Gender Gap in Parental Leave Intentions: Evidence from 37 Countries

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The present article focuses on traditional gender roles and thus primary analyses focus on cisgender participants who may expect to be in a straight relationship in the future (and thus more likely to anticipate a gender-traditional division of roles). Including data from lesbian and gay participants does not change the main findings.
Gender Gap in Leave Intentions

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Despite global commitments and efforts, a gender-based division of paid and unpaid work persists. To identify how psychological factors, national policies, and the broader sociocultural context contribute to this inequality, we assessed parental-leave intentions in young adults (18–30 years old) planning to have children (N = 13,942; 8,880 identified as women; 5,062 identified as men) across 37 countries that varied in parental-leave policies and societal gender equality. In all countries, women intended to take longer leave than men. National parental-leave policies and women’s political representation partially explained cross-national variations in the gender gap. Gender gaps in leave intentions were paradoxically larger in countries with more gender-egalitarian parental-leave policies (i.e., longer leave available to both fathers and mothers). Interestingly, this cross-national variation in the gender gap was driven by cross-national variations in women’s (rather than men’s) leave intentions. Financially generous leave and gender-egalitarian policies (linked to men’s higher uptake in prior research) were not associated with leave intentions in men. Rather, men’s leave intentions were related to their individual gender attitudes. Leave intentions were inversely related to career ambitions. The potential for existing policies to foster gender equality in paid and unpaid work is discussed.

KEY WORDS: parental leave, gender, cross-national, inequality, childcare

Many countries have a gender-based division of labor, with higher-status paid work done more by men, and lower-status unpaid care work done more by women (EIGE, 2019; WEF, 2020). Importantly, however, the gender gap in unpaid care work (e.g., childcare) is larger than in paid work (OECD, 2020). Men’s relatively lower engagement in childcare has been linked to lower career opportunities for women and marital dissatisfaction in couples (Carlson et al., 2016; Croft et al., 2019), as well as lower well-being for fathers and their children (see Meeussen et al., 2020). Notwithstanding these consequences, antecedents of men’s underrepresentation in childcare have been largely overlooked in psychological research (Croft et al., 2015). While empirically underexplored, men’s relatively low participation in childcare tasks is nonetheless a well-known issue among policy and political decision-makers. However, despite global commitments and efforts to tackle men’s lower engagement in childcare (Eurofound, 1998), recent decades showed varied—and overall
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only modest—progress toward gender equality in childcare between countries (Sullivan et al., 2018). This continued gender imbalance highlights the need for cross-cultural research on reasons for men’s underrepresentation in unpaid care work. In addition, despite evidence of gender inequities in parents’ actual division of labor (Ma et al., 2020), less is known about young women’s and men’s intended engagement in these roles prior to having children. Young women’s and men’s caregiving intentions may factor into their career choices and ambitions (Croft et al., 2019; Frome et al., 2006), ultimately perpetuating a gender-based division of paid and unpaid work. We thus examine predictors of intended uptake of parental leave in 13,942 young adults from 37 countries who do not yet have children.

Individual Gender Attitudes and the Gender Gap in Childcare

Empirical and theoretical research has examined why women and men often behave in accordance with traditional gender roles, with men largely occupying breadwinning roles and women largely occupying caretaking roles (e.g., social role theory; Eagly & Wood, 2012). Although individual differences in gender attitudes are assumed to drive gender-based division of roles (Knudsen & Wærness, 2008), evidence is mixed. Some research shows that gender-egalitarian attitudes predict more equal sharing of childcare and parental leave uptake between partners (Duvander, 2014; Evertsson, 2014). Yet even among straight couples who endorse gender-egalitarian attitudes, mothers still do more childcare than fathers, including taking the majority of parental leave (Brandén et al., 2018; Bulanda, 2004). Furthermore, realistic constraints at the country level, such as transferrable leave policies and gender inequality in the labor market, inhibit leave uptake in men, irrespective of their individual gender attitudes (Bueno & Grau-Grau, 2020; Kaufman, 2018). Thus, women’s and men’s engagement in childcare may depend not only on individual gender attitudes but also the broader sociopolitical context. Indeed, cross-national variation in policies and societal gender inequality corresponds with cross-national variation in the division of paid and unpaid work among mothers and fathers (Aboim, 2010; Boll et al., 2014; Craig & Mullan, 2011; DeRose et al., 2019; Gracia & Esping-Andersen, 2015). For example, although straight couples with children have a more traditional division of paid and unpaid work than couples without children, this difference is attenuated in countries where a proportion of paid leave is reserved specifically for fathers (DeRose et al., 2019).

National Policies, Societal Gender Equality, and the Gender Gap in Childcare

One political strategy for reducing the gender gap in childcare is to extend parental-leave opportunities to men. However, this does not always translate into equal participation in childcare. According to the International Labour Organization (ILO, 2014), 66 countries across the world have introduced parental leave (i.e., leave available to both mothers and fathers) to support gender equality in the division of paid and unpaid work (Burri & Prechal, 2013). However, statistics from Europe show that even in countries that allow mothers and fathers to share leave, mothers tend to take most or all of the leave (Eurofound, 2019). Research has thus examined whether equal uptake is associated with the extent to which leave policies are gender egalitarian (i.e., available to either parent) and generous (i.e., compensated at a high rate). To identify the parental-leave policies most associated with fathers’ leave uptake, one analysis of leave policies in 21 European countries found that “use it or lose it” parental leave that was nontransferrable (i.e., reserved for fathers) and highly paid (approaching 100% of salary) was associated with the highest uptake by men (Castro-García
& Pazos-Moran, 2016). In contrast, women tended to take most of the paid leave offered to them, not only leave paid at a high rate (for similar findings, see Duvander & Johansson, 2012; Geisler & Kreyenfeld, 2019; O’Brien, 2009). Longitudinal studies also show that policies play a key role in eliciting change, as introducing incentives for fathers to take parental leave increases gender-equitable norms and leave uptake (Jurado-Guerrero & Muñoz-Comet, 2021; Omidakhsh et al., 2020).

Importantly, however, parental-leave policies are likely to be confounded with other social, cultural, and economic factors (Carriero, 2020; Kasser, 2011). Thus, to better estimate the effect of leave policies over and above other country-level factors, it is important to consider the effect of societal gender equality, which may also contribute to a gendered divide of paid and unpaid work. For example, cross-national research has shown that straight couples in more gender-equalitarian societies (where women are afforded a higher degree of professional opportunities, economic power, and representation in politics) tend to divide domestic work more equally than those in less gender-equalitarian societies (Hook, 2006; Knudsen & Wærness, 2008). This association between societal gender equality and couples’ share of domestic work may be explained by social role theory (Eagly & Wood, 2012), according to which gender differences are more pronounced in more unequal countries (Eagly & Wood, 1999), as women and men are expected to behave in accordance with gender-role beliefs. These beliefs stem from the gender-based division of labor and gender hierarchy, as women and men infer what is intrinsic and appropriate behavior for their gender based on women’s and men’s relative distribution across social roles. Furthermore, in line with role-congruity theory, women and men are motivated to behave in accordance with gender-role expectations, as they experience personal and social rewards or punishments for role congruity and role incongruity, respectively (Diekman & Eagly, 2008). Taken together, both egalitarian parental-leave policies (linked to men’s higher representation in unpaid care work in prior research) and societal gender equality (women’s relative representation in higher-status paid work) may be associated with a smaller gender gap in intended uptake of parental leave, as young women and men align their future caregiving intentions with gender roles in society (Brown & Diekman, 2010).

Overview and Hypotheses

To address the gender-based division of paid work before it is firmly rooted in a new generation, it is important to situate caregiving intentions in young adults in a broader sociopolitical context. Our preregistered study thus examined parental-leave intentions among 13,942 students in 37 countries. We tested the extent to which parental-leave policies and societal gender equality predicted cross-national variation in the gender gap in intended leave uptake over and above individual-level gender-role attitudes (see the online supporting information for exploratory analyses with other country-level variables). We focus on intended leave uptake as a specific, tangible aspect of childcare rather than intended engagement in childcare in general, as previous research shows that men report shorter leave intentions than women, despite intending to share childcare equally (Tharp & Parks-Stamm, 2021).

In Model 1, we tested the independent effects of four different aspects of parental-leave policies. In all countries, maternity leave is exclusive to mothers, whereas paternity leave is exclusive to fathers. The amount of parental leave exclusive to fathers corresponds with fathers’ leave uptake (e.g., DeRose et al., 2019). Thus, in line with role congruity processes, we predicted that men would report greater intentions to take leave in countries where more leave is exclusive to fathers.
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H1: The gender gap will be smaller in countries where more leave is exclusive to fathers.

In most countries, however, more leave tends to be exclusive to mothers than fathers. We predicted that in countries where relatively more leave is exclusive to mothers than fathers (estimated by subtracting the number of weeks of leave exclusive to fathers from the number of weeks exclusive to mothers), women would report higher—and men lower—intentions to take leave.

H2: The gender gap will be larger in countries with more gender imbalance in exclusive leave.

Interestingly, previous research indicates that (unpaid) parental leave (i.e., leave that mothers and fathers choose how to distribute between themselves) seems to have little bearing on men’s uptake of leave (Han & Waldfogel, 2003). Moreover, experimental research suggests that when women and men are offered longer leave, the gender gap in intentions to take leave increases, as women are more likely to take advantage of unpaid leave than men (Tharp & Parks-Stamm, 2021). In line with these previous findings on how policies affect the gender gap in childcare, we predict that:

H3: Longer available parental leave will correspond with a larger gender gap.

In addition, although financial compensation may correspond with higher leave intentions among both women and men, it may be more strongly associated with men’s leave intentions because of a realistic calculus of lost salary (given men’s higher average pay) or gender norms prescribing men as breadwinners (Haas & Hwang, 2019). Thus, we predict that:

H4: More financially generous leave (i.e., the degree to which leave is compensated) will correspond with a smaller gender gap.

In Model 2, we tested the independent effects of different country-level gender equality indicators on men’s and women’s leave intentions. Again, in line with role-congruity processes, we predicted that gender equality at the national level (operationalized as women’s relative representation in high-status paid work) would correspond with greater gender-equal intentions to care for one’s future children, as women would report relatively shorter—and men relatively longer—leave intentions. Thus, we predict that:

H5: The gender gap in intended leave will be smaller in countries where women’s representation in earnings are more equal to men’s.

H6: The gender gap in intended leave will be smaller in countries where women’s representation in politics are more equal to men’s.

Finally, with the aim to integrate previous literature and examine the relative importance of national policy versus gender-equality indicators on the gender gap in intentions over and above individual gender attitudes, we included all significant interaction effects between participant
gender and country-level variables (from Models 1 and 2) into a final model where we also controlled for individual gender attitudes. In addition to testing the preregistered hypotheses outlined above, we explored the relationship between women’s and men’s leave intentions and career ambitions to assess the implications of caregiving intentions for gender-equal representation in high-status careers.

Method

Sample

Data were collected as part of an international research collaboration on gender roles (ucom2017.wordpress.com). Exclusion criteria, hypotheses, and analyses were preregistered (https://osf.io/7psf5/?view_only=a6ef2883d33d410b788042819d926c9; see the online supporting information for minor deviations from the preregistration). Because the question about leave intentions may be interpreted as only hypothetical in countries that do not offer leave, we preregistered excluding data from 12 countries that did not offer parental or paternity leave to fathers (ILO, 2014).

The present focus is on how gender norms influence a traditional gender division of labor and future child-rearing intentions between women and men in straight relationships. Lesbian and gay couples are more likely to engage in “degendered parenting,” where personal choice, aptitude, and fairness rather than gender guide the division of labor (Fulcher et al., 2008; Silverstein et al., 2002). Accordingly, we preregistered excluding participants who identified as neither male nor female (1.19%) or defined their sexual orientation as gay/lesbian or mostly gay/lesbian from the hypothesis testing1 (2.95%).

Furthermore, because we were interested in future child-rearing intentions, participants who were younger than 18 (1.65%) or reported already having a child (1.10%) or not wanting children in the future (4.88%) were excluded. Notably, despite declining birth rates in many countries, the majority of our young sample (82.30%) indicated that they definitely or most likely want to have children. A minority (17.70%) indicated being unsure. A relatively equal proportion of women (4.35%) and men (4.58%) reported not wanting children in the future.

After applying these preregistered exclusion criteria, the final sample contained 13,942 participants (8,880 identified as women; 5,062 identified as men) from 99 universities across 37 countries (see Table 1). The gender imbalance in the final sample is due to convenience sampling; most of the sample (57%) was recruited from majors in psychology, healthcare, and early education where women are overrepresented (OECD, 2019, see Table SI1 in the online supporting information for more details).

Procedure and Instruments

Participants completed a 45-minute survey in the language of instruction at their university. Only relevant measures are described (for a complete list, see: https://osf.io/rwxcj/?view_only=35deb74b4ddc49958bd7001a0064431d).

1Including (mostly) gay/lesbian participants in the hypothesis testing generated comparable results. Notably, however, the gender gap was more pronounced between straight women and men than between lesbian women and gay men. The relatively smaller gender gap in the latter group appears to be more driven by differences between straight versus gay men than straight versus lesbian women (see the online supporting information for related analyses).
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Individual-Level Variables

Intended parental leave Participants’ intended parental leave was assessed with: “If you had a child in the future, how much voluntary (non-medical) parental leave (may be paid or unpaid) would you like to take in the first 2 years of your child’s life? Please indicate in weeks. For reference, 1 month ~ 4 weeks, 6 months ~ 26 weeks, 1 year ~ 52 weeks.”

Gender Participants were asked: “What best reflects your gender?” Participants could choose between male, female, or neither best reflects my identity.

Career ambitions Two items assessed participants’ ambitions to pursue high-status careers: “I have ambitious career goals” and “I want to be an important person in my field,” rated from 1 (strongly disagree) to 7 (strongly agree). Items correlated between .42 to .76 across countries.

Control Variables

To account for potential differences in sample characteristics across universities, we preregistered as covariates participants’ study major, age, and subjective socioeconomic status (SES), each of which have been linked to parental-leave uptake (Borràs et al., 2018; Geisler & Kreyenfeld, 2019; Ma et al., 2020; Marynissen et al., 2019; see the online supporting information for control variables).

We also preregistered examining the role of country-level factors on leave intentions, over and above individual attitudes. We therefore controlled for individual gender-role attitudes toward childcare in the final model.

Table 1. Sample Information by Country

<table>
<thead>
<tr>
<th>Country (rank)</th>
<th>n (% men)</th>
<th>Country (rank)</th>
<th>n (% men)</th>
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<tbody>
<tr>
<td>Albania (38)</td>
<td>148 (43)</td>
<td>South Korea (118)</td>
<td>136 (60)</td>
</tr>
<tr>
<td>Australia (35)</td>
<td>402 (38)</td>
<td>Lithuania (28)</td>
<td>171 (42)</td>
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<tr>
<td>Belgium (31)</td>
<td>322 (22)</td>
<td>Macedonia (67)</td>
<td>151 (44)</td>
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<td>Canada (16)</td>
<td>1189 (40)</td>
<td>Netherlands (32)</td>
<td>509 (25)</td>
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<tr>
<td>Chile (63)</td>
<td>365 (37)</td>
<td>New Zealand (9)</td>
<td>222 (45)</td>
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<tr>
<td>Colombia (36)</td>
<td>308 (42)</td>
<td>Norway (2)</td>
<td>269 (38)</td>
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<td>198 (35)</td>
<td>Romania (58)</td>
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<td>Ireland (8)</td>
<td>282 (41)</td>
<td>Ukraine (61)</td>
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<td>Italy (82)</td>
<td>286 (37)</td>
<td>United Kingdom (15)</td>
<td>265 (18)</td>
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<td>Japan (114)</td>
<td>463 (41)</td>
<td>United States (49)</td>
<td>3049 (34)</td>
</tr>
<tr>
<td>Kazakhstan (52)</td>
<td>113 (45)</td>
<td>Total</td>
<td>13,942 (36)</td>
</tr>
</tbody>
</table>

Note: Sample information is reported with exclusion criteria applied. Rank refers to countries’ rank on the global gender-gap index (WEF, 2017).
Gender-role attitudes toward childcare  Three items assessed participants’ gender-role attitudes toward childcare\(^2\) (shortened from Gaunt, 2006), e.g., “Mothers are instinctively better caretakers than fathers” (\(\alpha = .45\) to .88 across countries). The response scales ran from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicate more traditional attitudes.

Country-Level Variables

Indicators of different parental-leave policies (ILO, 2014) and gender equality (WEF, 2017) were collected from publicly available datasets. As preregistered, to maximize the degrees of freedom (by limiting the number of predictors in each model), we applied a data-driven approach to select which indicators of gender equality to include as predictors in Model 2 (see the online supporting information for more details). To address missing data, we imputed 10 datasets from a larger dataset of 63 country-level economic, political, and social indicators using Amelia II in R (Honaker et al., 2011; for imputation code, see https://osf.io/9tshr/?view_only=becdb1e590a64ffca6cecf74f131f6ea8).

No multicollinearity was detected as indicated by VIF < 10 between hypothesized country-level variables in each model (Kutner et al., 2004; see Table S16 in the online supporting information for bivariate correlations between country-level variables).

Parental-leave policies  

Father-exclusive leave represents the days of leave exclusive to fathers in a given country (sample range: 0 to 80 days). Gender imbalance in exclusive leave represents the extent to which leave is exclusive to mothers over fathers (in days) and is calculated as the total leave reserved exclusively for mothers minus the total leave reserved exclusively for fathers in a given country (range: −10 to 283 days). Available leave length represents the total leave (in weeks) that is available to either parent (i.e., no part of this leave is exclusive to mothers or fathers; range: 0 to 156 weeks). Financially generous leave represents the number of weeks with 100% income compensation in a given country (range: 0 to 78 weeks), computed as the product of parental leave duration (in weeks) and compensation rate (% of previous earnings; e.g., 10 weeks compensated at 80% = 8 weeks).

Gender equality  

Women’s relative income represents the ratio of female-to-male income in a country and is estimated using the proportion of working women and men, their relative wages, and overall GDP of the country in question (scale ranges from 0 to 1; sample range: .43 to .79; WEF, 2017). Women’s relative representation in politics is based on the ratio of women to men with seats in parliament, at the ministerial level, and number of years with a female head of state over the last 50 years in a given country (scale ranges from 0 to 1; sample range: .08 to .53; WEF, 2017).

Results

Data and analytical code are available on the Open Science Framework (https://osf.io/65dnv/?view_only=c0fff2520ce949749013a30324770f46). All analyses were performed in R (version 4.1.1.1).

\(^2\)Scale is labeled “gender essentialist attitudes” in the dataset.
Data Structure

We had a sufficient sample size for hierarchical modeling based on the number of countries included (i.e., 37; Maas & Hox, 2005). To examine whether there was sufficient variance at the site and country level to justify a three-level hierarchical linear model, we first ran an intercept-only model that included no predictor variables but random intercepts at the site and country level. The intraclass correlation coefficient (ICC) for intended leave indicated sufficient clustering at the site (ICC = 0.06) and country (ICC = 0.09) level (LeBreton & Senter, 2008). We noted a higher degree of clustering for women (ICC = 0.24) than for men (ICC = 0.06). When we added individual- and site-level control variables to the model, the clustering decreased for site (ICC = 0.03) but increased for country (ICC = 0.12), indicating that we successfully captured variance at the site level by including the control variables.

Analytical Strategy

We ran a series of hierarchical linear models in which we included a random slope of participant gender at the country level to account for between-country variability. We added cross-level interactions between participant gender (centered at the grand mean; Enders & Tofighi, 2007; women = −0.36, men = 0.64) and country-level variables (i.e., parental-leave policies and gender-equality indicators, centered at their grand mean; Enders & Tofighi, 2007) in two respective models. To test each hypothesis, we followed significant cross-level interaction effects with simple slopes analyses and examined the gender gap in intentions (i.e., the effect of participant gender) at different levels (±1 SD) of the country-level variable.

In each model, the predictors were entered simultaneously. Each effect is thus tested as the other effects are held constant (see Table SI3 in the online supporting information for bivariate correlations between each country-level variable and country-level gender differences in intended leave uptake). We subsequently entered all significant cross-level interaction effects from Models 1 and 2 into one final model, which also controlled for individual gender-role attitudes. This strategy allowed us to weigh different cross-level interaction effects against each other with maximum degrees of freedom, over and above individual gender-role attitudes.

Age and subjective SES (centered within sites) and study major (effect coded) were added as individual-level control variables. Age and subjective SES were also averaged across sites (grand mean centered) and added as site-level control variables (to partial out potential differences across data-collection sites).

Descriptive Statistics

The first aim of the present research was to examine whether there is cross-national variability in the gender gap in caregiving intentions. Descriptive analyses showed that women intend to take longer leave than do men in all countries (see Figure 1). The gender gap in leave intentions ranged from 0.79 weeks (in Tanzania) to 45.79 weeks (in Russia). See Figures SI2-3 in the online supporting information for absolute averages and ranges for women and men across countries. Exploratory analyses at the individual level further revealed that leave intentions were negatively (albeit weakly) associated with career ambitions\(^3\) in both women (r = −.14, p < .001) and men (r = −.09, p < .001).

Overall, women (M = 5.53, SD = 1.29) reported higher career ambition than men (M = 5.45, SD = 1.37). However, this gender difference was significant in only a minority of countries: Belgium, Chile, Germany, New Zealand, Norway, and the United States (see Table SI5 in the online supporting information).
Hypothesis Testing

The second aim of the present research was to examine the relationship between the gender gap in caregiving intentions and different national parental-leave policies and levels of societal gender equality.

Figure 1. Gender gap in intended uptake of parental leave by country. Scores are based on the estimated means (i.e., subtracting the intercept for men from the intercept for women, when individual- and site-level control variables are held constant). Values above 0 indicate how many more weeks of leave women intend to take than men.
Model 1: Parental-Leave Policies

Model 1 tested whether different national parental-leave policies predicted gender differences in leave intentions. Model 1’s total explanatory power was substantial (conditional $R^2 = .30$), and the fixed effects alone explained 21% of variability (marginal $R^2$). See Table SI6 in the online supporting information for bivariate correlations between different parental-leave policies.

We predicted that the gender gap would be larger in countries with more leave available exclusively to fathers (H1). However, contrary to our hypothesis, with all other leave policies held constant, the gender gap in intended leave did not significantly vary as a function of the amount of exclusive leave available to fathers, $b = 0.13, SE = 0.10, p = .187, 95\%$ CI $[-0.06, 0.32]$. We also predicted that the gender gap would be larger in countries with more leave available exclusively to mothers over fathers (H2). Weak evidence for this hypothesis emerged, with gender imbalance in exclusive leave only marginally significantly moderating the effect of gender on intended leave uptake, $b = -0.04, SE = 0.02, p = .053, 95\%$ CI $[-0.09, 0.0002]$ (see the online supporting information for related analyses).

In addition, we predicted that the gender gap would be larger in countries where longer leave is available to either parent, as women will be more likely to take leave that is available (H3). When gender imbalance in exclusive leave, length of exclusive leave to fathers, and financially generous leave were held constant, available leave length significantly moderated the effect of gender on intended leave uptake, $b = -0.07, SE = 0.03, p = .005, 95\%$ CI $[-0.12, -0.03]$. The gender gap in intended uptake was larger in countries that offer relatively longer ($+1\ SD$) parental leave, $b = -22.92, SE = 1.88, p < .001, 95\%$ CI $[-26.61, -19.23]$, than in those that offer shorter ($-1\ SD$) parental leave, $b = -14.23, SE = 2.22, p < .001, 95\%$ CI $[-18.59, -9.87]$. In line with Hypothesis 3, simple slopes analyses indicated that this cross-national variation in the gender gap seemed to be driven by women’s (not men’s) leave intentions: The slope of length of leave was significantly positive for women, $b = 0.10, SE = 0.03, p = .001, 95\%$ CI $[0.05, 0.15]$, but not men, $b = 0.02, SE = 0.02, p = .125, 95\%$ CI $[-0.006, 0.05]$.

Finally, we predicted that the gender gap in leave intentions would be smaller in countries offering more financially generous leave, because men will be more motivated to take leave that is paid (H4). Contrary to Hypothesis 4, however, with all other leave policies held constant, evidence for the opposite pattern emerged, $b = -0.19, SE = 0.09, p = .044, 95\%$ CI $[-0.37, -0.006]$. Specifically, the gender gap in anticipated leave uptake was larger in countries that offer more financially generous ($+1\ SD$) leave, $b = -21.52, SE = 2.01, p < .001, 95\%$ CI $[-25.46, -17.58]$, than in those that offer less financially generous ($-1\ SD$) leave, $b = -15.63, SE = 2.07, p < .001, 95\%$ CI $[-19.69, -11.57]$. Simple slopes analyses indicated that this cross-national variation in the gender gap seemed to be driven by women’s (not men’s) leave intentions: The slope of financially generous leave was nonsignificant for men, $b = 0.09, SE = 0.06, p = .104, 95\%$ CI $[-0.02, 0.21]$, but significantly positive for women, $b = 0.28, SE = 0.10, p = .008, 95\%$ CI $[0.09, 0.48]$.

Model 2: Gender Equality

Model 2 tested whether country-level gender-equality indicators (income and political representation) predicted gender differences in leave intentions. Model 2’s total explanatory power was substantial (conditional $R^2 = .32$), and the fixed effects alone explained 16% of variability.
(marginal $R^2$). See Table SI6 in the online supporting information for bivariate correlations between different indicators of gender equality in the labor market.

We predicted that, with women’s relative representation in politics held constant, women’s relative income at the national level would be associated with lower leave intentions among women and higher leave intentions among men (H5). However, the interaction between gender and women’s relative income was nonsignificant, $b = -5.71$, $SE = 22.89$, $p = .760$, 95% CI $[-49.82, 38.29]$, indicating that the gender gap in intended leave uptake is not directly associated with the gender gap in income. We also predicted that women’s relative representation in politics would be associated with lower leave intentions among women and higher leave intentions among men (H6). We found that, when women’s relative income was held constant, women’s relative representation in politics significantly moderated the effect of gender on intended leave uptake, $b = 42.97$, $SE = 14.82$, $p = .007$, 95% CI $[14.53, 71.57]$. Specifically, the gender gap was smaller in countries where women are relatively more (+1 SD) represented in politics, $b = -15.20$, $SE = 2.37$, $p < .001$, 95% CI $[-19.84, -10.56]$, than in those where women are less (-1 SD) represented in politics, $b = -25.98$, $SE = 2.73$, $p < .001$, 95% CI $[-31.24, -20.54]$. In partial support of Hypothesis 6, simple slopes analyses indicated that this cross-national variation in the gender gap seemed to be driven more by women’s than men’s leave intentions: The slope of women’s representation in politics was negative (albeit only marginally significant) for women, $b = -36.44$, $SE = 18.97$, $p = .063$, 95% CI $[-73.62, 0.74]$, and positive but nonsignificant for men, $b = 6.54$, $SE = 8.52$, $p = .450$, 95% CI $[-10.17, 23.24]$.

Final Model

To weigh the effect of parental-leave policies and gender equality at the national level against each other, we subsequently entered the statistically significant cross-level interaction from Models 1 and 2 into one final model. To assess whether the gender gap in intended leave relates to parental-leave policies and/or women’s relative representation in politics, over and above individual gender role attitudes, we also added interaction terms between gender and gender role attitudes toward childcare (grand mean centered; Enders & Tofighi, 2007).

When considered simultaneously, the slopes were comparable to those in Models 1 and 2, but the cross-level interaction effect between financially generous leave and gender was reduced and statistically nonsignificant (see Table 2). Only the interactions between gender and length of available leave (see Figure 2) and gender and women’s relative representation in politics (see Figure 3) statistically predicted intended uptake of parental leave.\footnote{Available leave length was not significantly correlated with women’s relative representation in politics (see Table SI6 in the online supporting information).} The final model revealed that country-level indicators predict cross-national variation in the gender gap in leave intentions over and above individual-level gender-role attitudes toward childcare. As an exploratory analysis, we noted that individual-level gender-role attitudes toward childcare significantly interacted with gender in predicting individual intentions to take parental leave, $b = -2.33$, $SE = 0.28$, $p < .001$, 95% CI $[-2.88, -1.77]$. Simple slopes analyses revealed that the slope was significantly positive for women, $b = 0.63$, $SE = 0.17$, $p < .001$, 95% CI $[0.30, 0.96]$, and significantly negative for men, $b = -1.70$, $SE = 0.23$, $p < .001$, 95% CI $[-2.88, -1.77]$. The significant interaction between participant gender and women’s representation in politics should be treated with caution as it fell short of statistical significance when controlling for egalitarian cultural value orientation (see the online supporting information for more details).
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CI $[−2.14, −1.25]$. In other words, endorsing more traditional gender-role attitudes was associated with women intending to take more leave and men intending to take less leave (see Figure 4).

Discussion

A gender-based division of paid and unpaid work is a pressing issue worldwide. The present research documented, across a wide range of countries, a gender gap in young people’s intentions to take leave from work to care for their child(ren). In all countries, women intended to take longer leave than did men. Leave intentions were in turn negatively associated with career ambition, highlighting the importance of reducing this gender gap for equality in higher-status careers.
The gender gap in intended leave uptake varied across countries. In some countries, intentions to take leave were similar between women and men (e.g., 9 weeks difference in Sweden). In other countries, women intended to take many more weeks of leave than did men (e.g., 46 weeks difference in Russia). There seemed to be a regional pattern to leave intentions, with post-Soviet/Eastern European countries making up nine of the 10 countries with the largest gender gaps. More importantly, this variability in the gender gap in intended leave was systematically related to cross-national variation in parental-leave policies and societal gender equality, over and above individual attitudes.

Specifically, results showed a larger gender gap in countries that offer longer parental leave to either parent (in support of Hypothesis 3; even when controlling for financially generous leave, which was hypothesized to reduce the gender gap by increasing men’s intended uptake). This finding suggests that longer parental leave, often implemented with the intention to promote a more equal share of childcare, may paradoxically perpetuate childcare inequities between women and men (for similar findings, see Boeckmann et al., 2014; Tharp & Parks-Stamm, 2021). Notably, leave length was largely associated with women’s, rather than men’s, leave intentions. This finding aligns with previous research suggesting that whereas women take advantage of unpaid leave, men do not utilize leave unless it is highly paid or offered to them exclusively (Castro-García & Pazos-Moran, 2016; Jurado-Guerrero & Muñoz-Comet, 2021; Patnaik, 2019).

In contrast to prior evidence that generous and egalitarian leave policies promote uptake in men, we found that neither compensation (H4) nor exclusive leave (H1 and H2) was associated with greater leave intentions in young men (even when excluding control variables, see the online supporting information). A potential reason for this absence of an effect may be

**Figure 2.** Gender gap in intended uptake of parental leave predicted by available leave length. Dots represent the relationship between averaged intended leave uptake for a given gender in each country and length of available parental leave without additional covariates.
that we operationalized the compensation variable differently from previous research, as we computed a continuous measure (i.e., the number of weeks compensated at 100%), whereas previous research compared men’s uptake at low versus medium versus high compensation levels (e.g., Castro-García & Pazos-Moran). However, we did not replicate previous findings even when we employed a categorical variable with different compensation levels (see the online supporting information for related analysis). Thus, it seems that while generous policies relate to men’s leave uptake, they do not relate to men’s leave intentions. This null effect may be attributed to young men’s unfamiliarity with parental-leave policies, highlighting the importance of educating young men about these policies so their career decisions are more similar to the choices made by young women.

We had hypothesized that men’s intentions would align with previous findings showing gender-egalitarian policies increase uptake among fathers, by influencing young men’s future selves through role-congruity processes. This prediction was not supported, potentially because men are not aware of the details surrounding their rights to (compensated) parental leave prior to having children themselves. It also warrants further exploration as to whether policies must have been in place for a certain amount of time to catalyze such processes (but see the online supporting information for related analysis), or whether there are additional psychological barriers to men’s future caregiving selves.

Although it is important to interpret cross-sectional findings with caution, gender differences in caregiving intentions may affect career choices (e.g., what to study, how high to set one’s goals) and reinforce inequalities in the labor market. Indeed, our descriptive analyses showed that leave intentions were inversely correlated with career ambitions for both women

![Figure 3. Gender gap in intended uptake of parental leave predicted by women’s relative representation in politics. Dots represent the relationship between averaged intended leave uptake for a given gender in each country and women’s relative representation in politics.](https://onlinelibrary.wiley.com/doi/10.1111/pops.12880)
and men (but particularly for women), indicating that caregiving intentions and ambitions for high-status careers may be perceived as incompatible (Gutsell & Remedios, 2016). The pervasive gender gap in intended leave uptake revealed in young adults thus suggests that gender segregation in paid and unpaid work will continue to be an issue at a global level. This gap will, in turn, have implications for women’s economic independence, men’s psychological well-being, and children’s welfare (see Meeussen et al., 2020).

That said, although reducing the gender gap in leave intentions can have positive outcomes for both women and men, gender equality is not about gender parity in leave intentions/uptake per se, but rather intentions/uptake that are no longer restricted by gender norms of what or what not to do. Such gender norms are still influencing women’s and men’s intentions/uptake over and above their individual preferences (Beglaubter, 2017; Miyajima & Yamaguchi, 2017).

Thus, even though generous and gender-egalitarian policies may lead to a smaller gender gap in actual uptake later, these findings highlight the importance for gender-equality campaigns to not only target caregiving engagement in fathers, but also caregiving intentions in boys and young men who want to have children (likely the fathers of the future). Our findings do not speak to how this goal can be achieved through policies, as we do not have data on why these policies do not have any notable bearing on young men’s leave intentions. Nevertheless, this (lack of) effect is important for policymakers to recognize and calls attention to the need for future research to explore how policies can seek to promote leave intentions in young men.

In line with prior research showing that couples share domestic work more equally in countries where women are more represented in employment (Hook, 2006), or have more professional

Figure 4. Intended uptake of parental leave predicted by gender and attitudes toward childcare. Dots represent the relationship between women’s and men’s individual intentions to take parental leave and gender-role attitudes toward childcare without additional covariates.
opportunities and economic and political power (Knudsen & Wærness, 2008), our results also showed a smaller gender gap in parental-leave intentions in countries where women are more represented in politics (H6). Again, this effect seemed to be driven by women’s, rather than men’s, leave intentions. However, in contrast to our research, past work examined the division of unpaid work that can be done outside of paid work hours. Such work is different from the division of parental leave, which entails a break away from one’s career (for which men may expect to receive backlash; Reimer, 2020; Wayne & Cordeiro, 2003). Perhaps this work type distinction could explain the null effect for men.

The significant relationship between women’s relative representation in politics and women’s intended parental leave uptake did not replicate for other gender-equality indicators, such as women’s relative income (H5) and women’s relative representation in employment (see the online supporting information). It is possible these discrepant findings reflect that women in politics are more visible than women in other high-status work and may thus better serve as role models by acting as behavioral models, representing the possible, and being inspirational (see Morgenroth et al., 2015). However, the relation between women’s relative representation in politics and young women’s caregiving intentions may also be driven by a tendency for female politicians to push for gender-egalitarian parental-leave policies (see Table SI6 in the online supporting information for correlations between country-level indicators). To inform policy that seeks to address a gender-based division of paid and unpaid work, it is thus important for future research to examine the processes underlying this effect.

Taken together, our findings suggest that both leave policies and political representation are related to women’s family and career planning. Interestingly, we found no significant relationship between men’s leave intentions and the broader policy or sociocultural context. Previous research suggests that, relative to women, men’s engagement in childcare is rooted less in country-level factors (such as policies; Pedulla & Thébaud, 2015) and more in individual-level factors (such as their own gender attitudes; Duvander, 2014). Indeed, our exploratory analyses showed individual variation in men’s (but not women’s) attitudes toward leadership related to their intended leave uptake (see the online supporting information). This finding suggests that to increase men’s caregiving intentions, it may be more effective for interventions to focus directly on promoting gender-egalitarian attitudes in young men (Das et al., 2016). Notably, however, country-level initiatives and individual-level attitudes are not mutually exclusive. For example, changes to parental-leave policies that incentivize or encourage fathers to take time off seem to shift gender-role attitudes in the general population (Omidakhsh et al., 2020). The relatively low cross-national variance in men’s intentions to take parental leave may indicate a lack of effective policies across countries to shift these attitudes.

**Strengths, Limitations, and Perspectives for Future Research**

The current research was developed based on the understanding that young people’s caregiving decisions are made within a broader context (e.g., within couples, families, peer groups, and countries). Insight into the interdependence of these decisions is essential. The present data help move science further along that path by situating individual decisions within countries. Although we were able to make inferences about country-level factors with our large and diverse cross-national sample (including countries from every major world region), it bears noting that the data are cross-sectional. Relationships between policies and public attitudes are likely bidirectional, as policies may influence and be influenced by public opinion through political voting decisions. Moreover,
the relationship between length of parental leave and intentions may be driven by a third unknown variable. To account for this possibility, we explored several country-level confounds (related to economic development, preferences, and cultural values), but none of these moderated gender differences in intended uptake (see the online supporting information for more details).

Notably, despite our relatively large sample of countries, we have limited statistical power at the country level. Moreover, highly compensated parental leave and father-exclusive leave is unavailable in most countries, which means that the findings related to these policies must be interpreted with caution. It is important to replicate these findings using other research designs (e.g., by comparing young people’s intentions to take parental leave before and after changes to parental-leave policies). In addition, future research may wish to explore the cultural, historical, or political factors that underlie the above-mentioned regional pattern to the gender gap in intended leave uptake.

Finally, given that gender roles differ across social classes (England, 2010), different findings could emerge among young adults not enrolled in higher education. It is therefore important to not generalize these findings to the broader population. Thus, replicating these findings with representative samples remains a priority. That said, these findings are meaningful: University students’ intentions may indicate how societies are likely to develop, as young highly educated individuals are more likely to later hold positions of power to influence policies at an organizational or country level.

Taken together, the broader political and sociocultural context does appear to relate to the gender gap in intended uptake of parental leave, over and above individual-level gender attitudes. The current findings suggest that political decisions are meaningfully related to gender equality in the domestic sphere. However, merely offering both women and men the opportunity to take leave is not an effective way to promote caretaking intentions in men. As young people’s caregiving intentions seem to relate to their career decisions, more research is needed to better understand how to promote men’s intentions to take leave and reduce the gender gap in caregiving intentions. Indeed, accelerating progress for gender equality will depend on understanding what guides women’s and (especially) men’s decision-making regarding their future families.

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REFERENCES


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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher’s web site:

**Table SI1.** Study Major by Gender and Country

**Table SI2.** Age and Subjective SES by Gender and Country

**Table SI3.** Correlations between the Gender Gap in the Intended Uptake of Parental Leave and Country-Level Variables

**Figure SI1.** Intended uptake of parental leave by gender and sexual orientation.

**Table SI4.** Intended Uptake of Parental Leave by Gender and Country

**Figure SI2.** Women’s intended uptake of parental leave across countries.

**Figure SI3.** Men’s intended uptake of parental leave across countries

**Table SI5.** Career Ambition by Gender and Country

**Table SI6.** Correlations between Country-Level Variables

**Table SI7.** Model 3: Intended Uptake of Parental Leave Predicted by Gender and Cultural Value Orientations

**Table SI8.** Full Model: Intended Uptake of Parental Leave Predicted by Gender, Financially Generous Leave, Available Leave Length, Women’s Relative Representation in Politics, and Egalitarian Value Orientation

**Table SI9.** Year Parental Leave was Available by Country

**Figure SI4.** Intended uptake of parental leave predicted by gender and attitudes toward leadership.

**Table SI10.** Models 1–3 with Robustness Checks

**Table SI11.** Models 1–3 with Robustness Checks

**Table SI12.** Full Model with Robustness Checks