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# Cultural and social support explanations of the native-migrant gap in the use of day care for pre-school children

Matthijs Kalmijn

Netherlands Interdisciplinary Demographic Institute (NIDI)-KNAW/University of Groningen, The Hague, Netherlands

## ABSTRACT

Migrant families are generally less likely to use nonparental care for their pre-school-age children than native families. The few studies that have systematically examined the determinants of centre-based care (day care) for migrants have often zoomed in on the migrant population and have not made comparisons with natives nor have they decomposed the migrant-native gap. This paper presents a mediation analysis with an elaborate set of measures conceptually categorised into cultural and social support explanations. Using nationally representative survey data on Dutch parents with origins in Muslim countries and a comparison group of parents with Dutch origins (natives), this paper shows large and growing gaps in the enrolment of 0–4-year olds in subsidised day care even after controlling for differences in working hours, income, and education. A substantial part of the gap could be explained by cultural differences, particularly the more traditional attitudes toward marriage and family and the higher levels of religiosity among migrants. Of the cultural effects, a lack of trust in institutions appeared to play no role. Social support explanations that rely on alternative sources of support for child care were less important and differences in neighbourhood cohesion served as a suppressor of the gap.

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## KEYWORDS

Centre-based care; migrant families; women's employment; cultural differences

## Introduction

Several studies have shown that migrant families are less likely to use nonparental care for their pre-school-age children than families without a migration background (native for short). Ackert et al. showed that Mexican-origin pre-school-age children were less likely to be enrolled in a child-care centre compared to White children (Ackert et al. 2020; Ackert, Crosnoe, and Leventhal 2019; Crosnoe 2007). Similarly, Turney and Kao showed that Asian and Mexican American families were less likely to have their pre-school-age children enrolled in a child-care centre, with larger gaps for the foreign born than for the native born (Turney and Kao 2009). Research in other countries found similar gaps, with lower enrolment in early child care by children of immigrants in Norway (Zachrisson, Janson, and Naerde 2013), the Netherlands (Bártová and Karpinska 2023; De Vries 2012), and Germany (Klein and Sonntag 2017).

The underutilisation of centre-based care – day care hereafter – and other forms of institutional care for pre-school-age children by migrants is relevant for two reasons. First, several studies have pointed to beneficial effects of day care on cognitive development. In particular, for low-income families and migrant families, studies have found positive effects of enrolment in early child-care centres on academic achievement (Esping-Andersen et al. 2012; Votruba-Drzal et al. 2010). Migrant families are particularly important in this effect, given the role of language learning in child-care centres for children who only speak their origin language at home (Magnuson and Waldfogel 2005). Second, day care makes it easier for mothers to work and pursue a career. There is a substantial degree of gender inequality in the European migrant population, with lower levels of employment among married women, coupled with a less egalitarian division of household labour at home (Khoudja and Fleischmann 2015; 2017). The use of day care could in principle lead to a move away from this traditional pattern and could strengthen the economic independence of migrant women. In sum, by underutilising day care, potential benefits for children and women in migrant families are missed.

Descriptive evidence on differences between migrant and native families with respect to different types of pre-school care seems fairly well-established. Most studies have subsequently focused on the consequences of enrolment in day care for school readiness and behavioural outcomes and have examined how such effects differ by migrant status (Belsky 2007; Crosnoe 2007; Johnson et al. 2014; Magnuson and Waldfogel 2005; Pivnick 2019; Turney and Kao 2009). There are also a number of studies focusing on explanations of the native-migrant gap, but these have largely focused on what has been called structural or socioeconomic differences, in particular differences in working hours, income, and education (Karoly and Gonzalez 2011; Miller et al. 2014; Turney and Kao 2009; Yesil-Dagli 2011). Although socioeconomic differences play an important role given the lower levels of labour force participation among migrant women (Khoudja and Fleischmann 2015; 2017), some of the variables in this explanation are endogenous. Moreover, socioeconomic differences cannot explain the native-migrant gap entirely. To better understand the underutilisation of child care by migrants, other explanations have also been suggested in the literature, but these have received relatively little research attention. This paper focuses on two such explanations, cultural and social support explanations.

Cultural explanations rely on a neo-assimilationist perspective on migration and argue that group-specific preferences play a major role in how people behave (Alba and Nee 2003). Such preferences, in turn, are shaped by regional value systems (Norris and Inglehart 2004). Migrants on average are more traditional in their views of marriage and gender (Kalmijn and Kraaykamp 2018; Norris and Inglehart 2012; Roder 2014), and for that reason, may shy away from putting their children in a day-care centre. ‘Outsourcing’ early child care may not match well with a traditional interpretation of the family where it is assumed that mothers are the primary caregivers (Riley and Glass 2002). In this traditional context, help with child care is primarily given by relatives and not by strangers. A related cultural argument lies in language barriers. Migrants, especially those in the first generation, may feel less at ease in dealing with child-care centres if they do not master the destination language very well (Ackert, Crosnoe, and Leventhal 2019). Similarly, authors have argued that a lack of trust in the institutions of the

destination society may explain some of the gap in the underutilisation of public child care (Karoly and Gonzalez 2011).

Social support explanations borrow ideas from network theories and theories about social support (Fischer 1982; Marsden 1987) and argue that migrants and natives make different choices because their social networks and relationships differ. This framework points to the alternative sources of support migrants may have when needing help with child care. The availability of alternative sources of support presumably reduces the need for day care. Migrants more often have parents living in the vicinity than natives (Chan and Ermisch 2015; Reyes, Schoeni, and Choi 2020) and have stronger feelings of obligation to support family members (De Valk and Schans 2008). As a result, informal care for children at home or someone else's home may be a convenient form of early child care for certain migrant groups. Older siblings are another potential source of child care. Since migrants have larger numbers of children, particularly those from Islamic countries (Sobotka 2008), this may be part of the explanation. Support with child care from the neighbourhood may also play a role, perhaps especially in migrant communities.

Empirical evidence on the role of cultural and social support explanations is limited. Several studies have used indirect measures of cultural explanations, such as the length of stay in the destination country, intermarriage, or return intentions (e.g. Ackert et al. 2020; Bártová and Karpinska 2023). More direct evidence comes from studies on language use but this variable is primarily relevant for the foreign-born. Moreover, the evidence on the role of language is mixed. Some studies found that language use was positively associated with the tendency to have one's children enrolled in day care (Fram and Kim 2008; Miller et al. 2014; Yesil-Dagli 2011) whereas other studies found no effects of immigrants' origin language use (Kahn and Greenberg 2010; Turney and Kao 2009). Empirical evidence on social support explanations is even more sketchy. Two US studies found that immigrant children who had more siblings were less likely to be enrolled in child care at an early age (Kahn and Greenberg 2010; Turney and Kao 2009; Yesil-Dagli 2011). If and to what extent differential availability of extended family members can explain the underutilisation of child care by migrant families is not yet known. There is research linking the use of day care to the local context of migrants (Ackert, Crosnoe, and Leventhal 2019; Fram and Kim 2008) but these studies have not specifically looked at social support in the neighbourhood.

In the current contribution, I use nationally representative data from the Netherlands with a systematic oversample of migrants to mediate gaps in the use of day care between migrants and natives. Migrants in this paper are persons with origins in predominantly Muslim countries. Natives are persons with two parents born in the Netherlands. I describe differences in the prevalence that children aged 0–4 are enrolled in day care and try to explain differences between migrants and natives in terms of cultural and social support differences while controlling for socioeconomic variables. Cultural differences are operationalised with attitudes toward gender roles, marriage, and religion. A measure of trust in institutions is also included. Social support differences are operationalised with characteristics of the household, the extended family, and the neighbourhood, all being indicators of the potential support parents may receive. I analyze if and how these factors affect the odds that parents have a child in day care and I assess to what extent these factors mediate the gap in day care between migrants and natives.

Note that the cross-sectional, observational research design does not allow for a strict test of the causal hypotheses implied by the theoretical arguments and this also applies to the mediation analysis. The degree of mediation is therefore an approximation of the extent to which the gap is explained.

The Netherlands has had a parent-subsidised child care system since 2005. Children can be enrolled in a child-care centre when they are 0–4 years old (Plantenga 2005). The government pays a third of all parents' child care expenses. The remaining two-thirds of parents' child care expenses are also paid by the government but are income based, with lower incomes receiving more support. Working mothers receive support but when a mother is unemployed, enrolled in school, enrolled in a language course, or has special medical or social needs (as defined by the municipality where she lives), she may also receive child care benefits. Note that private firms provide child care and the government covers the costs at a certain hourly rate (most firms offer care at this rate).<sup>1</sup>

Statistics Netherlands calculated that in 2011, the average household received 73% of the costs of day care from the government, ranging from 55% for the highest income group (above € 75,000) to 89% for the lowest income group (below € 20,000).<sup>2</sup> In the Dutch context, average enrolment is limited to two days per week, with a range from 1 to 3 days. This practice coincides with a strong social norm against full-time enrolment of children in day care (Portegijs et al. 2006) and a high prevalence of part-time work among Dutch women (OECD 2017).

The survey analyzed comes from 2009, which is specific in that it was the beginning of the expansion of public day care. Since then, the supply of day care facilities has increased considerably (Roeters and Bucx 2018). There have been fluctuations in the amounts and ways the government subsidises day care, but the general trend in participation has been upward (CBS & SCP 2020; De Vries 2012). The upward trend may have affected the differentials I am studying, possibly leading to a decline in the native-migrant gap. To address this issue, I compare findings from the main survey to a recent replication of the survey held in 2022 which used a similar design and the same questionnaire for assessing the use of day care. This part of the analysis is descriptive and documents how the native-migrant gap in using day care has changed in the past thirteen years.

## Data and methods

The current paper used data from the Netherlands Longitudinal Lifecourse Study (NELLS). The NELLS was based on a two-stage stratified random sample of individuals aged 15–45 residing in the Netherlands. Thirty municipalities were chosen, stratified by region and degree of urbanisation. From the municipal registers, a random sample was obtained with a systematic oversample of people with Turkish and Moroccan origins (first and second generation). These two origin groups have been the largest immigrant groups in the Netherlands for decades. Respondents were interviewed at home in 2008–2010, with most interviews done in 2009, and also filled out a paper-and-pencil questionnaire. The overall response to the survey was 52% (De Graaf et al. 2010).

For the present paper, I selected respondents who lived with a partner (married or unmarried) and had at least one child between the ages of 0–4. For many characteristics (e.g. education), respondents reported about their partner so that a couple-oriented

design could be used, with parallel variables for fathers and mothers (e.g. father's education and mother's education). For some characteristics (e.g. attitudes and religiosity), there was information about respondents only. I tested interactions of these traits with the gender of the respondent but these were not significant. All attitude measures were standardised within gender. Note that single persons with children were excluded to simplify the couple design ( $n = 115$ ) and because single parenthood was uncommon in the migrant groups analyzed in this paper (Kalmijn 2018).

Migrants were defined based on the country of birth of the mother's parents. A migrant woman was defined as a person with at least one parent born in Turkey, Morocco, or another MENA country ( $n = 659$ ).<sup>3</sup> A native mother was defined as a person with both parents born in the Netherlands ( $n = 574$ ). Mothers with other migration origins were included in a separate category labelled as 'other migrant' ( $n = 88$ ). Among MENA-migrant women, 91% adhered to the Muslim faith; among 'other migrants', this was 17%. For the two migrants groups, I included an indicator variable for whether or not the husband had two native-born parents ( $n = 40$ ). The main focus of the analysis will be on the contrast between native mothers and mothers with a Turkish, Moroccan, or other MENA background.

To make comparisons over time, a new sample was used. NELS 2022 was based on a fresh sample of Dutch inhabitants aged 16–45. The sample was drawn at random from the Dutch population registry based on the age and country of birth of the respondents and their parents in April 2022 (Jeroense et al. 2023). People with a Moroccan or Turkish migration background were again oversampled using the same definition as in the first round. Core modules of the first wave of NELS were repeated. Respondents were approached via a letter and asked to participate in a CAWI interview. Participants were able to win an iPad for their contribution. The sample size was 3017 but only half of the respondents received questions on household and family (split ballot design). Results were weighted to make the sample representative of the population in terms of age, sex, and region (within migrant groups). The number of respondents (in the analytical sample) was smaller than in the first study but still sufficient to conduct statistical tests ( $N = 303$ ). The second round of NELS was only used for descriptive purposes and not included in the regression analyses.

## Variables

To assess the use of child care, respondents were asked to list all their children and their dates of birth. Subsequently, one focal child 0–4 was randomly selected for which detailed questions were asked. Four types of child care were assessed: day care, paid child care at home, paid care at someone else's home, and unpaid child care. The amount of time per week was assessed for each type of care. For paid care at (someone else's) home, subsidies were also possible (called 'guestparents' in the Netherlands) but the prevalence was low. The focus will be on day care which was coded as a dichotomy (any care versus no care) and as an interval variable (from 0–3+ days of care). In the Netherlands, children can enter kindergarten after their fourth birthday but this transition can be postponed if parents want.

Three sets of independent variables were included: cultural variables, social support variables, and socioeconomic variables. First, a set of cultural variables was used to

measure cultural differences within and between groups. *Religiosity* was measured using an index of religious behaviours and attitudes: (a) at least weekly church/Mosque attendance (dichotomised), (b) regular praying, (c) regular Bible/Koran reading, and (d) evaluating religion as 'very important' personally (dichotomised). The index range was 0–4. *Gender-role attitudes* were measured with four Likert items. Respondents had to indicate whether they agreed or disagreed with the following normative statements: (a) a man is equally fit to care for an infant as a woman, (b) it is not natural when a man takes care of household work, (c) a man and a woman should contribute equally to the household income, and (d) it is good when a father also contributes to the care of infants. The reliability of the scale was moderate but acceptable ( $\alpha = .65$ ). *Marriage attitudes* were measured with statements about the (normative) 'acceptability' of (a) homosexuality, (b) sex before marriage, (c) unmarried cohabitation, and (c) divorce. The reliability of the scale was good ( $\alpha = .79$ ). Finally, I included an index of *trust* in institutions: (a) the political system, (b) the government, (c) private firms, (d) the European Union, and (e) the justice system (each institution was rated on a four-point scale). The reliability of the scale was good ( $\alpha = .83$ ).

Second, a set of indicators for social support was developed. *Proximity to parents* was assessed by information on the mother and/or father of the respondent. Four outcomes were distinguished: (a) the parent(s) living in the same neighbourhood, (b) the parent(s) living in the same place but not in the same neighbourhood, (c) the parent(s) living in a different place, (d) the parent(s) living abroad. *The age of the oldest child* in the household was included since older children may provide child care. With a similar reasoning, the *number of children* in the household was included. The focal child was included in the calculation of the maximum age and the age of the focal child was included as a separate control variable. Finally, a measure of *neighbourhood support* was included. I did not measure actual support in the neighbourhood since this would be confounded by the (non-)use of centre-based child care, which is the dependent variable. Instead, I measured potential support in the local area using the concept of neighbourhood cohesion (Sampson, Morenoff, and Gannon-Rowley 2002). Respondents were asked five questions about how people in the neighbourhood interacted with each other (e.g. whether neighbours knew each other, whether neighbours said hello to each other, whether neighbours could trust each other). These questions were combined into a scale ( $\alpha = .86$ ) and aggregated to the level of districts (neighbourhoods). There were 265 districts with 20 respondents on average per district. The aggregate means were based on all respondents in the data and corrected for the oversample of migrants and demographic and regional variation in nonresponse.

Three socioeconomic variables were included (see also below). *Mother's and father's working hours* were coded from 0 to 40. *Household income* was assessed in categories with logged midpoints to scale the variable. In the paragraph on the research design below, I discuss how socioeconomic variables were analyzed.

The following control variables were used. *Child age* in months was included since the use of day care varies by age of the child. *Mother's and father's level of education* were coded in the ISLED metric (Schröder and Ganzeboom 2014). Respondents were either male or female and both reported on the partner's education. Because education is causally prior to cultural and social support variables, as well as a key determinant of socioeconomic outcomes, it is important to adjust the native-migrant gap for educational

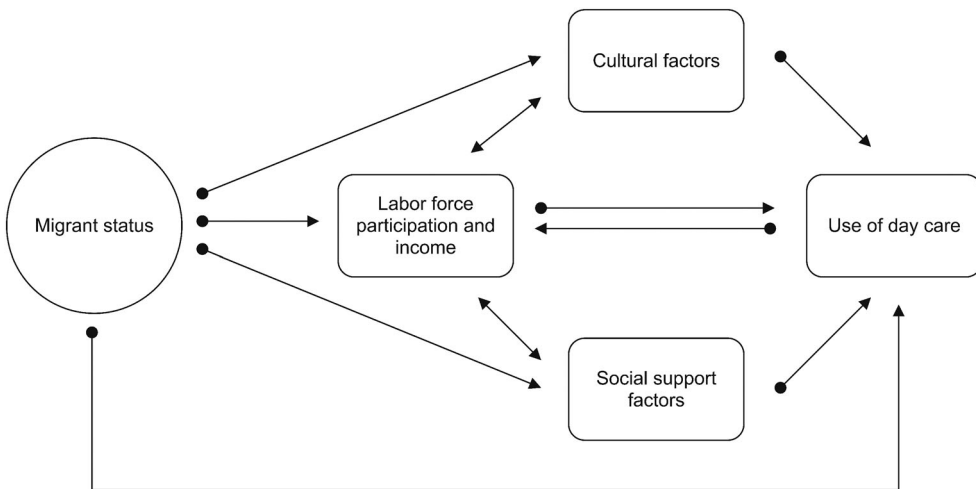
differences. Because migrants and natives live in different areas, differences in the supply of day care could also affect the gap. To control for differences in supply, I included two indicators of supply at the level of municipalities: (a) the average distance toward the nearest child-care centre (for an average inhabitant in the municipality), and (b) the number of child-care centres per 1000 four-year old's. These numbers were obtained from the online database of Statistics Netherlands.<sup>4</sup>

**Design and models**

Before presenting the models, I discuss differences between migrants and natives with respect to the independent variables and differences in the use of various types of child care between natives and migrants (Tables 1 and 2). Differences in day care are also described by the age of the child (Figure 2) and by maternal employment (Figure 3), separately for migrants and natives.

To analyze which factors contributed to differences in day care, I used logistic regression to analyze if parents sent their child to day care (Table 3). For each set of independent variables, a separate model was estimated but control variables were always included. Because both relative and absolute effects are informative, I present odds ratios in the first panel of Table 3 and average marginal effects in the second panel. Odds ratios can be interpreted as the relative difference in the odds of using child care. Average marginal effects can be interpreted as differences in percentage points. In terms of the significance tests, the findings are the same. The effect sizes are of course different. Models that included the number of days enrolled in care were also estimated but yielded no new findings (Appendix 1).

To explain the gap between migrants and natives, the causal diagram in Figure 1 served as the guide. The effect of migrant status on day care can be decomposed into several paths. One path is via the effects of migrant status on cultural variables in combination with the effects of cultural variables on day care (the top of Figure 1). Another path is via the effects of migrant status on social support variables in combination with



**Figure 1.** Casual diagram for the mediation of the effects of migrant status on the use of day care.



the effects of social support variables on day care (the bottom of Figure 1). Both these paths were estimated using the *khb* module in STATA which provides estimates and tests for indirect effects in nonlinear models such as logit models (Karlson, Holm, and Breen 2012; Kohler and Karlson 2012). The indirect effects are presented in Table 4.

The socioeconomic variables (labour force participation and income) and the use of day care are mutually related (Zangger, Widmer, and Gilgen 2021). As Figure 1 shows, there are arrows in both directions. Socioeconomic variables can in part be seen as mediators, with migrant status affecting labour force participation and income which in turn affect day care. In a cross-sectional design, the estimated effect of socioeconomic variables on day care will be biased upward due to reverse causality. The mediation via socioeconomic variables will therefore also be overestimated. For this reason, this part of the mediation was not estimated but the mediation via cultural and social support variables was estimated in two ways, once with and once without controlling for socioeconomic variables. It is plausible that the degree of mediation via cultural and social support variables lies somewhere in between the two versions of the mediation analysis.

Control variables were used as concomitant variables (children's age, education, and day care supply). Missing values were imputed with multiple imputation in Stata. Twenty imputed data sets were created and estimates were based on the combined data sets using Rubin's rules (Royston 2005).

## Findings

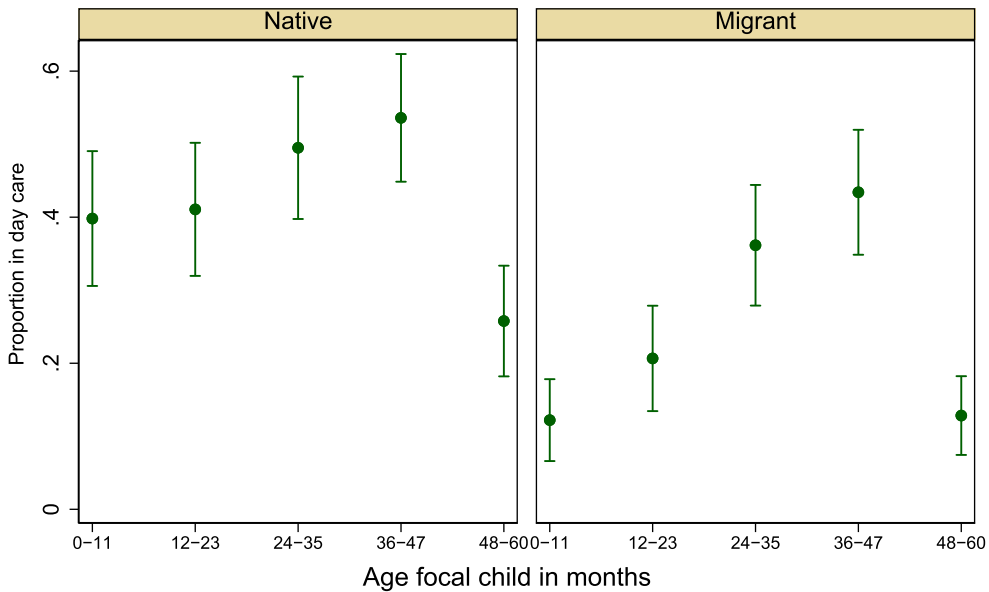
### Descriptive analyses

Table 1 shows that migrant families were less likely to have a child in day care than native families (25% versus 42%). Weighted percentages in Table 2 are similar (24% and 40%).

**Table 1.** Means and standard deviations of variables by migrant status.

	Native			Migrant		
	Mean	SD	Count	Mean	SD	Count
Day care	.416		574	.247		659
Days centre care	1.833	.754	239	1.963	.702	163
Paid care elsewhere	.110		574	.029		659
Paid care at home	.066		574	.024		659
Unpaid care	.411		574	.188		659
Age in months	30.707	17.315	574	30.458	17.437	659
Day-care centres per capita	2.143	1.365	574	1.798	.698	659
Distance to day care	.967	.406	574	.639	.236	659
Father education	6.177	1.901	573	5.095	2.129	646
Mother education	6.234	1.717	574	4.851	2.085	648
Income (logged)	7.424	.417	502	6.953	.647	572
Father work hours	36.976	7.230	574	32.507	13.863	659
Mother work hours	20.315	11.509	574	11.524	14.523	659
Religiosity	-.501	.912	551	.538	.819	566
Traditional marriage attitudes	-.502	.825	554	.564	.869	567
Traditional gender attitudes	-.154	.986	554	.177	.978	569
Institutional trust	.166	.880	552	-.150	1.077	568
Number of kids at home	1.936	.938	574	2.250	1.030	659
Age oldest kid	4.826	3.848	574	7.096	4.985	659
Grandparents same nb	.117		574	.147		659
Grandparents same place	.287		574	.212		659
Grandparents abroad	.035		574	.439		659
Neighbourhood cohesion	3.429	.218	574	3.217	.189	659

Source: NELLS 2009 data. Other migrant group omitted from the descriptive table.

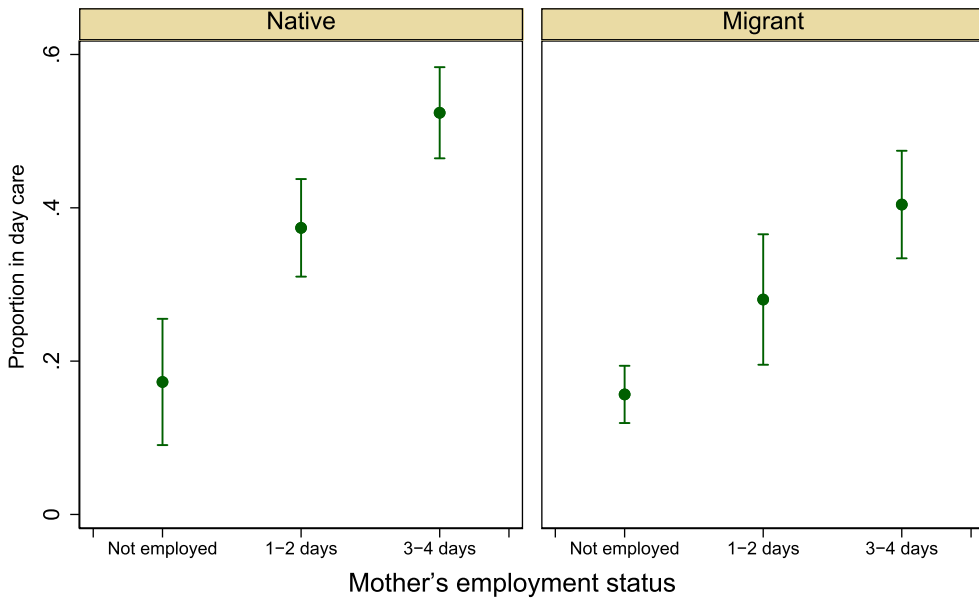


**Figure 2.** Any day care use by age and migration status.

Figure 2 shows that differences between migrants and natives were especially large when children were very young. Enrolment in day care increased with the age of the child but more so among migrants than among natives (Figure 2). At four years, enrolment in day care dropped since children are assumed to enter kindergarten at that age. Because mothers were less likely to be employed in migrant families than in native families, it is important to examine migrant-native differences by maternal employment (Figure 3). Enrolment in day care increased with the amount of employment for both natives and migrants but at each level of employment, migrants were less likely to have a child in day care than natives. Note that some nonemployed women also had children in day care, which may be due to school enrolment.

There were also differences in other forms of nonparental child care (Table 1). In the NELLS data, migrants were less likely to use paid child care at their own home or at someone else's home than natives ('guestparents'). However, both types of paid care were uncommon. Interesting to see is that migrant families also used unpaid care for their child less often than natives, suggesting that social support explanations of the gap – explanations relying on the idea that migrant women rely more on their own support networks – may play a limited role.

In Table 2, I show how the use of day care has changed over time. The percentage using day care has increased among native parents from 40% in 2009 to 53% in 2022. This is a substantial change in the thirteen-year period and in line with other trend studies in the Netherlands (CBS & SCP 2020; De Vries 2012; Roeters and Bucx 2018). For migrant parents, there was a small and insignificant increase of 3 percentage points. Because the trends were different, the gap between migrants and natives was in fact larger in contemporary times than in the past, at least for the migrant groups studied in the NELLS. While there have been improvements in the socioeconomic and



Note: NELLS 2009 data.

**Figure 3.** Any day care use by employment and migration status.

**Table 2.** Weighted percentages of parents using day care for a pre-school child by year and migrant status.

	2009	2022	Chi-2 <sup>c</sup>
Natives <sup>a</sup>	40.1	52.9	8.24*
Base N	(574)	(164)	
Migrants <sup>b</sup>	24.0	27.4	0.67
Base N	(659)	(139)	

<sup>a</sup>Person with both parents born in the Netherlands (persons with a partner).

<sup>b</sup>Persons with at least one parent born in Turkey, Morocco, or another MENA country (persons with a partner).

<sup>c</sup>Test for change in percentage.

\*  $p < .05$ .

Source: NELLS 2009 and NELLS 2022.

social integration of ethnic minorities in the Netherlands (CBS 2020), this apparently does not apply to the use of day care.

Before turning to the regression models, it is helpful to examine to what extent natives and migrants differed in other respects. Table 1 shows that there were large socio-economic differences. Migrant parents worked fewer hours and had lower household income on average than native parents. Differences were similar for mothers and fathers. There were also substantial cultural differences. Migrant parents had more traditional attitudes toward marriage and gender roles, were more religious, and had less trust in institutions than natives. Differences in attitudes toward marriage were especially pronounced (cf., Kalmijn and Kraaykamp 2018). The variable was standardised so that the difference between migrants and natives in the mean attitudes can be regarded as an effect size. Finally, it was clear that migrants had larger families, and partly as a consequence, more often had older children at home. Migrants were also more likely to have

a parent in the same neighbourhood. When zooming in on migrants whose parents lived in the Netherlands, this difference was substantial (27% for migrants versus 12% for natives; not in Table 1). Neighbourhood cohesion was higher for natives than for migrants.

### *Regression analyses*

Table 3 presents the models for the odds that children are in day care. The first model tests the effect of migrant status while controlling for the age of the child, the supply of day care, and education. The migrant status effect was strong and significant (Model 1). Several control variables were associated with the use of day care. The supply of day care was significantly associated with enrolment, especially the average distance toward the nearest child-care centre in a municipality. There were the expected positive associations between the use of day care and the mother's work hours. Note that these effects are merely associations since the causal relationship between employment and the use of day care goes in both directions. Maternal education had the expected positive effect on the use of day care but there was no effect of household income, which is plausible in the context of an income-based subsidy system.

With the socioeconomic variables included, a significant gap in the use of day care remained. Migrant couples had a 39% lower odds of using day care than native couples (i.e. 1-.610). According to the average marginal effects, this translates into 9.2% points fewer women using day care in the migrant population. Hence, the gap between migrant and native families is substantial, even when adjusting for differences in working hours, education, and income.

Model 2 in Table 3 contains the cultural variables. The variables were standardised so that their effects could be compared. Of the four variables included, attitudes toward marriage had the strongest effect. Parents with more traditional views on marriage and the family were considerably less likely to enrol their child in day care. There was also a negative effect of religiosity, with more religious persons being less likely to have a child in day care. Gender-role attitudes had no effects on day care. There was also no evidence for the notion that a lack of trust would make couples reluctant to send their child to day care.

The variables used for testing social support explanations for day care are included in Model 3. In families with larger numbers of children and families with older children, children of 0–4-year old were less likely to be in day care, in line with expectations. The effect of the number of children was significant and strong but the effect of the age of the oldest child was not significant but in the predicted direction. When the grandparents were living in the same neighbourhood, children were less likely to be in day care, but the effect, although substantial, was not significant ( $p = .16$ ). There were negative effects of neighbourhood cohesion, in line with expectations, but these effects were marginally significant ( $p = .07$ ).

In Table 4, I test the indirect effect and decompose it into its components. The indirect effect, presented at the bottom of the table, was significant and amounted to 68% of the original gap. This shows that the gap was to a large extent mediated by the complete set of independent variables. Higher levels of religiosity and more traditional marriage attitudes mediated most of the gap. In the set of social support variables, competing

**Table 3.** Logit regression of the use of day care: Odds ratios (OR) and average marginal effects (AME).

	(1) OR	(2) OR	(3) OR	(1) AME	(2) AME	(3) AME
Migrant (vs. native) <sup>a</sup>	.610* (.003)	.938 (.737)	.614* (.008)	-.092* (.003)	-.012 (.737)	-.088* (.009)
Other origin (vs. native)	1.269 (.400)	1.399 (.245)	1.148 (.634)	.048 (.405)	.063 (.253)	.027 (.636)
Dutch husband	1.085 (.835)	.802 (.578)	1.099 (.813)	.015 (.835)	-.039 (.578)	.017 (.813)
Day-care centres per capita	.976 (.681)	.971 (.623)	1.021 (.745)	-.005 (.681)	-.005 (.623)	.004 (.745)
Distance to day care	.529* (.003)	.517* (.002)	.629* (.039)	-.116* (.003)	-.118* (.002)	-.083* (.037)
Child 12–23 months	1.615* (.023)	1.637* (.020)	1.755* (.009)	.088* (.022)	.088* (.019)	.101* (.008)
Child 24–35 months	3.172* (.000)	3.224* (.000)	3.688* (.000)	.211* (.000)	.209– (.000)	.233* (.000)
Child 36–47 months	3.811* (.000)	4.041* (.000)	4.743* (.000)	.245* (.000)	.249* (.000)	.278* (.000)
Child 48–60 months	.818 (.365)	.796 (.307)	1.060 (.802)	-.037 (.364)	-.041 (.306)	.010 (.802)
Father education	1.047 (.217)	1.038 (.328)	1.036 (.348)	.008 (.216)	.007 (.327)	.006 (.348)
Mother education	1.086* (.040)	1.078~ (.068)	1.069 (.101)	.015* (.039)	.013~ (.067)	.012 (.100)
Income (logged)	1.278 (.106)	1.202 (.227)	1.314~ (.083)	.045 (.105)	.033 (.226)	.049~ (.082)
Father work hours	1.013~ (.062)	1.012~ (.095)	1.013~ (.058)	.002~ (.061)	.002~ (.095)	.002~ (.057)
Mother work hours	1.036* (.000)	1.030* (.000)	1.031* (.000)	.007* (.000)	.005* (.000)	.006* (.000)
Religiosity		.804* (.035)			-.039* (.033)	
Traditional marriage attitudes		.769* (.025)			-.047* (.024)	
Traditional gender attitudes		.944 (.431)			-.010 (.431)	
Institutional trust		1.030 (.674)			.005 (.674)	
Number of kids at home			.780* (.018)			-.045* (.018)
Age oldest kid			.964 (.113)			-.007 (.112)
Grandparents same nb			.730 (.158)			-.056 (.157)
Grandparents same place			.863 (.384)			-.026 (.383)
Grandparents abroad			1.003 (.987)			.001 (.987)
Neighbourhood cohesion			.608~ (.065)			-.089~ (.064)
Observations	1321	1321	1321	1321	1321	1321

Source: NELLS 2009 data. *P*-values in parentheses. Multiple imputation of missing values.

<sup>a</sup>Persons with at least one parent born in Turkey, Morocco, or another MENA country (persons with a partner).

~*p* < 0.10, \* *p* < 0.05.

explanations were operating. Children mediated a portion of the gap (24%). Migrant families had larger families and more often older children at home, which reduced the need for using day care. At the same time, neighbourhood cohesion suppressed the gap (–19%) and this worked against the mediating effects of children. Migrants lived in somewhat less cohesive areas and this increased the demand for day care, given the

negative effect of community cohesion on day care. Overall, however, the gap in day care could not be attributed to social support factors.

I replicated the decomposition models without including income and working hours. As is clear, employment and the use of day care are mutually related so that working hours (and therefore also income) are endogenous variables in the model (Figure 1). For this reason, it is possible that the effects of migrant status as well as the effects of the other independent variables are biased. Without longitudinal data – scarce for migrant surveys – it is not possible to rule out this bias. A simple solution is to estimate models both ways, with and without working hours and to regard the outcomes as the possible range of true effects. The last column of Table 4 presents this decomposition. The explanation of the gap was similar in this alternative decomposition. Cultural variables mediated 63% of the gap. The age and number of children in the family variables mediated 17% and there was a suppressor effect of neighbourhood cohesion (–12%). How we treat endogenous socioeconomic variables therefore makes little difference for our conclusions about cultural and social support variables.

So far, it was assumed that the determinants of day care would work in a similar way for natives and migrants. A logit model was estimated with interaction effects with migrant status and all independent variables. One significant interaction effect was found, between migrant status and father's education ( $t = 3.00$ ). The  $t$ -value for this interaction was virtually identical in a linear probability model ( $t = 3.02$ ). Marginal effects of father's education on day care were .033 ( $p < .01$ ) for natives and  $-.010$  ( $p = .25$ ) for migrants. In other words, the use of day care in migrant families did not increase with the level of father's education. Important is that there were no interactions of cultural

**Table 4.** Decomposition of native-migrant gap in the use of day care.

	b	S.E.	% explained	% explained <sup>1</sup>
Religiosity	–.143	.081	30.5	25.1
Traditional marriage attitudes	–.170	.086	36.4	33.7
Traditional gender attitudes	–.011	.013	2.4	3.1
Institutional trust	–.007	.013	1.5	1.2
Number of kids at home	–.031	.021	10.2	7.9
Age oldest kid	–.064	.042	13.8	9.1
Grandparents same nb	–.003	.007	0.7	0.5
Grandparents same place	.008	.015	–1.8	–1.4
Grandparents abroad	.028	.070	–6.1	3.6
Neighbourhood cohesion	.091	.048	–19.3	–11.7
All variables combined	–.303	.130	68.3	71.1

Source: NELLS 2009 data. T-values in parentheses. Multiple imputation of missing values. Decomposition based on the *kfb* method (see text).

<sup>1</sup>Working hours and income not used as concomitant variables.

~ $p < 0.10$ , \*  $p < 0.05$ .

and social support variables with migrant status. Larger samples are probably needed to provide stronger evidence about the differential effects of social and cultural variables for the two groups.

## Conclusion

This paper showed, for a new societal context, that migrant families with origins in MENA countries were less likely to use day care than families without a migration background. The main contribution of the current paper lies in a comprehensive analyses of the reasons for why this gap exists. Previous studies have mostly focused on the consequences of day care for children's early academic achievement and have tested the hypothesis that such consequences may be more beneficial for disadvantaged groups like migrant families (Crosnoe 2007). The few studies that have systematically examined the determinants of day care for migrants have focused on socioeconomic factors such as working hours, education, and income. My analysis showed that a substantial gap exists even after controlling for socioeconomic factors, suggesting that additional explanations for the gap are needed. I presented a new mediation analysis with a new set of measures that were conceptually categorised into cultural and social support explanations, while controlling for relevant socioeconomic variables.

Cultural differences played a major role in understanding the gap. I looked at a variety of attitudinal measures – religiosity, gender roles, and marriage and family values – and found that migrant mothers and fathers were on average more conservative in these respects. Moreover, these differences could mediate a substantial part of the gap in day care enrolment. Of the three variables, especially religion and marriage values – and not so much gender role attitudes – were important. Apparently, cultural ideas about the traditional family and religious norms underlying these attitudes are for many couples irreconcilable with 'outsourcing' early child care. The importance of the culture of the origin country was also emphasised in a previous study of the use of day care by Polish migrants in the Netherlands (Bártová and Karpinska 2023). American authors have further argued that distrust of government programmes is an important cultural barrier in using centre-based care (Karoly and Gonzalez 2011) but the evidence in my paper does not reveal any effect of institutional trust on enrolment in day care.

Weaker evidence was found for social support explanations. An influential idea is that migrant families can rely more on informal sources of support, for example because migrants live closer to their parents and have a stronger local orientation. I found that these factors mediated only a small part of the variation in day care. Moreover, I found evidence that migrant couples did not use informal care at home more often. Both findings suggest that social support explanations of the gap are less relevant. There was evidence that a small part of the gap could be mediated by the greater availability of sibling support among migrant families, in line with social support explanations.

The findings are relevant for a number of reasons. An underutilisation of day care does not help migrant women's emancipation process as it makes child-related interruptions in the career more likely, with possible penalties later on in the life course. Additional disadvantages lie in the possibility that children of migrant families miss out on opportunities to learn the destination language better and to engage in tasks that can be

beneficial for school readiness. Many children in the current analyses are second and third generation, but even for these groups, gaps in reading test scores have been observed in primary and secondary school (CBS 2020). Although elevating the use of day care by migrant families would be beneficial in a number of respects, the current analysis also shows that there are cultural barriers in taking advantage of the child care opportunities that the government offers. The strong effects of cultural attitudes and the insignificant effects of income suggest that boosting enrolment of children from migrant families is a difficult challenge for policymakers.

A number of limitations of the present research must be pointed out. First, no claims about causality can be made with the cross-sectional data that I have analyzed. This issue is most relevant for the employment variables, and less for the cultural and social support variables, the main variables of interest. For the cultural variables there may be some reverse causality bias in so far as people's attitudes about marriage and their religious beliefs are changed by their use or non-use of day care. There is some evidence for attitude adjustment but primarily for gender role attitudes (Kalmijn 2005) but it is not known if this also applies to the use of day care. Note that longitudinal studies of day care that compare migrants and natives are very rare, so the current explanatory analysis remains a step forward.

Second, I used a large and nationally representative sample with elaborate measures, but no direct questions were asked about the motivations, experiences, and feelings that women have regarding their child care options. Some previous papers, directly asked about parents' preferences regarding child care and related these preferences to the child care options chosen (Zachrisson, Janson, and Naerde 2013). Although such designs are important, it is also important to look at norms and values since these inform us where preferences regarding child care come from.

A third limitation is that the current study focuses on the period immediately after the current child care subsidy system was installed in the Netherlands. Although enrolment in day care has increased in the last decades, the migrant-native gap has not closed, on the contrary, it seems to have grown. Larger samples for more years are needed to replicate this result and monitoring trends remains important for the future. How the use of day care in other migrant groups compares and how this has changed is also an important remaining question (Bártová and Karpinska 2023). Finally, it needs to be recognised that even among parents with native origins, the use of day care in the Netherlands is low in comparison to other countries. About half of the three-year old's without a migration background were enrolled in day care in the Netherlands, compared to more than 70% of such children in Norway (Zachrisson, Janson, and Naerde 2013).

## Notes

1. In 2020, an investigative committee of the Dutch Parliament concluded that from 2004 to 2019, the government was responsible for systematic, harsh, unfair, and often unjustly sanctioning of parents who had received day care subsidies (Tweede Kamer der Staten-generaal 2020). This so-called 'Toeslagenschandaal' is still in the news as of this writing, primarily because the government has not yet been able to compensate parents who were treated unfairly, despite its admittance of responsibility in the affair. Parents who were affected were more often single parents and more often had a migration background, but this



applied more to parents with Caribbean origins than to parents with a Turkish or Moroccan background (CBS 2022).

2. <https://www.cbs.nl/nl-nl/nieuws/2013/01/kinderopvang-kost-ouders-gemiddeld-2-000-euro>.
3. Other Muslim countries of the Middle East and North Africa (Kalter et al. 2018)
4. <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/80305ned/table?fromstatweb>.

## Disclosure statement

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## Appendix

### Appendix 1. Linear regression of the frequency of centre-based care (0–3+)

	(1)	(2)	(3)
Migrant	-.136* (.042)	.006 (.932)	-.157* (.031)
Other origin	.144 (.216)	.186 (.109)	.092 (.434)
Dutch husband	.009 (.957)	-.093 (.565)	.028 (.862)
Daycare centres per capita	-.003 (.915)	-.005 (.830)	.013 (.611)
Distance to daycare	-.332* (.000)	-.342* (.000)	-.266* (.002)
Child 12–23 months	.219* (.007)	.223* (.005)	.242* (.003)
Child 24–35 months	.446* (.000)	.445* (.000)	.467* (.000)
Child 36–47 months	.515* (.000)	.527* (.000)	.551* (.000)
Child 48–60 months	-.085 (.278)	-.088 (.261)	-.032 (.690)
Father education	.005 (.736)	.000 (.980)	-.001 (.967)
Mother education	.042* (.006)	.038* (.013)	.036* (.019)
Income (logged)	.067 (.202)	.048 (.360)	.074 (.163)
Father work hours	.003 (.185)	.003 (.239)	.003 (.147)
Mother work hours	.016* (.000)	.013* (.000)	.014* (.000)
Religiosity		-.077* (.045)	
Traditional marriage attitudes		-.084* (.042)	
Traditional gender attitudes		-.014 (.607)	
Institutional trust		.031 (.241)	
Number of kids at home			-.074* (.043)
Age oldest kid			-.006 (.438)
Grandparents same nb			-.159~ (.055)
Grandparents same place			-.086 (.192)
Grandparents abroad			.006 (.939)
Neighbourhood cohesion			-.216* (.033)
Constant	-.345 (.357)	-.168 (.656)	.519 (.289)
Observations	1321	1321	1321

Source: NELS 2009 data. *P*-values in parentheses. Multiple imputation of missing values.

~*p* < 0.10, \* *p* < 0.05