Uncovering hidden kin:

Cross-national evidence from KINMATRIX

Lisa Jessee, Lea Ellwardt & Thomas Leopold

ABSTRACT

Family relationships are central to individuals' lives, yet demographic shifts, such as rising divorce rates, remarriages, and parent–child estrangement, may weaken connections to extended relatives. In some cases, this may lead to *hidden kin*: family members whose existence is known but whose name or living status is unknown, and with whom no contact or support is exchanged. The prevalence of hidden kin likely varies across societies, depending on rates of divorce, remarriage, estrangement, and prevailing levels of familialism. Against this background, this study examines the prevalence of hidden kin across countries and different kin types (parents, siblings, grandparents, aunts, uncles, cousins, half-siblings). We draw on cross-national data from the KINMATRIX survey (N = 11,911 anchors; N = 240,156 dyads), covering nine European countries (UK, Germany, Poland, Italy, Sweden, Denmark, Finland, Norway, and the Netherlands) as well as the U.S. Hidden kin were identified when either the name, the living status, or both were unknown. Our analyses reveal the highest prevalence of hidden kin in Denmark, Finland, the U.S., and the UK, and, as expected, the lowest prevalence in more familialistic contexts such as Italy and Poland. Results further indicate distinct patterns across kin types and countries. While in most countries hidden kin are most common among paternal and maternal grandfathers and cousins, in Italy, Poland, and Germany, the highest prevalence is found among paternal half-siblings. Overall, the findings highlight how cross-cultural differences shape knowledge gaps within family networks and, in turn, influence individuals' access to family-based social capital.

INTRODUCTION

Family relationships are widely regarded as one of the most important aspects of individuals' lives (Pew Research Center, 2021). Among these relationships, parent–child ties have received the greatest scholarly attention, as they are among the most enduring relationships and involve extensive exchanges of support across the life course (Fingerman et al., 2020; Silverstein et al., 2025). Yet, family extends far beyond this dyad. Individuals are embedded in broader kinship networks that accompany them throughout life and can provide support during critical life phases (Alburez-Gutierrez et al., 2022; Bengtson et al., 2002).

Beyond the nuclear family, previous research has primarily examined two types of familial relationships – those with siblings (e.g., Büyükkececi & Çineli, 2024; Voorpostel & Blieszner, 2008) and grandparents (e.g., Geurts et al., 2009; Zanasi et al., 2023). Only recently have empirical studies begun to emphasize the sociological relevance of the wider kinship network (e.g., Hünteler et al., 2025; Leopold et al., 2025; Tosi et al., 2025), largely due to the absence of suitable data on relationships to extended kin. This gap is unfortunate, as emerging evidence shows that extended kin, such as aunts, uncles, cousins, or half-siblings, play a substantial role in young adults' lives (Leopold et al., 2025). Indeed, extended kin account for roughly half of all family members with whom young adults feel emotionally close, maintain regular contact, and consider important (Leopold et al., 2025).

While relationships beyond the nuclear family appear to hold considerable importance, demographic changes may increasingly disrupt ties to extended relatives. Research has shown, for example, that divorce and repartnering weaken intergenerational bonds (Jessee & Carr, 2025; Kalmijn, 2007, 2023), and that estrangement between parents and adult children is becoming more common (Arránz Becker & Hank, 2022; Reczek et al., 2023). Such processes may erode broader kin networks, leading to fragmented or "disrupted" family ties. In extreme cases, these disruptions can result in what we refer to as *hidden kin*—family members whose

existence is known to the respondent but whose name and/or living status is unknown, and with whom no solidarity is exchanged.

Moreover, it is unclear whether patterns of hidden kin differ based on cultural background, as both divorce rates (Eurostat, 2024; National Center for Health Statistics, 2023) and estrangement rates differ across European countries and the U.S. (Jessee & Carr, 2025; Reczek et al., 2023). In societies where divorce and estrangement are less statistically and culturally normative, rates of hidden kin may be lower.

To date, no existing survey has permitted the systematic study of hidden kin. Demographic research on kin availability (de Bel et al., 2025; Kolk et al., 2023) has typically relied on administrative population data, which provide valuable information on the size and structure of kin networks but lack detail on relationship quality or whether these ties are even personally known to individuals (see Leopold et al., 2024). Consequently, focusing solely on the number of kin may lead to an overestimation of the social capital individuals can draw upon in times of need. If a family member is hidden, it is highly unlikely that they can be mobilized for support.

The KINMATRIX family network data (Leopold et al., 2024) now make it possible to identify hidden kin in kinship networks of young adults (25-35 years). Beyond the relationships with nuclear families, KINMATRIX also accounts for relationships with extended kin, including grandparents, aunts, uncles, cousins and halfsiblings. KINMATRIX collects information on all potential biological relatives, including their names and living status. Relatives for whom respondents indicated that they *did not know* the name or living status were classified as hidden kin. KINMATRIX further allows to study hidden kin from a cross-cultural perspective, as data is available from nine European countries (UK, Germany, Poland, Italy, Sweden, Denmark, Finland, Norway, and the Netherlands) and the U.S. We were particularly interested in the prevalence of hidden kin across a) countries and b) kin type (i.e., parents, siblings, grandparents, aunts, uncles, cousins, half-siblings). The study can

inform about how cross-cultural differences shape kinship knowledge gaps and hence access to family-based social capital.

DATA

The study uses data from the KINMATRIX survey, conducted between late 2022 and early 2024. KINMATRIX collected information on the egocentric kinship networks of young adults aged 25–35 (Leopold et al., 2024). Using a web-based tool, data were gathered from participants in nine European countries (UK, Germany, Poland, Italy, Sweden, Denmark, Finland, Norway, and the Netherlands) and the U.S.

After completing questions about sociodemographic information, the survey asked respondents about all their biological relatives, as well as non-biological family ties resulting from parental repartnering (e.g., stepparents and stepsiblings) using name-generating modules. For each identified tie, respondents reported the relative's name and living status, or indicated if either was unknown. For *known* kin, additional follow-up questions captured details about the relationship (e.g., closeness, proximity, contact) and attributes of the family member (e.g., age, education, perceived social status).

Participants were drawn from online access panels using quotas for a range of demographic characteristics (age, gender, education and region). A various number of quality issues may arise from non-probability samples (for a detailed discussion, see Leopold et al., 2024, 2025). However, comparisons between KINMATRIX and other probability-based surveys show a close match across a range of key outcomes, such as the number of nuclear family members and the nature of relationships within the nuclear family. Nonetheless, aunts, uncles, and consequently cousins appear to be somewhat underrepresented in the KINMATRIX data (Leopold et al., 2025).

SAMPLE

For this study, we draw on data from the pooled sample of KINMATRIX. As we were interested in biological kin, we only included information on respondents biological kin,

including (1) mothers, (2) fathers, (3) full brothers, (4) full sisters, (5) maternal grandmother, (6) maternal grandfather, (7) paternal grandmother, (8) paternal grandfather, (9) maternal aunts, (10) maternal uncles, (11) paternal aunts, (12) paternal uncles, (13) maternal cousins, (14) paternal cousins, (15) maternal halfsiblings, (16) paternal halfsiblings. Information on non-biological kin was therefore excluded (N=12,122 respondent-kin dyads). After this cleaning step, the baseline sample included N=11,911 respondents with N=240,156 respondents kin-dyads.

DEPENDENT VARIABLE

Hidden kin. Information on hidden kin was derived from two variables: (a) the *name* of each kin and (b) their *living status*. For kin categories with a fixed number of relatives (e.g., two parents, two maternal grandparents, two paternal grandparents), respondents were asked to provide the name and living status for each. For kin categories with a variable number of relatives (e.g., siblings, aunts, uncles, cousins, half-siblings), respondents first reported the number of relatives in that category and then provided the name and living status for each listed individual. In all cases, respondents could indicate that the name or living status of a kin member was *unknown*. Based on this information, we constructed a categorical variable capturing the degree of hidden kin: (0) Kin and living status known (reference), (1) name unknown, (2) living status unknown, (3) both unknown.

ANALYTICAL STRATEGY

The analysis for this project is currently in preliminary stages and is thus restricted to descriptive analysis. First, we share the percentage of respondents who report hidden kin by category of hidden kin and country. Second, we discuss the percentage of respondents who report hidden kin by kin type (mothers, fathers, full brothers, full sisters, maternal grandmother, maternal grandfather, paternal grandmother, paternal grandfather, maternal aunts, maternal uncles, paternal aunts, paternal uncles, maternal cousins, paternal cousins, maternal halfsiblings, paternal halfsiblings), category of hidden kin and country. All analyses

are weighted using sample weights to account for unequal probability of selection into the sample and (non)response.

PRELIMINARY RESULTS

Sample descriptives. Our preliminary descriptive results show that respondents were, on average, 30.3 years old and 49% female. The majority (87%) identified as heterosexual, 11% had experienced parental death or separation in early childhood, and 8% had migrated from another country. On average, respondents reported information on 20.4 living or deceased kin.

Hidden kin. Across all reported kin relations, approximately 8% were classified as hidden. The majority of these cases involved respondents who could not recall a kin's name (5%), followed by those who could not recall either the name or the living status (2%). Only about 1% of kin had an unknown living status alone. However, the prevalence of hidden kin varied across countries, as shown in *Figure 1*. The highest prevalence of hidden kin was observed in Denmark (12%), followed by Finland and the U.S. (11%) and the UK (10%). In contrast, the lowest rates were found in Poland (5%) and Italy (4%). The distribution of hidden kin types was similar across countries: not knowing the name of the kin was most common, followed by not knowing both the name and living status, and finally, not knowing the living status alone.

<< insert *Figure 1* >>

We also examined whether the prevalence of hidden kin varied across kin types and countries. In most countries, hidden kin were most common among paternal and maternal grandfathers as well as cousins. However, in Italy, Poland, and Germany, the highest prevalence was observed among paternal half-siblings (*Figure 2*).

<< insert *Figure 2* >>

DISCUSSION

While relationships with extended family members remain highly significant, demographic and cultural changes increasingly disrupt these ties. Previous research has shown that divorce and repartnering tend to weaken intergenerational bonds (Jessee & Carr, 2025; Kalmijn, 2007, 2023), and that estrangement between parents and adult children is becoming more common (Arránz Becker & Hank, 2022; Reczek et al., 2023). In some instances, such processes may result in *hidden kin*: family members whose existence is known but whose name or living status is unknown, and with whom no contact or support is exchanged. The prevalence of hidden kin likely differs across societies, depending on rates of divorce, remarriage, estrangement, and the overall strength of familial norms. Against this backdrop, the present study examined the prevalence of hidden kin across *countries* and *kin types*, including parents, siblings, grandparents, aunts, uncles, cousins, and half-siblings. We draw on cross-national data from the KINMATRIX survey, which covers nine European countries (the UK, Germany, Poland, Italy, Sweden, Denmark, Finland, Norway, and the Netherlands) as well as the U.S.

The preliminary descriptive results indicate that Denmark, Finland, the U.S., and the UK exhibit the highest prevalence of hidden kin, whereas Italy and Poland show the lowest. This pattern aligns with the well-documented South–North gradient in divorce and estrangement rates across Europe (Eurostat, 2024; Jessee & Carr, 2025), as well as with previous findings highlighting comparatively weaker family ties in the U.S (Silverstein et al., 2010). In contexts where such demographic changes are more common, they may contribute to a gradual erosion of extended family networks. Results further reveal distinct patterns by kin type and country. While in most countries hidden kin are most frequently found among paternal and maternal grandfathers and cousins, in Italy, Poland, and Germany, the highest prevalence occurs among paternal half-siblings, a pattern that warrants further investigation.

As a next step, we *first* plan to analyze the sociodemographic correlates of hidden kin and examine whether these associations differ across countries. *Second*, we are currently collecting new data that include questions on the reasons for reporting hidden kin. These additions will provide deeper insight into why individuals report hidden kin and may further help explain cross-country differences by kin type.

REFERENCES

Alburez-Gutierrez, D., Barban, N., Caswell, H., Kolk, M., Margolis, R., Smith-Greenaway, E., Song, X., Verdery, A. M., & Zagheni, E. (2022). *Kinship, Demography, and Inequality: Review and Key Areas for Future Development*. SocArXiv. https://doi.org/10.31235/osf.io/fk7x9

Arránz Becker, O., & Hank, K. (2022). Adult children's estrangement from parents in Germany. *Journal of Marriage and Family*, *84*(1), 347–360. https://doi.org/10.1111/jomf.12796

Bel, V. de, Bokányi, E., Hank, K., & Leopold, T. (2025). A parallel kinship universe? A replication of Kolk et al. (2023) with Dutch register data on kinship networks. *Demographic Research*, *52*, 915–938. https://doi.org/10.4054/DemRes.2025.52.28

Bengtson, V., Giarrusso, R., Mabry, J. B., & Silverstein, M. (2002). Solidarity, conflict, and ambivalence: Complementary or competing perspectives on intergenerational relationships? *Journal of Marriage and Family*, *64*(3), 568–576. https://doi.org/10.1111/j.1741-3737.2002.00568.x

Buyukkececi, Z., & Çineli, B. (2024). Adult sibling relationships: The impact of cohabitation, marriage, separation, and childbearing. *Journal of Marriage and Family*, *86*(3), 698–717. https://doi.org/10.1111/jomf.12949

Eurostat. (2024). *Divorce indicators*. https://ec.europa.eu/eurostat/databrowser/view/demo_ndivind/default/table?lang=en&category=demo.demo_div

Fingerman, K. L., Huo, M., & Birditt, K. S. (2020). A decade of research on intergenerational ties: Technological, economic, political, and demographic changes. *Journal of Marriage and Family*, *82*(1), 383–403. https://doi.org/10.1111/jomf.12604

Geurts, T., Poortman, A.-R., van Tilburg, T., & Dykstra, P. A. (2009). Contact between grandchildren and their grandparents in early adulthood. *Journal of Family Issues*, *30*(12), 1698–1713. https://doi.org/10.1177/0192513X09336340

Hünteler, B., Hank, K., Alburez-Gutierrez, D., & Leopold, T. (2025). A typology of younger adults' nuclear and extended family relations in the United States. *Journal of Marriage and Family*, *online first*. https://doi.org/10.1111/jomf.70014

Jessee, L., & Carr, D. (2025). Parent–child disconnectedness and older European adults' mental health: Do patterns differ by marital status and gender? *The Journals of Gerontology: Series B, Psychological Sciences and Social Sciences*, *80*(6), gbaf024. https://doi.org/10.1093/geronb/gbaf024

Kalmijn, M. (2007). Gender differences in the effects of divorce, widowhood and remarriage on intergenerational support: Does marriage protect fathers? *Social Forces*, *85*(3), 1079–1104. https://doi.org/10.1353/sof.2007.0043

Kalmijn, M. (2023). Weakened parent–child ties and the well-being of older divorced parents. *Demographic Research*, *48*(21), 591–608. https://doi.org/10.4054/DemRes.2023.48.21

Kolk, M., Andersson, L., Pettersson, E., & Drefahl, S. (2023). The Swedish kinship universe: A demographic account of the number of children, parents, siblings, grandchildren, grandparents, aunts/uncles, nieces/nephews, and cousins using national population registers. *Demography*, *60*(5), 1359–1385. https://doi.org/10.1215/00703370-10955240

Leopold, T., Becker, C. C., Buyukkececi, Z., Çineli, B., & Raab, M. (2024). KINMATRIX: A new data resource for studies of families and kinship. *Demographic Research*, *51*, 789–808. https://doi.org/10.4054/DemRes.2024.51.25

Leopold, T., Raab, M., Becker, C. C., Buyukkececi, Z., & Çineli, B. (2025). Mapping modern kinship networks: First results from the KINMATRIX survey. *Journal of Marriage and Family*, *87*(2), 478–504. https://doi.org/10.1111/jomf.13049

National Center for Health Statistics. (2023). *Marriage and divorce*. https://www.cdc.gov/nchs/fastats/marriage-divorce.htm

Pew Research Center. (2021). *What makes life meaningful? Views from 17 advanced economies*. www.pewresearch.org/global/2021/11/18/what-makes-life-meaningful-views-from-17-advanced-economies/

Reczek, R., Stacey, L., & Thomeer, M. B. (2023). Parent-adult child estrangement in the United States by gender, race/ethnicity, and sexuality. *Journal of Marriage and Family*, *85*(2), 494–517. https://doi.org/10.1111/jomf.12898

Silverstein, M., Fingerman, K. L., & Suitor, J. J. (2025). Intergenerational relationships and family support: Evidence for health and well-being in studies supported by the National Institute on Aging. *The Gerontologist*, *65*(3), gnaf003. https://doi.org/10.1093/geront/gnaf003

Silverstein, M., Gans, D., Lowenstein, A., Giarrusso, R., & Bengtson, V. L. (2010). Older parent–child relationships in six developed nations: Comparisons at the intersection of affection and conflict. *Journal of Marriage and Family*, *72*(4), 1006–1021. https://doi.org/10.1111/j.1741-3737.2010.00745.x

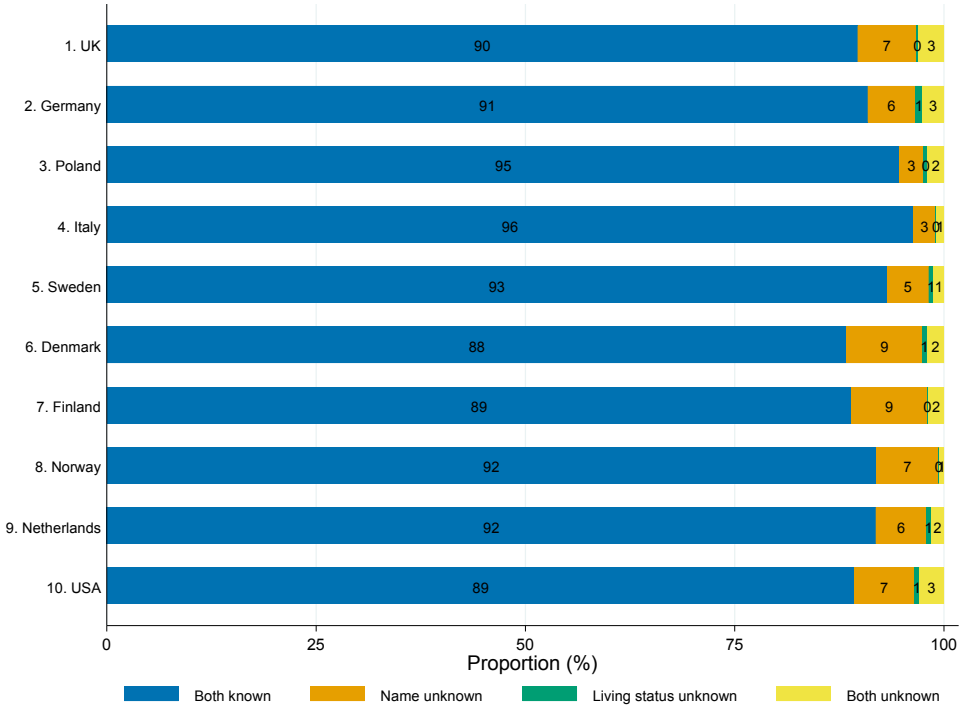
Tosi, M., Albertini, M., & Tocchioni, V. (2025). Horizontal or vertical? A tale of geographical proximity in Italian kinship networks. *Population, Space and Place*, *31*(5), e70063. https://doi.org/10.1002/psp.70063

Voorpostel, M., & Blieszner, R. (2008). Intergenerational solidarity and support between adult siblings. *Journal of Marriage and Family*, *70*(1), 157–167. https://doi.org/10.1111/j.1741-3737.2007.00468.x

Zanasi, F., Arpino, B., Bordone, V., & Hank, K. (2023). The prevalence of grandparental childcare in Europe: A research update. *European Journal of Ageing*, *20*(1), 37. https://doi.org/10.1007/s10433-023-00785-8

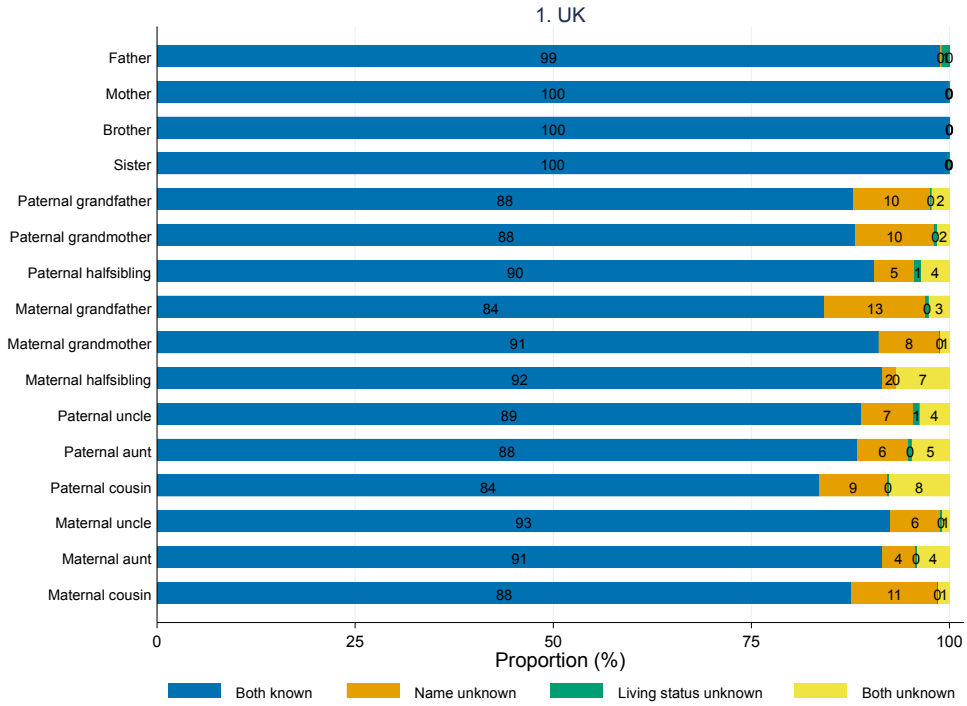
FIGURES

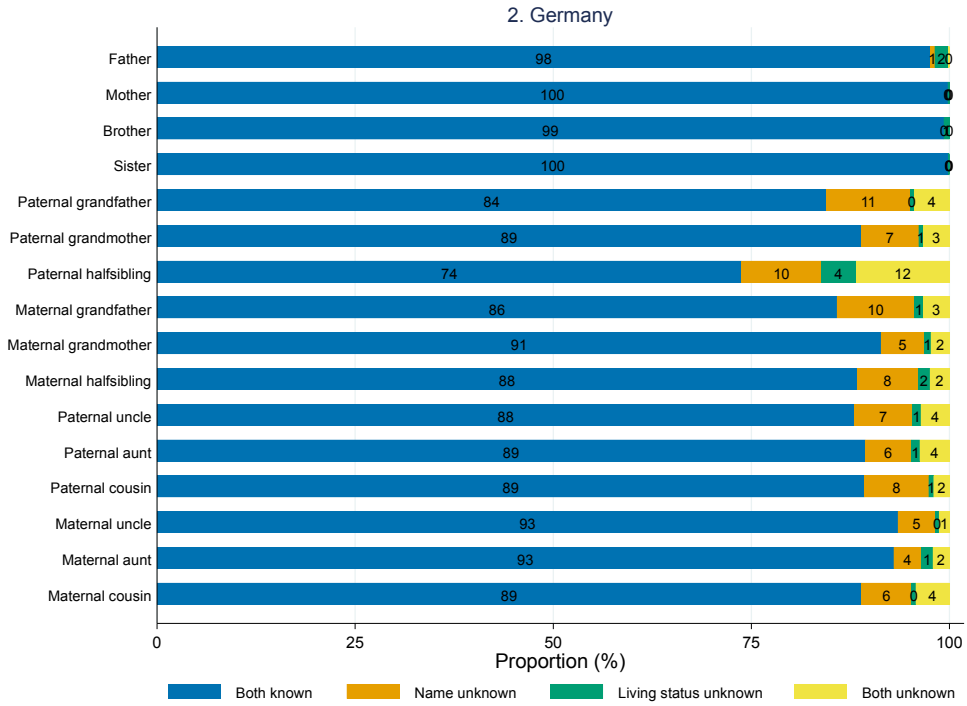
Figure 1. The prevalence of hidden kin by country (weighted)

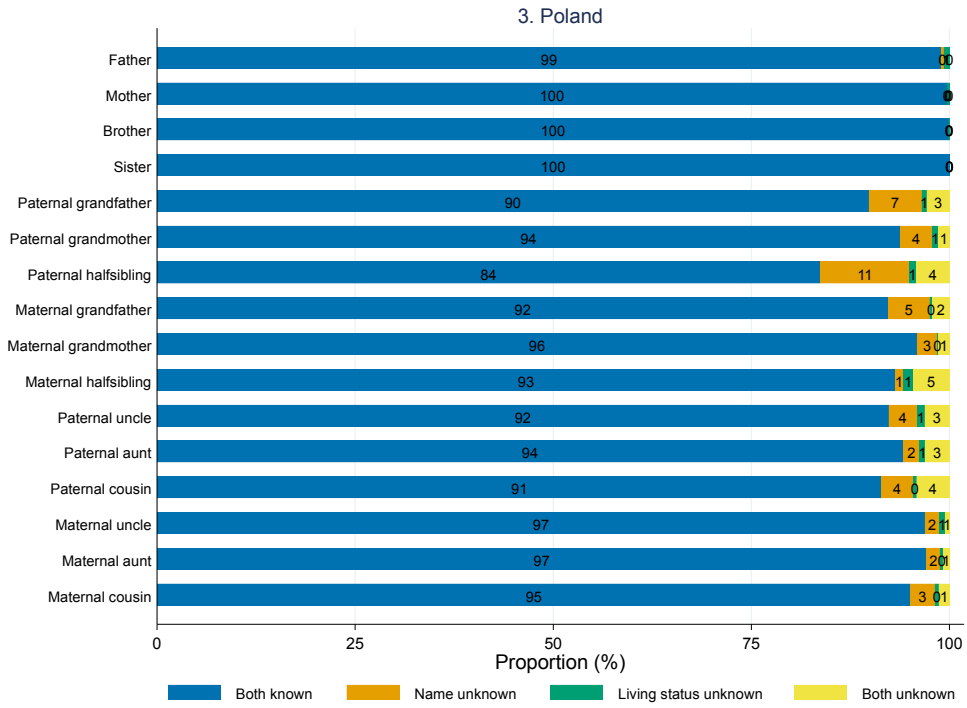


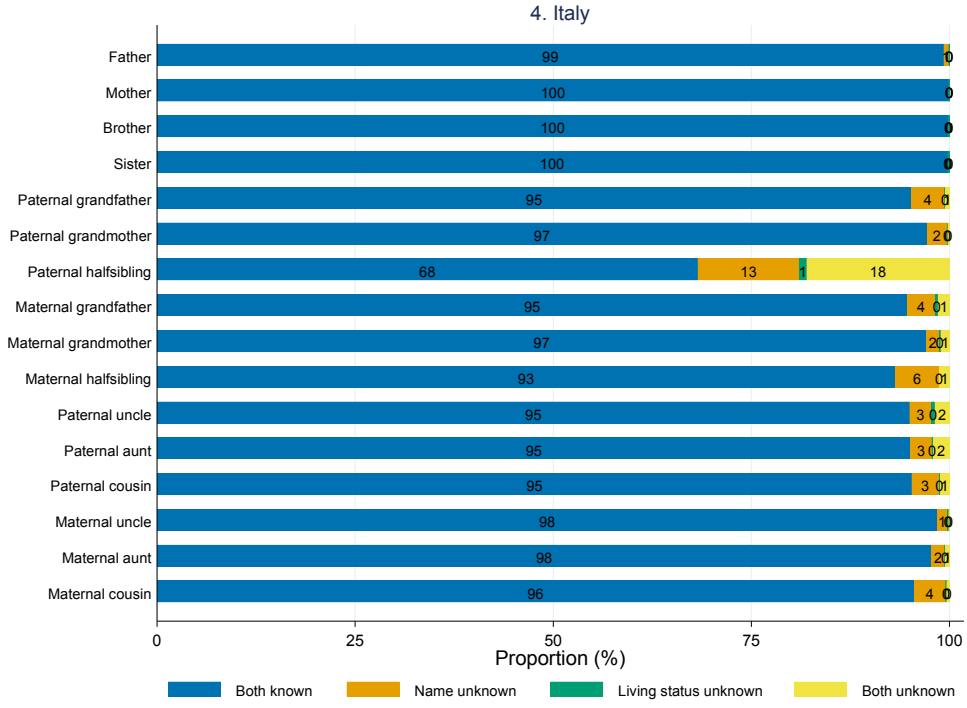
Note. KINMATRIX data, release 2.0.0.

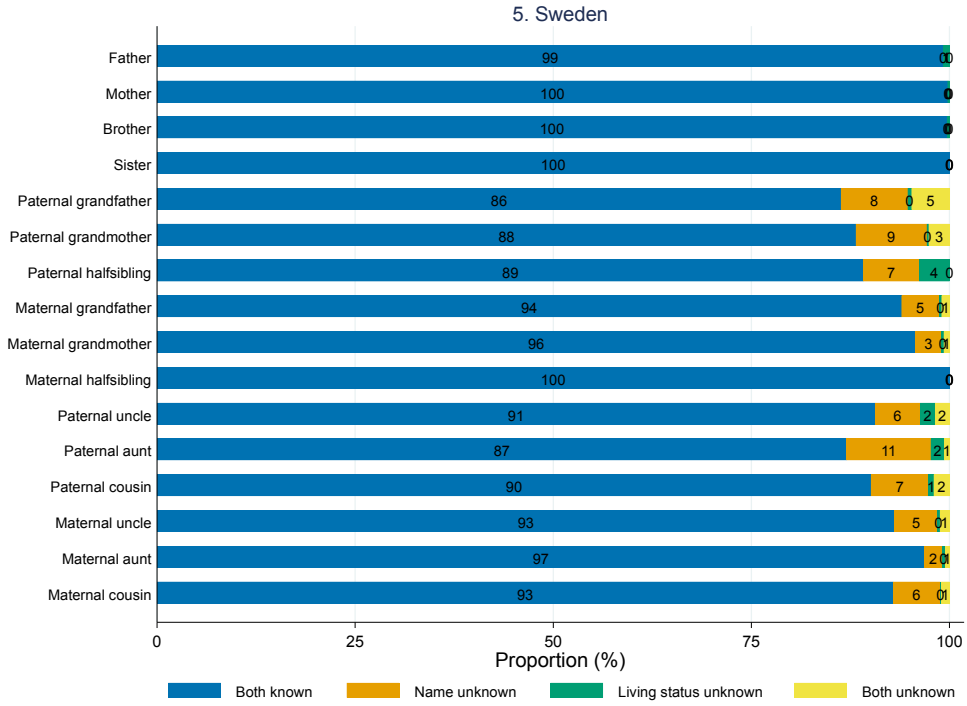
Figure 2. The prevalence of hidden kin by kin type and country (weighted)

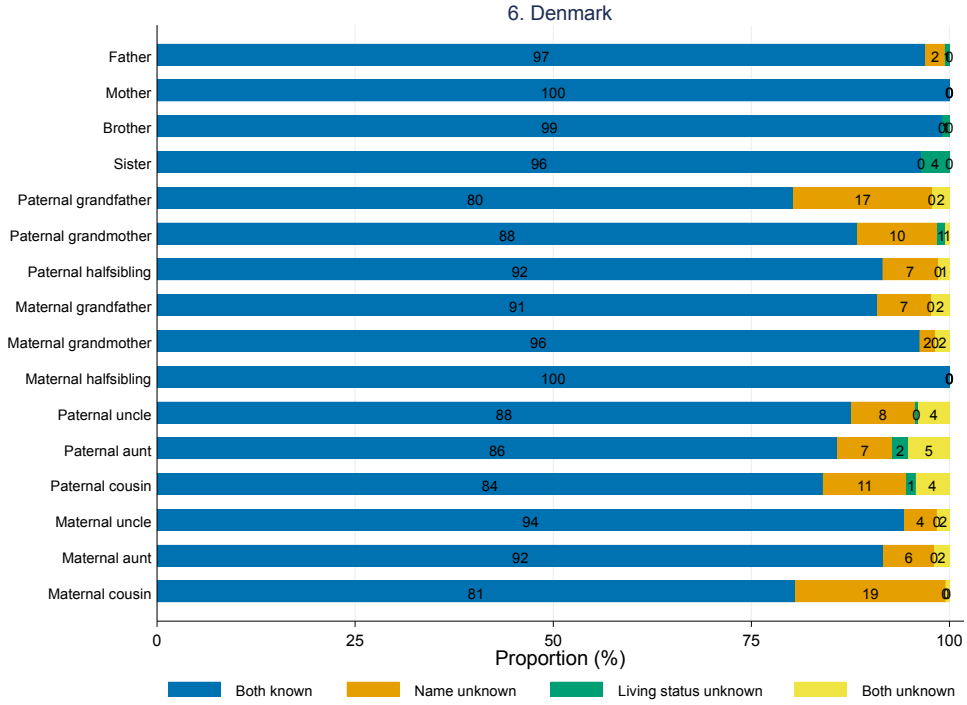


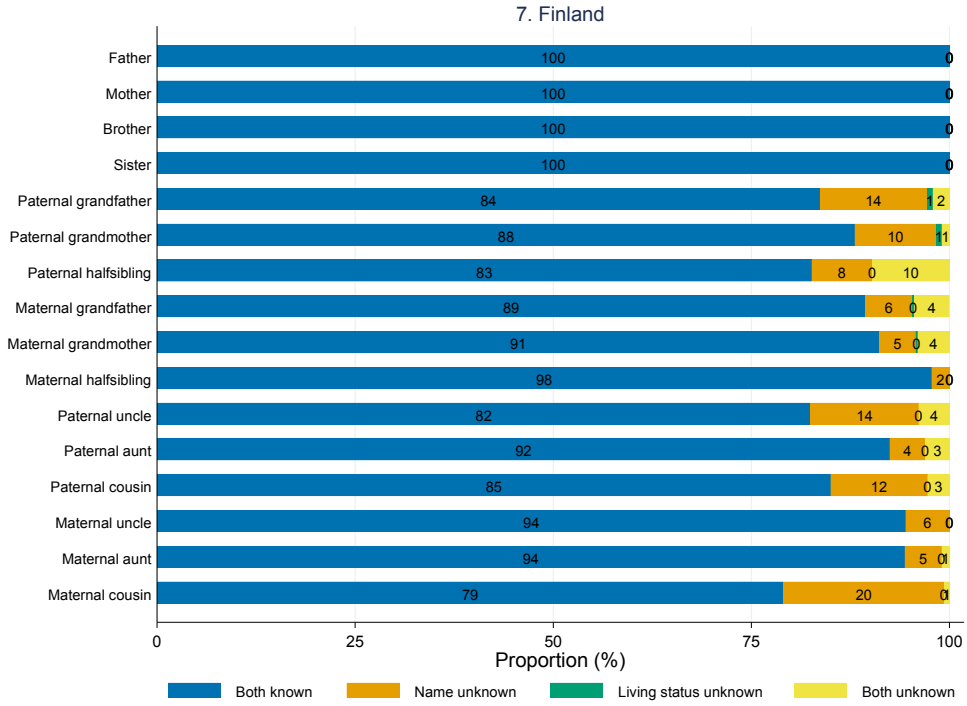



3. Poland
Father
Mother
Brother
Sister
Paternal grandfather
Paternal grandmother
Paternal halfsibling
Maternal grandfather
Maternal grandmother
Maternal halfsibling
Paternal uncle
Paternal aunt
Paternal cousin
Maternal uncle
Maternal aunt
Maternal cousin
0
25
50
75
100
Proportion (%)
Both known
Name unknown
Living status unknown
Both unknown

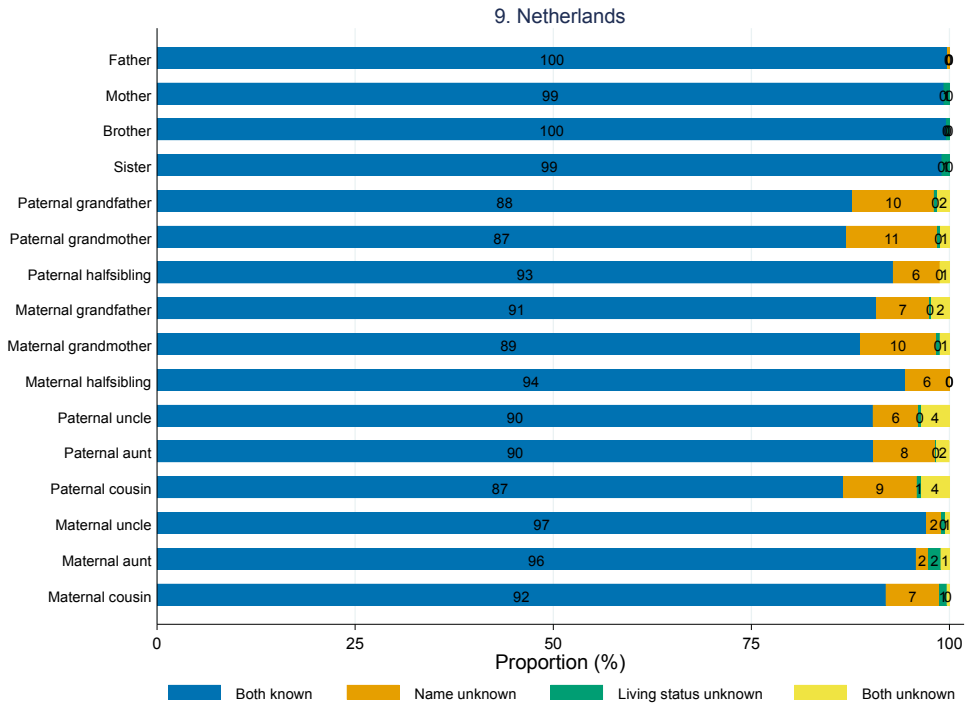

4. Italy
Father
Mother
Brother
Sister
Paternal grandfather
Paternal grandmother
Paternal halfsibling
Maternal grandfather
Maternal grandmother
Maternal halfsibling
Paternal uncle
Paternal aunt
Paternal cousin
Maternal uncle
Maternal aunt
Maternal cousin
0
25
50
75
100
Proportion (%)
Both known
Name unknown
Living status unknown
Both unknown


5. Sweden
Father
Mother
Brother
Sister
Paternal grandfather
Paternal grandmother
Paternal halfsibling
Maternal grandfather
Maternal grandmother
Maternal halfsibling
Paternal uncle
Paternal aunt
Paternal cousin
Maternal uncle
Maternal aunt
Maternal cousin
0
25
50
75
100
Proportion (%)
Both known
Name unknown
Living status unknown
Both unknown


6. Denmark
Father
Mother
Brother
Sister
Paternal grandfather
Paternal grandmother
Paternal halfsibling
Maternal grandfather
Maternal grandmother
Maternal halfsibling
Paternal uncle
Paternal aunt
Paternal cousin
Maternal uncle
Maternal aunt
Maternal cousin
0
25
50
75
100
Proportion (%)
Both known
Name unknown
Living status unknown
Both unknown


7. Finland
Father
Mother
Brother
Sister
Paternal grandfather
Paternal grandmother
Paternal halfsibling
Maternal grandfather
Maternal grandmother
Maternal halfsibling
Paternal uncle
Paternal aunt
Paternal cousin
Maternal uncle
Maternal aunt
Maternal cousin
100 0
100 0
100 0
100 0
84 14 1 2
88 10 1 1
83 8 0 10
89 6 0 4
91 5 0 4
98 2 0
82 14 0 4
92 4 0 3
85 12 0 3
94 6 0
94 5 0 1
79 20 0 1
0
25
50
75
100
Proportion (%)
Both known
Name unknown
Living status unknown
Both unknown


8. Norway
Father
Mother
Brother
Sister
Paternal grandfather
Paternal grandmother
Paternal halfsibling
Maternal grandfather
Maternal grandmother
Maternal halfsibling
Paternal uncle
Paternal aunt
Paternal cousin
Maternal uncle
Maternal aunt
Maternal cousin
100 0
100 0
100 0
100 0
96 3 0
97 3 0
92 8 0
84 8 0 8
96 3 0
85 2 0 13
93 6 0
92 8 0
98 2 0
99 1 0
99 1 0
74 26 0
0
25
50
75
100
Proportion (%)
Both known
Name unknown
Living status unknown
Both unknown



Note. KINMATRIX data, release 2.0.0.