

# Bride Capture and Psychological Stress

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October 11, 2017

# Motivation

- In a recently published paper, we find that marriages resulting from bride capture negatively affect the birth weight of infants [Becker et al., 2017].
- Children born in these marriages weigh, on average, 2%-6% (80-200 grams) less than children born in love and arranged marriages.
- We assume that the loss in birth weight is due to higher psychological stress experienced by women who were captured for marriage.
- Stress, caused by economic crises, terrorist attacks, armed conflict, death of relatives, or earthquakes, affects birth outcomes [Bozzoli and Quintana-Domeque, 2014; Camacho, 2008; Mansour and Rees, 2012; Persson and Rossin-Slater, forthcoming; Torche, 2011]

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# The Economics of Marriage

- Around the world, people tend to marry through "love" marriage or arranged marriage.
- Love marriage: Two members of a couple choose one another following a search process.
- Arranged marriage: The search activity is not undertaken by the members of a couple but by a third party.
- In both cases, potential spouses compare each other's characteristics and evaluate their potential gains from marriage. If the expected gains from marriage are greater than the expected gains from continued search, then they contract marriage [Becker, 1973].

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# The Economics of Marriage

- In some societies, forced marriage is a third option.
- One spouse or occasionally both spouses do not have a choice in selecting their marriage partner.
- This lack of choice presumably reduces the expected gains from marriage, which should lead to adverse outcomes in forced marriage.
- We regard marriages resulting from bride capture, practiced in Kyrgyzstan and other countries, as a specific form of forced marriage.

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# Bride Kidnapping and Stress

- The woman cannot choose the man who promises most utility: for example, she cannot marry with whom she shares common interests, attitudes, and values.
- This leads to less "assortative mating", or more random selection of spouses, than in other marriages.
- Low assortative mating, in turn, leads to chronic stress because it reduces compatibility and increases conflict and arguments in the daily life of couples [Luo and Klohnen, 2005].

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## Questions in this Paper

- 1 Is there evidence for less assortative mating in marriages in which the woman was captured compared with other marriages?
- 2 Are women in marriages resulting from bride capture more stressed than women in other marriages?

# Data

- Life in Kyrgyzstan (LIK) survey [Brück et al., 2014]
- Starting point is 2011 wave because the birth weight results are based on this wave, but we merge several variables from other waves
- Restrict analysis to Kyrgyz women because there is essentially no bride capture among other ethnic groups

# Assortative Mating

Romantic partners tend to show

- strong similarity in age, political, and religious attitudes,
- moderate similarity in education, general intelligence, and values,
- and little or no similarity in personality characteristics.

[reviews provided by Klohnen and Mendelsohn, 1998; Watson et al., 2004]

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## Assortative Mating: Age

Correlation (Pearson's  $r$ ) between wife's age at marriage and husband's age at marriage:

|                   |       |
|-------------------|-------|
| Love marriage     | 0.66* |
| Arranged marriage | 0.61* |
| Bride capture     | 0.41  |

\* indicates that correlation differs from that of bride capture

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| Random couple     | 0.14  |

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# Assortative Mating: Education

Correlation (Spearman's rho) between wife's educational attainment and husband's educational attainment:

|                   |       |
|-------------------|-------|
| Love marriage     | 0.46* |
| Arranged marriage | 0.40  |
| Bride capture     | 0.31  |
| Random couple     | -0.04 |

\* indicates that correlation differs from that of bride capture

## Assortative Mating: Political Attitude

Correlation (Spearman's rho) between wife's political attitude and husband's political attitude:

*In your opinion, what kind of political system is the most suitable for Kyrgyzstan?*

|                   |       |
|-------------------|-------|
| Love marriage     | 0.60  |
| Arranged marriage | 0.72  |
| Bride capture     | 0.63  |
| Random couple     | -0.08 |

\* indicates that correlation differs from that of bride capture



# Assortative Mating: Attitudes on Gender Roles

Do you agree or disagree with the following statements? (*LIK 2012*)

- 1 Important decisions should be made by the husband rather than the wife.
- 2 A man's job is to earn money; a woman's job is to look after the home and family.
- 3 A woman is really fulfilled only when she becomes a mother.
- 4 Both the husband and the wife should contribute to the household income.
- 5 ...

# Assortative Mating: Attitudes on Gender Roles

Luo and Klohnen (2005): Assortative Mating and Marital Quality in Newlyweds: A Couple-Centered Approach, *Journal of Personality and Social Psychology*, 88(2): 304-326.

- How similar is each husband and wife pair in terms of their profiles of responses across a number of responses?
- Compute a similarity index for every couple by correlating each husband's and wife's responses across all items (statements) on a given domain (gender attitude)

# Assortative Mating: Attitudes on Gender Roles

Mean comparison of the similarity index:

|                   |       |
|-------------------|-------|
| Love marriage     | 0.59* |
| Arranged marriage | 0.47  |
| Bride capture     | 0.50  |
| Random couple     | 0.09  |

\* indicates that the mean differs from that for bride capture

# Assortative Mating: Attitudes on Gender Roles

|                            | Dependent: Bride capture |
|----------------------------|--------------------------|
| Gender attitude similarity | -0.049**                 |
| Wife's age                 | 0.002**                  |
| Rural                      | 0.111***                 |
| Number obs.                | 1,229                    |

Probit estimation. Shown are marginal effects.

# Assortative Mating: Personality

I see myself as someone who (*LIK 2012*)

- 1 keeps distance
- 2 tends to find fault with others
- 3 does a thorough job
- 4 is depressed
- 5 is curious about many different things
- 6 generates a lot of enthusiasm
- 7 generally trust other people
- 8 ...

# Assortative Mating: Personality

The personality items are supposed to produce the so-called Big-Five personality traits [Rammstedt and John, 2005]:

- 1 Extraversion
- 2 Agreeableness
- 3 Conscientiousness
- 4 Neuroticism
- 5 Openness

# Assortative Mating: Personality

Using factor analysis, we get a slightly different categorization of personality characteristics, or maybe behavioural clusters, which we call

- 1 Positive attitude towards life
- 2 Obnoxious
- 3 Someone best avoided
- 4 Extraverted
- 5 Depressed

# Assortative Mating: Personality

Mean comparison of the similarity index for positive attitude towards life:

|                   |       |
|-------------------|-------|
| Love marriage     | 0.40* |
| Arranged marriage | 0.37  |
| Bride capture     | 0.34  |
| Random couple     | 0.15  |

\* indicates that the mean differs from that for bride capture



# Assortative Mating: Personality

Mean comparison of the similarity index for being someone best avoided:

|                   |       |
|-------------------|-------|
| Love marriage     | 0.55* |
| Arranged marriage | 0.62* |
| Bride capture     | 0.47  |
| Random couple     | 0.41  |

\* indicates that the mean differs from that for bride capture

# Assortative Mating: Personality

Mean comparison of the similarity index for being obnoxious:

|                   |      |
|-------------------|------|
| Love marriage     | 0.35 |
| Arranged marriage | 0.34 |
| Bride capture     | 0.27 |
| Random couple     | 0.14 |

\* indicates that the mean differs from that for bride capture

# Assortative Mating: Personality

Mean comparison of the similarity index for being extraverted:

|                   |      |
|-------------------|------|
| Love marriage     | 0.33 |
| Arranged marriage | 0.39 |
| Bride capture     | 0.40 |
| Random couple     | 0.05 |

\* indicates that the mean differs from that for bride capture

# Assortative Mating: Personality

Mean comparison of the similarity index for being depressed:

|                   |       |
|-------------------|-------|
| Love marriage     | 0.64* |
| Arranged marriage | 0.69* |
| Bride capture     | 0.52  |
| Random couple     | 0.44  |

\* indicates that the mean differs from that for bride capture

# Assortative Mating: Personality

|                               | Dependent: Bride capture |
|-------------------------------|--------------------------|
| Similarity: Positive attitude | -0.045**                 |
| Wife's age                    | 0.002**                  |
| Rural                         | 0.098***                 |
| Number obs.                   | 1,501                    |

Probit estimation. Shown are marginal effects.

# Assortative Mating: Personality

Similar result for

- Someone best avoided
- Obnoxious
- Depressed

# What is Stress?

- Stress is the body's way of responding to unusual demand or threat.
- When faced with threat, the nervous system responds by releasing a flood of stress hormones (e.g. adrenaline, cortisol), which rouse the body for emergency action:
  - Heart pounds faster
  - Muscles tighten
  - Blood pressure rises
  - Breath quickens
  - Senses become sharper
- A stressed person has extra strength or energy to defend him/herself against the threat.

# What is Stress?

## Symptoms of stress overload

- Cognitive: inability to concentrate, constant worrying
- Emotional: depression, moodiness
- Physical: aches and pains, nausea
- Behavioral: sleeping too much or too little, withdrawing from others



## Stress indicators in the LIK

- Divorce
- Satisfaction with life in general
- Satisfaction with family life
- Worries about own health
- Depression severity

Note: The last four indicators are only for couples that are still married.

## Stress indicators: Divorce

|                   | (1)      | (2)      |
|-------------------|----------|----------|
| Bride capture     | 0.076*** | 0.082*** |
| Mother captured   | .        | 0.037*   |
| Interaction       | .        | -0.065*  |
| Observations      | 1,951    | 1,433    |
| R-squared         | 0.136    | 0.154    |
| Mean of dependent | 0.062    | 0.055    |

Control variables: age at marriage, current age, educational attainment, number of children, any male children, rural/urban, district fixed effects

## Stress indicators: Satisfaction with life

|                               | (1)     | (2)    | (3)     |
|-------------------------------|---------|--------|---------|
| Bride capture                 | -0.381* | -0.191 | -0.378  |
| Mother captured               | .       | 0.094  | .       |
| Interaction                   | .       | -0.188 | .       |
| Similarity: Positive attitude | .       | .      | 0.371** |
| Observations                  | 1,564   | 1,177  | 1,452   |
| R-squared                     | 0.306   | 0.335  | 0.319   |
| Mean of dependent             | 7.060   | 7.118  | 7.082   |

Control variables: age at marriage, current age, educational attainment, number of children, any male children, rural/urban, district fixed effects

## Stress indicators: Satisfaction with family life

|                               | (1)       | (2)       | (3)       |
|-------------------------------|-----------|-----------|-----------|
| Bride capture                 | -0.465*** | -0.610*** | -0.435*** |
| Mother captured               | .         | -0.329*   | .         |
| Interaction                   | .         | 0.704**   | .         |
| Similarity: Positive attitude | .         | .         | 0.320**   |
| Observations                  | 1,562     | 1,176     | 1,452     |
| R-squared                     | 0.343     | 0.362     | 0.355     |
| Mean of dependent             | 7.867     | 7.953     | 7.944     |

Control variables: age at marriage, current age, educational attainment, number of children, any male children, rural/urban, district fixed effects

## Stress indicators: Worries about own health

|                               | (1)   | (2)      | (3)     |
|-------------------------------|-------|----------|---------|
| Bride capture                 | 0.264 | 0.197    | 0.175   |
| Mother captured               | .     | -0.498** | .       |
| Interaction                   | .     | -0.204   | .       |
| Similarity: Positive attitude | .     | .        | -0.487* |
| Observations                  | 1,558 | 1,172    | 1,446   |
| R-squared                     | 0.504 | 0.532    | 0.522   |
| Mean of dependent             | 5.280 | 5.251    | 5.257   |

Control variables: age at marriage, current age, educational attainment, number of children, any male children, rural/urban, district fixed effects

## Stress indicators: Depression severity

Over the past two weeks, have you been bothered by any of the following problems? (*LIK 2016*)

- 1 Little interest or pleasure in doing things
- 2 Feeling down, depressed or hopeless
- 3 Trouble falling asleep, staying asleep, or sleeping too much
- 4 Feeling tired or having little energy
- 5 Feeling bad about yourself - or that you're a failure or have let yourself or your family down
- 6 ...

## Stress indicators: Depression severity

|                               | (1)    | (2)    | (3)    |
|-------------------------------|--------|--------|--------|
| Bride capture                 | 0.623* | 0.777* | 0.645* |
| Mother captured               | .      | 0.493* | .      |
| Interaction                   | .      | -0.520 | .      |
| Similarity: Positive attitude | .      | .      | -0.452 |
| Observations                  | 1,175  | 1,175  | 1,108  |
| R-squared                     | 0.338  | 0.340  | 0.350  |
| Mean of dependent             | 2.949  | 2.949  | 2.950  |

Control variables: age at marriage, current age, educational attainment, number of children, any male children, rural/urban, district fixed effects

# Conclusion

- We find clear evidence for less assortative mating in marriages resulting from bride capture.
- Women in marriages resulting from capture are more stressed than women in other marriages.
- However, this appears to be mainly true for women whose mothers were not captured themselves.
- Bride capture is associated with stress even when we control for similarity of the spouses. This suggests that bride capture does not only work through low assortative mating.



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