p-value = 0.005733  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.05187275 0.30071346  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.4137931 0.2375000   
##   
## [1] "group by self\_2\_child testing variable has\_son"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.3599, df = 180.17, p-value = 0.01935  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.27542104 -0.02457896  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.60 0.75   
##   
## [1] "group by self\_2\_child testing variable one\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.3708, df = 140.83, p-value = 0.0009675  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.0919697 0.3528579  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.7724138 0.5500000   
##   
## [1] "group by self\_2\_child testing variable young\_mother"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.3585, df = 145.91, p-value = 0.001  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.09277119 0.35809088  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.737931 0.512500   
##   
## [1] "group by self\_2\_child testing variable childhood"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.6132, df = 173.94, p-value = 0.009756  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1095937 0.7860960  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.510345 3.062500   
##   
## [1] "group by self\_2\_child testing variable con\_2nd\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 3.9306, df = 168.11, p-value = 0.0001236  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.2962836 0.8942337  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.116092 2.520833   
##   
## [1] "group by high\_edu testing variable motherhood2"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.3533, df = 147.17, p-value = 0.01993  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.76811966 -0.06690338  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.096774 2.514286   
##   
## [1] "group by high\_edu testing variable motherhood6"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.4435, df = 156.32, p-value = 0.01566  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.08379937 0.79085501  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.251613 2.814286   
##   
## [1] "group by high\_edu testing variable rank\_daughter"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.5661, df = 134.31, p-value = 0.01138  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.76214813 -0.09868136  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.683871 3.114286   
##   
## [1] "group by high\_edu testing variable rank\_occup"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.3399, df = 108, p-value = 0.02112  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.06411666 0.77459301  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 4.419355 4.000000   
##   
## [1] "group by high\_edu testing variable rank2\_son"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.3461, df = 147.71, p-value = 0.00104  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.8854536 -0.2279104  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.929032 3.485714   
##   
## [1] "group by high\_edu testing variable rank2\_occup"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.311, df = 117.6, p-value = 0.02257  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.07082253 0.91903923  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.980645 3.485714   
##   
## [1] "group by high\_edu testing variable mother\_birth\_order"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.7545, df = 166.6, p-value = 0.006532  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.1158584 0.7022531  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.835526 1.426471   
##   
## [1] "group by high\_edu testing variable education"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -36.44, df = 154, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -1.543910 -1.385122  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.535484 3.000000   
##   
## [1] "group by high\_edu testing variable age"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 4.2087, df = 198.13, p-value = 3.893e-05  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 1.948814 5.385268  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 36.23226 32.56522   
##   
## [1] "group by high\_edu testing variable has\_brothers"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.3066, df = 131.84, p-value = 0.02264  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.0234923 0.3064616  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5935484 0.4285714   
##   
## [1] "group by high\_edu testing variable only\_child"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.1836, df = 123.62, p-value = 0.03088  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.29343617 -0.01439793  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.3032258 0.4571429   
##   
## [1] "group by high\_edu testing variable young\_mother"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -3.7022, df = 165.47, p-value = 0.0002908  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.3483501 -0.1060278  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.5870968 0.8142857   
##   
## [1] "group by high\_edu testing variable life\_satisfaction"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.0061, df = 151.76, p-value = 0.04662  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.004859363 0.637229730  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 3.359140 3.038095   
##   
## [1] "group by high\_income testing variable rank\_occup"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.1719, df = 113.57, p-value = 0.03194  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.03373862 0.73423524  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 4.411765 4.027778   
##   
## [1] "group by high\_income testing variable mother\_birth\_order"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.474, df = 158.96, p-value = 0.01441  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.07695061 0.68607047  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.832215 1.450704   
##   
## [1] "group by high\_income testing variable income"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -39.787, df = 152, p-value < 2.2e-16  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -1.667103 -1.509368  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 1.411765 3.000000   
##   
## [1] "group by high\_income testing variable age"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 1.9974, df = 164.12, p-value = 0.04743  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.02227708 3.86633564  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 35.71895 33.77465   
##   
## [1] "group by high\_income testing variable young\_mother"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = -2.0928, df = 154.42, p-value = 0.038  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## -0.263637001 -0.007604829  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 0.6143791 0.7500000   
##   
## [1] "group by high\_income testing variable mother\_interferes\_work"  
##   
## Welch Two Sample t-test  
##   
## data: dat[[v]] by dat[[group]]  
## t = 2.1243, df = 152.54, p-value = 0.03526  
## alternative hypothesis: true difference in means is not equal to 0  
## 95 percent confidence interval:  
## 0.02469865 0.68118371  
## sample estimates:  
## mean in group FALSE mean in group TRUE   
## 2.427015 2.074074