

Beauty and the Beast: Not a happy ending.

Physical Unattractiveness and Sexual Violence Perpetration

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April 29, 2025

Abstract

Little is known about whether an individual's level of attractiveness plays a role in the likelihood of perpetrating sexual violence. Using U.S. data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), we examine the relationship between attractiveness and sexual violence perpetration against one's partner. To operationalize beauty, we use physical attractiveness scores assigned by interviewers to survey respondents between the ages of 12 and 17. Our results show that within the sample of men, a 1-point increase in beauty rating (on a scale of 1-5) reduces the likelihood of having perpetrated sexual violence on the partner in adulthood by 13 percent. We also find that parental investment – proxied by birth order – mitigates this association, as very unattractive men who received high levels of parental investment have substantially lower predicted probabilities of perpetrating sexual violence compared to their counterparts who received low levels of parental investment.

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1 Introduction

Sexual violence against women is a serious violation of human rights and a significant issue worldwide. In the U.S., almost one every two women has experienced some form of sexual violence in their life, with approximately half of (rape) cases committed by an intimate partner (CDC 2011, 2018). The consequences of sexual violence victimization are severe, ranging from mental health and physical health disorders to lower social well-being and increased suicidality (Dworkin et al. 2017; Basile and Smith 2011). Despite the high prevalence of sexual assaults and their traumatizing effects on victims, we still know little about the underlying factors that drive men to perpetrate sexual violence. In this study, we provide first evidence of the effects of physical attractiveness on sexual violence perpetration.

It is well established in the literature that society pays a premium for being physically attractive. Attractive individuals receive higher grades in school and university (Mehic 2022), earn higher wages (Hamermesh 2011), have easier career advancements (Hale, Regev, and Rubinstein 2023), and generally report higher life satisfaction scores (Hamermesh and Abrevaya 2013). Failure to meet society's beauty standards, however, can have significant negative impacts on individual well-being. Already in youth, unattractive students are more likely to be unpopular in high school and have lower number of friends (Green, Wilson, and Zhang 2023). Feelings of vulnerability and social exclusion have been shown to be among the factors that drive men toward extremist behaviors (Harpviken 2020). Within the sexual sphere in particular, physical unattractiveness and vulnerability are at the core of misogynist movements such as that of the incels (short for "involuntary celibate") (Daly and Reed 2022; Botto and Gottzén 2024). Incels attribute their inability to form romantic or sexual relationships to their perceived lack of physical attractiveness and glorify sexualized violence against women as a means to reestablish their manhood (Daly and Reed 2022; Gosse, Halpin, and Maguire 2024). Whether a relationship between physical attractiveness and sexual violence perpetration exists, however, remains to date empirically unknown.

In this paper, we investigate the effect of own level of physical attractiveness on the likelihood of committing sexual violence against their partner using rich survey data from Add Health. This data is particularly well-suited for our purposes since it includes (i) interviewers' ratings of respondents' level of physical attractiveness and (ii) information about respondents' relationships,

including details about any attempted or committed sexual offenses against their partners.

With this paper, we contribute to two strands of literature. First, we add to the literature on beauty premium effects by providing first evidence on sexual violence outcomes. Earlier studies examined educational and labor market outcomes (Mehic 2022; Hale, Regev, and Rubinstein 2023; Hamermesh 2011), crime outcomes (Mocan and Tekin 2010), and risky behaviors (Green, Wilson, and Zhang 2023), but have overlooked intimate partner sexual violence.

Second, we contribute to the literature that examines the drivers of and protective factors against intimate partner violence (Akyol and Kırdar 2022; Erten and Keskin 2018; Aizer 2010; Bulte and Lensink 2019; Brassiolo 2016; Card and Dahl 2011; Luca, Owens, and Sharma 2015; Cesur and Sabia 2016). The majority of studies on this topic have generally focused on physical violence outcomes (Aizer 2010; Bulte and Lensink 2019; Card and Dahl 2011; Cesur and Sabia 2016), with relatively few also including sexual violence considerations (Akyol and Kırdar 2022; Erten and Keskin 2018; Brassiolo 2016; Luca, Owens, and Sharma 2015). However, these studies offered evidence on sexual violence occurrences from women's (victimization) perspective ¹ With our paper, we contribute to the literature by offering unique insights of a factor – physical attractiveness – driving sexual violence from the perpetrator's perspective.

Our results show that 1-point increase of beauty ratings decreases the likelihood of perpetrating sexual violence toward own partner by 1.3 percentage point. Relative to the baseline mean sample (9.9), this effect corresponds to a reduction in perpetrated violence by 13 percent. We also find that personality traits and social inclusion play a marginal role in mediating the relationship between beauty and sexual violence perpetration. Instead, suggestive evidence indicates that parental time and economic investment can significantly mitigate the impact of beauty on sexual violence perpetration. Using birth order as an exogenous proxy for parental investment, our results show that very unattractive men receiving high levels of parental investment have substantially

¹Exploiting a compulsory schooling law in Turkey, Akyol and Kırdar (2022) and Erten and Keskin (2018) examined the effect of education on women's likelihood of becoming victims of physical, psychological, and sexual violence. Both studies found statistically insignificant effects of education on sexual violence victimization. Exploiting a reform that unexpectedly lowered the costs of divorce in Spain, Brassiolo (2016) examined the effects of divorce on the likelihood for women to become victims of physical, psychological, or sexual abuse by their partners. The author found a statistically negative effect of divorce on sexual violence victimization. Finally, Luca, Owens, and Sharma (2015) examined how a reform in India that banned alcohol consumption has reflected in the likelihood for women to become victims of physical or sexual violence. The author found that banning alcohol significantly reduced sexual violence victimization among women.

lower predicted probabilities of committing sexual violence against their partner as opposed to their comparison group receiving low levels of parental investment. These findings have important implications, prompting reflection on the importance society places on physical appearance and the family's protective role in preventing the development of violent behaviors within the sexual sphere.

2 Data

2.1 Dataset

We use data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a U.S. longitudinal survey that follows a nationally representative sample of 8th to 12th graders as they transition from adolescence to adulthood. The first wave of the survey (Wave 1) was conducted in the 1994-95 academic year and involved 80 high schools and 52 middle schools whose student population (about 90,000 students aged 12 to 19) was given a short baseline interview. From these schools, a subsample of 20,745 students – the "In-Home" sample – was randomly chosen to participate in a detailed interview that would typically take place at the respondent's home. The In-Home sample was then longitudinally followed in four subsequent follow-ups conducted in 1996 (Wave 2), 2001-02 (Wave 3, ages 18-26), 2008-09 (Wave 4, ages 24-32), and 2016-18 (Wave 5, ages 32-42). For the purpose of this study, we retain all Wave 1 In-Home respondents who participated in either one among Wave 3, Wave 4, or Wave 5 and for whom sexual violence information is collected (17,619 observations).² After deleting observations with missing information on control variables (5.58 percent of the sample), our final sample consists of 16,636 observations, 7920 men and 8716 women.

Interviews in Wave 1 and subsequent waves were conducted using a mixture of Computer Assisted Personal Interview (CAPI) or Computer Assisted Self Interview (CASI), depending on the nature of the question.³ Specifically, for less sensitive questions, the interviewer would read the questions aloud to the respondents and record their answers on a laptop. For more sensitive

²Individuals who never had a partner up to Wave 3 or who do not have a current partner at the time of the survey in Wave 4 or 5 do not answer to questions related to partnership violence.

³Only in Wave 5, a mixed-mode interview is employed, where some respondents get the usual CASI/CAPI interviews, whereas other respondents fill a web or mail questionnaire independently.

questions, instead, the interviewer would allow respondents to read the question in private on the laptop and type the answer themselves. At the end of the interview, interviewers were asked to fill in answers to some questions regarding the interview and the respondent. Among these questions, interviewers were asked “How physically attractive is the respondent” being able to choose between “1 - very unattractive,” “2 - unattractive,” “3 - about average,” “4 - attractive,” and “5 - very attractive”.

As a key independent variable of interest, we use the physical attractiveness rating assigned by interviewers to respondents in Wave 1. Table 1 reports the frequencies for each category of physical attractiveness separately for men and women. On average, women receive higher beauty ratings than men, with mean scores of 3.7 for women and 3.5 for men. Both genders receive relatively few ratings in the "very unattractive" and "unattractive" categories combined (6.7% for men and 5.8% for women). Instead, approximately half of men (50.6%) are rated as "about average," whereas this proportion is lower for women (37.3%). Finally, women receive relatively more ratings in the "attractive" or "very attractive" categories combined (57.2%), while this percentage is lower for men (42.7%).

2.2 Sexual violence perpetration

According to the U.S. Centers for Disease Control and Prevention (CDC), sexual violence is "a sexual act that is committed or attempted by another person without freely given consent of the victim or against someone who is unable to consent or refuse" (Basile et al. 2014). In our data, we measure sexual violence perpetration by constructing a binary indicator for whether individuals have ever attempted to or exerted sexual violence toward their partner. Starting from Wave 3 through Wave 5, respondents are asked, almost always with respect to their ongoing relationship⁴, how often they "insisted on or made [partner] have sexual relations with [respondent] when [partner] didn't want to". Using answers to this question, we code sexual violence perpetration as 1 if respondents report having forced sexual relations on their partner at least once in any of the Waves 3-5 they participated, and as 0 if respondents report never having forced sexual relations on their

⁴Only in Wave 3 respondents are asked to reconstruct their relationship history and survey items about sexual violence are available for up to three relationships.

partner in any of the waves they participated.⁵

Because questions about perpetrated violence are by their nature sensitive and refer to socially undesirable or unlawful actions that respondents may not feel comfortable disclosing, to maximize response rates, Add Health uses CASI interview for such questions (Harris 2013). As mentioned earlier, these questions are asked on laptops, with responses filled in by respondents independently and in privacy. Although CASI interview systems are generally recognized as effective in improving the reporting of sensitive behavior and in increasing response rates (Cesur and Sabia 2016; Rathod et al. 2011), it is possible that the underreporting of violent behaviors might still persist. Yet, to the extent that beauty ratings are not correlated with the frequency of (under)reporting sexually violent behaviors, our estimates of the effect of beauty on sexual violence perpetration should be unbiased.

Table 1 shows frequencies for sexual violence perpetration. In our data, 9.9 percent of men report having forced sexual relations on their partner at least once, whereas this percentage is lower within the sample of women, amounting to 5.4 percent.

2.3 Control and mechanism variables

To account for individual, family, and socioeconomic characteristics that might be correlated with physical attractiveness scores, we employ a rich range of control variables, all measured in Wave 1. At the individual level, we include a discrete variable for respondents' age, binary indicators for respondents' sex and birthplace (U.S.-born vs. foreign-born), and account for respondents' race by constructing a categorical variable arranged in five levels (White, Black, Hispanic, Asian, Other). We also account for respondents not being continuously followed from Wave 3 to Wave 5 by creating a categorical variable that captures their exact participation pattern across these waves. This variable indicates whether a respondent participated in only Wave 3, only Wave 4, only Wave 5, both Waves 3 and 4, both Waves 3 and 5, both Waves 4 and 5, or all three waves (3, 4, and 5).

At the family level, we include discrete variables for respondents' number of full siblings and birth order. Additionally, as socioeconomic background variables, we first include a continuous variable for the total income received by the family in 1994. If missing, we impute it by taking the

⁵However, our results are robust to estimating sexual violence perpetration by wave (see Table A.1 in the Appendix).

average family income of the school attended by the respondent, and we include a binary indicator to control for whether the family income variable was imputed. We also control for the mother's and father's level of education, each arranged in five categories (less than secondary education, secondary education, some college, college, and missing/not known).

We also construct a variety of variables that we use as mediating or moderating mechanisms. As mediating mechanisms, we test the roles of i) education; ii) social inclusion; iii) self-esteem; iv) personality traits. First, because physical attractiveness has been shown to affect educational attainment (REF), we check whether by affecting school grades, physical attractiveness might also be reflected in respondents' likelihood to perpetrate violence. For this purpose, we construct a variable for respondents' Wave 1 Grade Point Average (GPA) by averaging the last grade that each respondent reported in English, History, Math, and Science. Further, because physical attractiveness has been shown to correlate with individuals' number of friends and social inclusion (REF), which are also determinants of violent behaviors (REF), we examine the role of social integration as a mediator of the association between physical attractiveness and sexual violence perpetration. To operationalize social inclusion, we construct two variables, social acceptance and social isolation, both using Wave 1 information⁶. Next, because physical attractiveness might significantly influence an individual's level of self-esteem and self-esteem has been shown to significantly correlate with violent behaviors (Ostrowsky 2010), we test the mediating role of self-esteem in driving the association between physical attractiveness and sexual violence perpetration.⁷ Finally, previous research has descriptively shown that certain levels of personality traits (low agreeableness, low extraversion, or low conscientiousness) recur more frequently among individuals who commit sexual offenses (Voller and Long 2010). Because beauty can influence personality (Green, Wilson, and Zhang 2023), we test the role of personality traits as mediators of the relationship between physical attractiveness and sexual violence perpetration by including measures of respon-

⁶Following Fletcher et al. (2021), we construct a variable for how integrated the respondent is at school by doing factor analysis of how much the student feels 'part of school', 'close to people at school', 'happy at school', 'accepted at school' and thinks that 'students are not prejudiced [at school]'. Additionally, we construct a variable for how isolated the respondent is by doing a factor analysis of how often in the week before the interview the respondent 'talked less than usual', 'felt lonely', thought 'friends do not care', felt 'disliked by people', 'hang out with friends'.

⁷Following Green, Wilson, and Zhang (2023), we define self-esteem by factor analysis of respondents' levels of agreement (on a 1–5 scale, where 1 = strongly disagree and 5 = strongly agree) with each of the four following statements: 1) You have a lot to be proud of; 2) You like yourself just the way you are; 3) You feel you are doing everything just about right; 4) You have a lot of good qualities.

dents' Big Five personality trait levels – conscientiousness, extroversion, openness, neuroticism, and agreeableness – constructed using the Wave 4 personality modules.⁸

As a moderating mechanism, instead, we consider and test the role of parental investment. To measure it, we consider two variables. First, we construct a measure of parental school involvement as a cumulative score ranging from 0 to 3 based on how many of the following activities the resident parent engaged with their child in the four weeks preceding the survey: (i) discussing school grades, (ii) working on a school project, or (iii) talking about other school-related matters. However, because parental school involvement may be an endogenous measure of parental investment as it may itself be influenced by a child's physical attractiveness, as a second variable we use an exogenous proxy for parental investment, namely birth order. It is indeed well established in the literature that higher-order children tend to receive larger time and economic resources from their parents than their lower-order siblings, as they have spent more time in the family with fewer siblings to compete with (Black, Devereux, and Salvanes 2005; Price 2008).

3 Empirical strategy

To examine the effect of physical attractiveness on sexual violence perpetration, we estimate the following regression:

$$y_i = \beta_0 + \beta_1 Phys_attr_i + \delta X_i + \delta_{st} + \varepsilon_i \quad (1)$$

where y_i indicates the examined outcome variable (sexual violence perpetration) for individual i ⁹, $Phys_attr_i$ is a discrete variable for an individual's level of physical attractiveness (scale 1-5), X_i defines a series of individual, family, and socioeconomic control variables, and δ_{st} denotes school-by-interviewer fixed effects. Unless otherwise specified, standard errors are clustered at the school by interviewer level.

Estimating the effect of beauty presents several challenges. First, although individuals ap-

⁸The Big Five personality traits (conscientiousness, extroversion, openness, neuroticism, and agreeableness) are constructed using responses to 41 survey items asked in Wave 4 as part of the personality module (see Fletcher and Padrón 2016 for further information).

⁹In additional analyses, we examine the effects of physical attractiveness on physical violence perpetration, finding no statistical effect (see Table A.2 in the Appendix).

pear to show relatively consistent judgments among each other about what is deemed “attractive” (Hamermesh 2011; Hamermesh and Abrevaya 2013), beauty is ultimately a subjective matter. The assessment of a person’s level of beauty might indeed reflect personal preferences or cultural influences, with ratings differing from one person to another. Including interviewer fixed effects – by construction absorbed when school-by-interviewer fixed effects are estimated – allows us to account for subjectivity in beauty ratings.

Second, beauty is correlated with a number of background variables, among which the socioeconomic status (SES) of the family of origin is most prominent. Individuals from low-SES families may appear more neglected than those from high-SES families, influencing interviewers’ assessments of beauty regardless of respondents’ actual level of attractiveness. Including an extensive set of control variables for respondents’ background characteristics helps us to mitigate this concern. In addition to family background characteristics, interviewers’ beauty ratings may also be influenced by external factors. For example, interviewers may unconsciously be more likely to assign high beauty ratings to students attending schools located in wealthy neighborhoods than to students attending schools located in more disadvantaged neighborhoods. To address this issue, we follow Green, Wilson, and Zhang (2023) and include school-by-interviewer fixed effects, exploiting variation in beauty ratings assigned by the interviewer within the same school.

4 Results

4.1 Baseline results

Table 2 shows our main results for the effect of beauty on sexual violence perpetration, with estimates reported separately for men (columns 1 to 5) and for women (columns 5 to 10). In the table, we also show a series of specification checks. Starting with the baseline model of columns 1 and 6, which includes only the full set of covariates, we gradually add school and grade fixed effects (columns 2 and 7), interviewer fixed effects (columns 3, 4, and 8, 9), and finally, in our preferred specification, school-by-interviewer fixed effects (columns 5 and 10).

Across specifications, we consistently find that, within the sample of men, physical attractiveness has a negative impact on sexual violence perpetration. By contrast, within the sample of

women, no significant effect is found. In column 5, a 1-point increase in men's beauty rating is associated with a 1.3 percentage points reduction in the likelihood of perpetrating sexual violence toward their partner. The magnitude of this reduction is non-negligible, corresponding to a 13% decrease relative to the sample mean.

4.2 Mechanisms

Mediating factors of sexual violence perpetration. In Figure 1, we test for the sample of men the possible roles of i) education; ii) social inclusion; iii) self-esteem; and iv) personality traits as mediators of the relationship between beauty and sexual violence perpetration (see Table XXX to XXX in the Appendix for the full regression tables). In Panel (a), we first assess the relevance of the mediators and find that physical attractiveness is significantly correlated with nearly all mediators along the directions suggested by the literature. Specifically, a one-point increase in beauty rating is associated with a 0.121 standard deviation (s.d.) increase in school GPA, a 0.116 s.d. increase in self-esteem, a 0.083 s.d. increase in social acceptance, and 0.033 s.d. decrease in social isolation. Finally, regarding personality traits, higher physical attractiveness is associated with greater conscientiousness (+0.087 s.d.), extroversion (+0.107 s.d.), and agreeableness (+0.098 s.d.), as well as lower neuroticism (-0.092 s.d.), whereas it is not significantly correlated with openness.

In Panel (b), we examine how the association between physical attractiveness and sexual violence perpetration changes when mediators are included in the regression. Specifically, for each potential mechanism, we report the estimated coefficient on physical attractiveness from two specifications: one excluding the mediator(s) and one including them. In Table 3, we report 95% percentile bootstrap confidence intervals, following the approach of Preacher and Hayes (2004), to evaluate the significance of each mediating pathway. Our findings show that personality traits and social inclusion account for significant yet marginal portions of the observed association, reducing the physical attractiveness coefficient by 17.14% and 11.94%, respectively. Self-esteem also plays a statistically significant mediating role, explaining 6.15% of the reduction. By contrast, we find no evidence that high school GPA significantly mediates the relationship.

Moderating factors of sexual violence perpetration. So far, we have shown that higher physical

attractiveness is significantly associated with lower frequencies of sexual violence perpetration within the sample of men. In Figure 2, we examine the role of parental investment as a potential moderator of this relationship for men. In the right-hand graph, we show how predicted frequencies of sexual violence perpetration vary across levels of physical attractiveness as parental school involvement increases. The graph reveals a negative relationship between parental school involvement and sexual violence perpetration among very unattractive individuals. Specifically, very unattractive men who received the highest level of parental school involvement appear to have predictive sexual violence perpetration frequencies that are not statistically different from zero, whereas very unattractive men with the lowest level of parental school involvement appear at the highest end of the predicted sexual violence perpetration frequencies.

However, because parental school involvement may be an endogenous measure of parental investment as it may itself be influenced by a child's physical attractiveness, we check the robustness of our findings using birth order as an exogenous proxy for parental investment. The left-hand graph in Figure 2 shows how predicted frequencies for sexual violence perpetration change across levels of physical attractiveness as birth order increases. Consistent with our previous findings, we observe that among very unattractive men, those who are higher in the birth order report lower predicted sexual violence perpetration frequencies compared to their counterparts who are lower in the birth order. Altogether, these findings provide suggestive evidence that parental investment is a relevant moderator of the relationship between physical attractiveness and sexual violence perpetration, serving as a protective factor preventing at-risk men from developing violent attitudes that ultimately lead to sexual violence perpetration.

5 Conclusion

In this paper, we analyze the relationship between perceived physical attractiveness and the likelihood of committing sexual violence. The main insight of our work is that in a society that places significant value on physical appearance, individuals who are considered less attractive are not only more vulnerable to becoming victims in certain contexts but, if male, are also more prone to developing frustration that can more easily manifest in aggressive and violent behavior within the sexual sphere.

This pattern, while marginally mitigated by personality traits (such as conscientiousness and neuroticism) and levels of social inclusion during high school, is significantly affected by parental investment. In a society where violence against women remains the only form of violence that does not decline, it is crucial to thoroughly understand all contributing factors. These findings have important implications. Recognizing that lower perceived attractiveness can lead to frustration and result in toxicity within romantic relationships forces us to reflect on the value society places on physical appearance. The evidence that mitigating factors include parental emotional and time investment highlights, once again, the protective role of family presence. It suggests that family support can address significant vulnerabilities, limit their impact on critical aspects of individual development, and reduce the likelihood of behavioral escalation that could lead to violent attitudes.

Tables and Figures

Table 1: Descriptive statistics

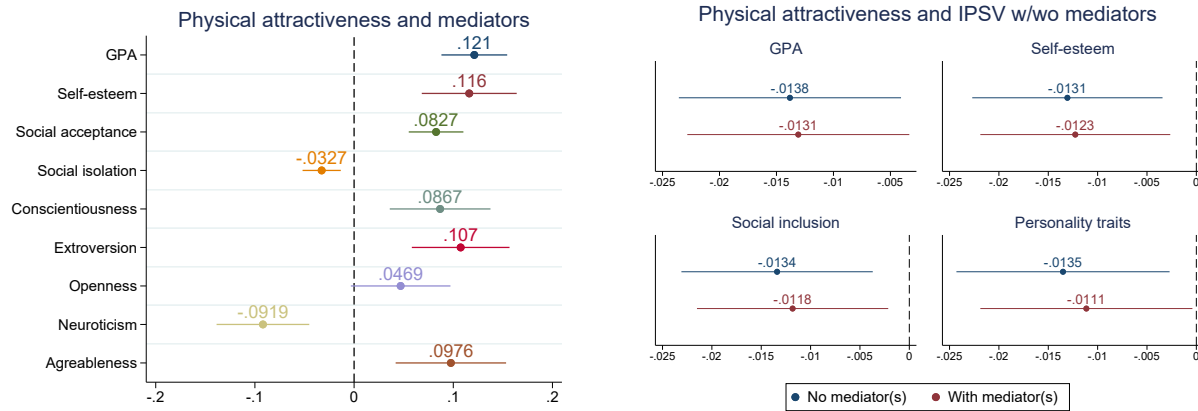
	Men (N=7920)		Women (N=8716)	
	Mean	(SD)	Mean	(SD)
Physical attractiveness (1-5 scale)	3.454	(0.811)	3.692	(0.901)
Very unattractive	0.015	(0.121)	0.021	(0.144)
Unattractive	0.052	(0.222)	0.037	(0.189)
Average	0.506	(0.500)	0.37	(0.483)
Attractive	0.319	(0.466)	0.373	(0.484)
Very attractive	0.108	(0.311)	0.199	(0.399)
<i>Control variables</i>				
Age	15.724	(1.711)	15.567	(1.712)
Family income	46.523	(44.449)	46.608	(48.194)
Family income missing	0.234	(0.423)	0.258	(0.437)
Number of siblings	2.626	(1.452)	2.573	(1.435)
Birth order	1.866	(1.220)	1.83	(1.171)
Born in US	0.918	(0.274)	0.919	(0.272)
Born outside US	0.082	(0.274)	0.081	(0.272)
White	0.36	(0.480)	0.363	(0.481)
Black	0.139	(0.346)	0.162	(0.369)
Hispanic	0.069	(0.253)	0.069	(0.253)
Asian	0.053	(0.225)	0.043	(0.204)
Other ethnicity	0.379	(0.485)	0.362	(0.481)
Mother no secondary education degree	0.135	(0.342)	0.162	(0.369)
Mother at most secondary education degree	0.373	(0.484)	0.374	(0.484)
Mother some college	0.117	(0.321)	0.128	(0.334)
Mother college degree	0.267	(0.442)	0.245	(0.430)
Mother education missing	0.107	(0.310)	0.091	(0.288)
Father no secondary education degree	0.105	(0.307)	0.108	(0.310)
Father at most secondary education degree	0.268	(0.443)	0.251	(0.433)
Father some college	0.086	(0.280)	0.078	(0.268)
Father college degree	0.229	(0.420)	0.208	(0.406)
Father education missing	0.312	(0.463)	0.355	(0.479)
Wave(s) participated: 3	0.064	(0.246)	0.035	(0.184)
Wave(s) participated: 4	0.071	(0.257)	0.045	(0.207)
Wave(s) participated: 5	0.029	(0.168)	0.025	(0.157)
Wave(s) participated: 3, 4	0.234	(0.424)	0.169	(0.375)
Wave(s) participated: 4, 5	0.089	(0.285)	0.088	(0.283)
Wave(s) participated: 3, 5	0.05	(0.218)	0.046	(0.210)
Wave(s) participated: 3, 4, 5	0.462	(0.499)	0.591	(0.492)
<i>Outcome variable</i>				
Sexual violence	0.099	(0.299)	0.054	(0.227)

Table 2: Beauty and sexual violence perpetration

	Men					Women				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Physical attractiveness	-0.009*** (0.004)	-0.010*** (0.004)	-0.011** (0.005)	-0.013*** (0.005)	-0.013*** (0.005)	-0.004 (0.003)	-0.004 (0.003)	-0.004 (0.003)	-0.005 (0.003)	-0.004 (0.003)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
School FE	No	Yes	No	Yes	Absorbed	No	Yes	No	Yes	Absorbed
Grade FE	No	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes
Interviewer FE	No	No	Yes	Yes	Absorbed	No	No	Yes	Yes	Absorbed
Sch-by-int FE	No	No	No	No	Yes	No	No	No	No	Yes
Observations	7920	7920	7920	7920	7920	8716	8716	8716	8716	8716
Dep. var. mean	0.099	0.099	0.099	0.099	0.099	0.054	0.054	0.054	0.054	0.054
Cluster SE	School	School	Intvw	Intvw	Sch-by-int	School	School	Intvw	Intvw	Sch-by-int
R ²	0.019	0.041	0.090	0.110	0.172	0.011	0.031	0.062	0.083	0.136

Notes: The table shows the effect of physical attractiveness on the likelihood of having perpetrated sexual violence on one's partner. Physical attractiveness is a discrete score ranging from 1 (very unattractive) to 5 (very attractive) assigned to students by interviewers in Wave 1. Sexual violence is a binary variable, coded as 1 if the respondent reported forcing sexual relations on their partner at least once in Wave 3, 4, or 5, and coded as 0 if the respondent reported never having forced sexual relations on their partner. Control variables include age, family income, an indicator for missing family income, number of siblings, birth order, indicators for ethnicity, indicators for mother's and father's level of education, indicators for missing mother's and/or father's level of education, indicators for the waves the respondent participated among Wave 3, 4, and 5. Standard errors, clustered as indicated, in parenthesis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 1: Mediating mechanisms of the association between physical attractiveness and sexual violence perpetration



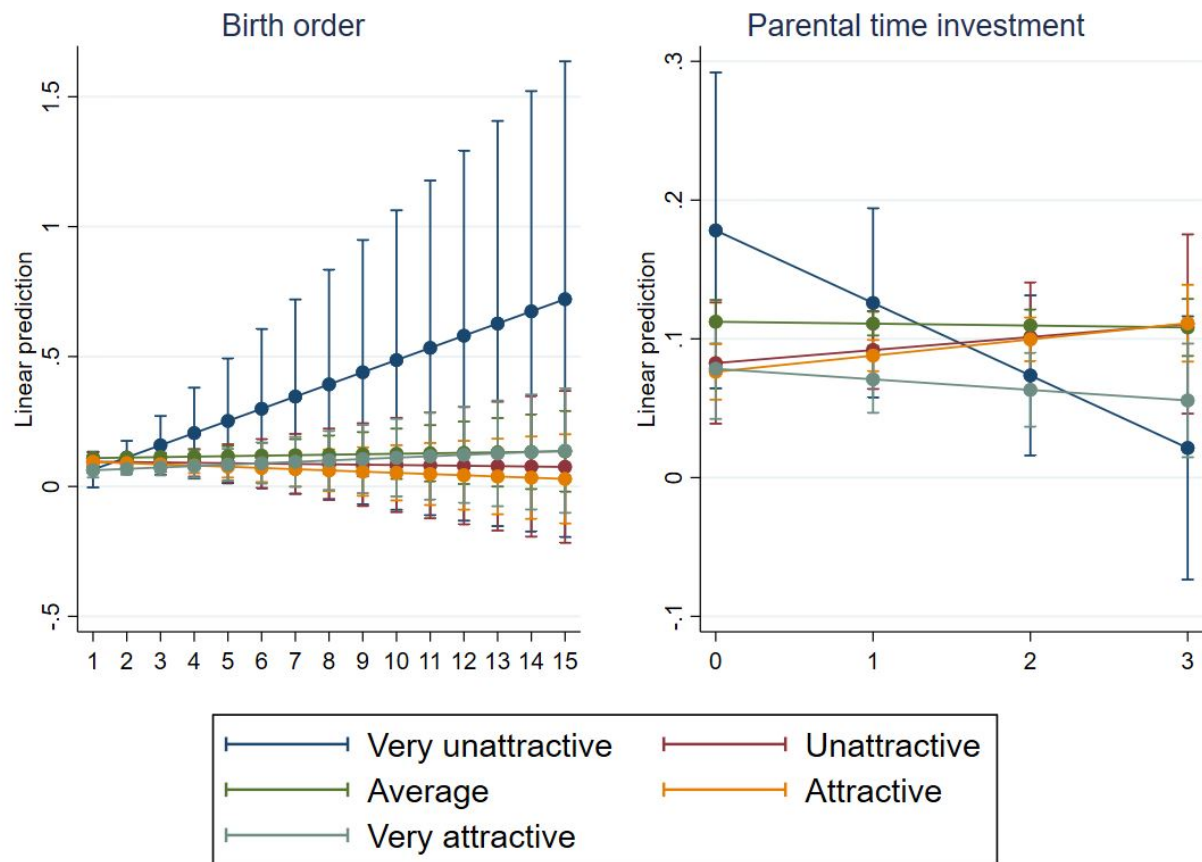
Notes: This figure shows the (possible) mediating roles of education, self-esteem, social inclusion, and personality traits in the relationship between physical attractiveness and sexual violence perpetration among men. Panel (a) presents the regression coefficients of the association between physical attractiveness and mediator(s), each estimated in a separate regression. Panel (b) shows the estimated coefficients for the association between physical attractiveness and sexual violence perpetration, in a regression with the mediator(s) and another regression without the mediator(s) in the model. Error bars represent 95% confidence intervals.

Table 3: Testing the significance of the indirect mediating effect following Preacher and Hayes (2004)

	GPA	Self-esteem	Social inclusion	Personality traits
95% percentile bootstrap CI	[-0.0017, 0.0002]	[-0.0015, -0.0002]	[-0.0025, -0.0007]	[-0.0038, -0.0011]
% change in association	-	↓ 6.15%	↓ 11.94%	↓ 17.14%

Notes: This table shows for each mediation analysis shown in Figure 1, 95% percentile bootstrap confidence intervals computed following Preacher and Hayes (2004) ($R=1000$), and the percentage change in the key coefficient of interest between the regression with and without mediator(s).

Figure 2: Linear prediction of sexual violence perpetration likelihood for each combination of the categories of physical attractiveness and birth order or parental school involvement



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Appendices

A Supplementary Tables and Figures

Table A.1: Beauty and sexual violence perpetration by waves

	Men			Women		
	Wave 3 (1)	Wave 4 (2)	Wave 5 (3)	Wave 3 (4)	Wave 4 (5)	Wave 5 (6)
Physical attractiveness	-0.011** (0.005)	-0.008** (0.004)	-0.002 (0.004)	-0.003 (0.004)	-0.000 (0.002)	-0.002 (0.002)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Grade FE	Yes	Yes	Yes	Yes	Yes	Yes
Sch-by-intvw FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4981	6650	4785	5732	7639	6272
Dep. var. mean	0.062	0.056	0.041	0.054	0.017	0.011
R ²	0.219	0.188	0.213	0.182	0.144	0.145

Notes: The table shows the effect of physical attractiveness on the likelihood of having perpetrated sexual violence on one's partner, with the outcome variable constructed separately for Wave 3, Wave 4, and Wave 5. Controls are defined as in Table 2. Standard errors, clustered at the school-by-interviewer level, are in parenthesis. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A.2: Beauty and physical violence perpetration

	Men	Women
	(1)	(2)
Physical attractiveness	0.004 (0.007)	-0.010 (0.007)
Controls	Yes	Yes
Grade FE	Yes	Yes
Sch-by-intvw FE	Yes	Yes
Observations	7909	8710
Dep. var. mean	0.202	0.356
R ²	0.179	0.169

Notes: The table shows the effect of physical attractiveness on the likelihood of perpetrating physical violence against one's partner. Physical violence is a binary indicator coded 1 if the respondent, in Wave 3, 4, or 5, reported to have engaged at least once in any of the following acts: i) threatened partner with violence, pushed or shoved him/her, or thrown something at him/her that could hurt; ii) slapped, hit, or kicked partner; iii) caused the partner an injury, such as a sprain, bruise, or cut because of a fight with him/her; 0 if the respondent has never engaged in any of the aforementioned acts. Control variables are as defined in 2. Standard errors, clustered at the school-by-interviewer level, in parenthesis. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$