

# Void of the Voiceless: An Analysis of Residents With a Language Barrier in Germany, France, and the United Kingdom

Nicholas Heck-Grossek and Sonila Dardha

## Introduction

Coverage error is an essential component of the total survey error (TSE) framework, particularly worth examining if excluded units differ systematically from the surveyed respondents (Biemer, 2010; Biemer et al., 2017; Groves, 2004; Groves et al., 2011). In nationally representative surveys where researchers aim to make inferences about the general population as a whole, systematically undercovering or undersampling specific groups may lead to biased estimates. A clear example of such exclusion is the community of migrants who reside in a country but do not speak the national language(s). Large-scale comparative surveys in Europe and beyond, like the European Social Survey (ESS), the Eurobarometer (EB), and the European Quality of Life Survey (EQLS), sample individuals from households on the premise that an eligible unit is one that speaks the official language(s) of the country, among other potential criteria. If a general population target means the resident population of a country, such surveys would exclude migrant residents simply because they do not speak the languages on which the questionnaire is translated and scripted. Overlooking such units becomes especially problematic if this group presents dissimilar sociodemographic composition, perceptions, attitudes, or behaviors compared with the rest of the population.

A large body of literature in the field of public health examines migrant minorities with a language barrier and how they differ from their majority counterparts. Previous research shows that a language barrier affects the patient–physician relationship (Diamond, Izquierdo, Canfield, Matsoukas, & Gany, 2019; Jaeger, Pellaud, Leville, & Klauser, 2019), and often the health

status of those facing a language barrier is significantly different from the remainder of the population (Bousmah, Combes & Abu-Zaineh, 2019; Ding & Hargraves, 2009; Watson, Harrop, Walton, Young, & Soltani, 2019). Studies investigating sociological research questions present evidence that ethnic or racial minority groups with a language barrier differ from the majority on other outcomes such as social interactions (Cho, 2000) and cooperation with social workers (Chand, 2005). More importantly, an illustration of this difference is summarized by “3D occupations”—occupations that are “dirty,” “dangerous,” and “demeaning” or “difficult”—which are predominantly executed by ethnic minorities (Mucci et al., 2019; Sun, 2019). Furthermore, this group earns less (Barret & McCarthy, 2007), is less likely to own homes (Duffy, Gerald, & Kearney, 2005), and lives in housing with poorer conditions and more decay (Statistics Norway, 2009).

From a survey methodology perspective, ethnic migrant minorities are of particular interest because they often represent hidden populations that are hard to sample, identify, reach, and persuade and have a low propensity to participate in surveys (Bacher, Lemcke, Schmich, & Quatember, 2019; Tourangeau, Edwards, & Johnson, 2014; Willis, Smith, Shariff-Marco, & English, 2014). Consequently, research from this field focuses on methods to sample migrants and include them in the target population as an attempt to achieve better representativeness (Kappelhof & De Leeuw, 2019; Lohr, 2008). Given the rather low prevalence of migrants with a language barrier and their highly mobile nature (South, Crowder, & Chavez, 2006; Warfa et al., 2006), drawing samples from frames of national statistics offices proves insufficient, particularly when national registers frequently exclude such units. Alternatively, some of the frequently used but costly sampling techniques developed to date include snowballing or respondent-driven sampling (Shi, Cameron, & Heckathorn, 2019; Tyldum & Johnston, 2014), time-location sampling (Kalsbeek, 2003; Karon, 2005), name-based sampling (Ferguson, 2009; Schnell et al., 2013; Schnell, Trappmann, & Gramlich, 2014), random routes or random walk procedures (Agadjanian & Zotova, 2012), and other novel approaches (Raymond, Chen, & McFarland, 2019) or even a combination of techniques (Reichel & Morales, 2017).

If methods to sample and reach ethnic migrant minorities are available, the subsequent step is to encourage minorities’ participation in the study. To encourage their participation, the research team needs to account for any potential language barriers faced during the survey process, including during the contact, recruiting, and interviewing stages. To cope with this challenge

in a face-to-face survey, not only would the questionnaire need to be translated, but the interviewers also would need to speak the target language(s). However, translation is labor-intensive and time-consuming, and fieldwork agencies do not necessarily have a pool of interviewers who speak the needed language(s) at hand. This economic inefficiency usually leads to the exclusion of units with a language barrier from surveys altogether. Systematic exclusion, however, might have undesired critical implications for the generalizability of survey results. Despite the ongoing research and efforts from both survey scholars and practitioners to include eligible units in the population frame, the trade-off between methodological rigor and financial constraints still persists. Thus, this chapter explores whether the exclusion of migrants with a language barrier is sizable and whether they differ significantly from the rest of the population on various perceptible outcomes upon contact with a survey interviewer.

## Methods

This research brief examines the excluded units facing a language barrier using data from the European Social Survey (ESS ERIC) round 8 fielded in 2016 (European Social Survey Round 8 Data, 2016), focusing on case studies of the three most populous European countries: Germany, France, and the United Kingdom. Data were obtained from publicly accessible contact information sheets that contain details about interviewers' contact process with potential respondents. Previous research shows that para-data stemming from contact sheets provide a fruitful source for understanding fieldwork and survey results but are as yet underused, despite promising results from some initial research (Kreuter, 2013). These sheets indicate that, apart from coding survey dispositions and refusal outcomes, interviewers gather information on the characteristics of the house and the immediate vicinity in which a unit lives and whether the interviewer faces any access impediments such as entry phones and locked gates or doors.

This research brief's objective is to use this data to determine how units with a language barrier differ with regard to their dwelling or area characteristics (e.g., type of house, overall physical condition of the building or house, amount of litter and rubbish, or vandalism and graffiti in the immediate vicinity, and access impediments) from all other units for which contact was attempted. The advantage of this approach lies in shifting the focus from participating units to nonrespondents who do not meet the survey eligibility requirements because of linguistic constraints. Thus, the analysis

included comparisons of living conditions for units with and without a language barrier, and excluded units that could not be reached in any of the contact attempts or for whom contact sheets were unavailable. The unit of analysis is the household, so a unit with a language barrier refers to a household with at least one member facing a language barrier. To avoid small cell sizes, some of the variables of interest were recoded into binary or categorical variables with three levels of measurement. Using chi-squared tests, we assessed the independence between the dwelling or area characteristics and whether the unit faces a language barrier. Table 6-1 shows the cross-tabulated results and the corresponding chi-squared and *p* values.

## Results

Of the 18,473 contacted units in the three countries under examination, 335 were identified as having a language barrier. The prevalence for this group is small and constitutes 2.0 percent of the observations in Germany (182 of 9,305 units), 1.9 percent in France (82 of 4,300 units), and 1.5 percent in the United Kingdom (71 of 4,868 units). On the whole, units with a language barrier seemed to be living in worse conditions than the remainder of the contacted respondents. To illustrate, across all three countries, a relative majority live in multi-unit buildings as opposed to single units (37 percent to 67 percent who have a language barrier vs. 17 percent to 40 percent who do not have a language barrier) that are in bad or very bad overall physical condition (13 percent to 16 percent who have a language barrier vs. 3 percent to 4 percent who do not have a language barrier); both results are significant at the  $p < .001$  level. Likewise, a higher proportion of potential respondents who have a language barrier live in areas with a large or very large amount of litter and rubbish (12 percent to 20 percent vs. 1 percent to 4 percent) or vandalism and graffiti (4 percent to 11 percent vs. 1 percent to 2 percent) compared with those without a language barrier. The proportions of those with a language barrier are relatively large, especially in France. However, results are mixed for whether those with a language barrier live in dwellings with access impediments: although this is the case in France and the United Kingdom, findings from Germany suggest the opposite but are inconclusive as they do not reach statistical significance.

## Discussion and Conclusions

The results presented in this chapter show a clear trend with minor country-specific differences. Overall, households with at least one person who has a

**Table 6-1. Cross-tabulations of units with and without a language barrier and their dwelling or area characteristics**

	Germany			France			United Kingdom		
	No barrier	Language barrier	Chi-squared test	No barrier	Language barrier	Chi-squared test	No barrier	Language barrier	Chi-squared test
Type of house respondent lives in									
Single unit	34%	14%	$\chi^2 = 62^{***}$ $df = 2$	55%	30%	$\chi^2 = 25^{***}$ $df = 2$	71%	58%	$\chi^2 = 21^{***}$ $df = 2$
Multi-unit	37%	65%	$p < .001$	40%	67%	$p < .001$	17%	37%	$p < .001$
Other	28%	21%	$p < .001$	6%	2%	$p < .001$	13%	6%	$p < .001$
Entry phone or locked gate/door before reaching respondent's individual door									
Yes	75%	70%	$\chi^2 = 1.43$ $df = 1$	46%	63%	$\chi^2 = 10^{**}$ $df = 1$	16%	32%	$\chi^2 = 14^{***}$ $df = 1$
No, neither of these	25%	30%	$p = .233$	54%	37%	$p = .001$	84%	68%	$p < .001$
Overall physical condition of building or house									
Very good/good	73%	43%	$\chi^2 = 83^{***}$ $df = 2$	83%	65%	$\chi^2 = 47^{***}$ $df = 2$	66%	38%	$\chi^2 = 32^{***}$ $df = 2$
Satisfactory	23%	44%	$p < .001$	14%	20%	$p < .001$	30%	49%	$p < .001$
Bad/very bad	4%	13%	$p < .001$	3%	16%	$p < .001$	4%	13%	$p < .001$
Amount of litter and rubbish in the immediate vicinity									
Very large/large	4%	12%	$\chi^2 = 21^{***}$ $df = 1$	1%	20%	$\chi^2 = 158^{***}$ $df = 1$	3%	12%	$\chi^2 = 22^{***}$ $df = 1$
Small/none or almost none	96%	88%	$p < .001$	99%	80%	$p < .001$	97%	88%	$p < .001$
Amount of vandalism and graffiti in the immediate vicinity									
Very large/large	2%	6%	$\chi^2 = 6^*$ $df = 1$	1%	11%	$\chi^2 = 61^{***}$ $df = 1$	1%	4%	$\chi^2 = 10^{**}$ $df = 1$
Small/none or almost none	98%	94%	$p = .012$	99%	89%	$p < .001$	99%	96%	$p = .002$

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

language barrier tend to inhabit impoverished houses, buildings, or vicinities. They are likely to be found in multi-unit buildings in all countries under observation, more frequently so than those without any language barrier. This finding is in line with a large, long-standing body of literature focusing on ethnic minorities, which, among other findings, concludes that ethnic minorities tend to live in cities and towns where there are more multi-unit households than in rural areas, which typically have more single-unit dwellings (Duffy et al., 2005; Razum et al., 2008; Statistics Norway, 2009). A similar pattern prevails when looking at other indicators: households that have at least one person with a language barrier are located in neighborhoods with higher amounts of both litter and rubbish as well as vandalism and graffiti; these indicators clearly speak to the deprivation of these migrant communities. Again, these results align with previous research on ethnic minorities (Spallek, Zeeb, & Razum, 2010; Statistics Norway, 2009). With the exception of Germany, residents with a language barrier also seem harder to reach because they often dwell in buildings with access impediments such as entry phones and locked gates or doors. This finding is not surprising given that access impediments (e.g., intercoms or entry phones) often go along with multi-unit household buildings, which arguably indicate a lower socioeconomic status of the inhabitants in these countries. Therefore, it is reasonable to suggest that migrant units living in more precarious settings could also differ in their demographic composition, socioeconomic status, and worldview from those who live in less precarious settings. As a result, even though units with a language barrier compose a small proportion of the resident population, their exclusion is likely to be a source of bias and could affect the ESS estimates.

Although these findings offer a glimpse into the poor living conditions of sampling units with a language barrier, no discussion of substantial results for this group is possible because they were excluded from survey interview recruitment, and no additional information is available. Nevertheless, the added value of this study is that it uncovers the housing situation of this hidden segment in the three largest European countries. The analysis from the para-data can serve as a proxy for further interpretation given that unfavorable living conditions are likely to be correlated with the respondents' other demographic, attitudinal, or behavioral traits.

Upcoming surveys targeting either migrant or general populations need to be cautious in excluding resident units facing a language barrier. Based on their distinctive living conditions, these units might also differ on other

substantial measures and, consequently, threaten the inference potential of the collected data. Suggestions for future research include taking more of the available ESS countries into account to explore cross-country differences and similarities, collecting other auxiliary data on excluded units via contact sheets or other para-data procedures to investigate this population in more detail, and ultimately assessing the feasibility of including this population in surveys.

## References

- Agadjanian, V., & Zotova, N. (2012). Sampling and surveying hard-to-reach populations for demographic research: A study of female labor migrants in Moscow, Russia. *Demographic Research*, 26, 131–150.
- Bacher, J., Lemcke, J., Schmich, P., & Quatember, A. (2019). Probability and nonprobability sampling: Representative surveys of hard-to-reach and hard-to-ask populations. Current surveys between the poles of theory and practice. *Survey Methods: Insights from the Field*. Retrieved from <https://surveyinsights.org/?p=12070>
- Barrett, A., & McCarthy, Y. (2007). The earnings of immigrants in Ireland: Results from the 2005 EU Survey of Income and Living Conditions. (IZA Discussion Paper, No. 2990). Bonn, Germany: IZA, Institute of Labor Economics.
- Biemer, P. P. (2010). Total survey error: Design, implementation, and evaluation. *Public Opinion Quarterly*, 74(5), 817–848.
- Biemer, P. P., De Leeuw, E., Eckman, S., Edwards, B., Kreuter, F., Lyberg, L. E., & West, B. T. (Eds.), (2017). *Total survey error in practice*. Hoboken, NJ: John Wiley & Sons.
- Bousmah, M., Combes, J. B. S., & Abu-Zaineh, M. (2019). Health differentials between citizens and immigrants in Europe: A heterogeneous convergence. *Health Policy*, 123(2), 235–243.
- Chand, A. (2005). Do you speak English? Language barriers in child protection social work with minority ethnic families. *British Journal of Social Work*, 35(6), 807–821.
- Cho, G. (2000). The role of heritage language in social interactions and relationships: Reflections from a language minority group. *Bilingual Research Journal*, 24(4), 369–384.

- Diamond, L., Izquierdo, K., Canfield, D., Matsoukas, K., & Gany, F. (2019). A systematic review of the impact of patient–physician non-English language concordance on quality of care and outcomes. *Journal of General Internal Medicine*, 34(8), 1591–1606. <https://doi.org/10.1007/s11606-019-04847-5>
- Ding, H., & Hargraves, L. (2009). Stress-associated poor health among adult immigrants with a language barrier in the United States. *Journal of Immigrant and Minority Health*, 11(6), 446–452.
- Duffy, D., Gerald, J. F., & Kearney, I. (2005). Rising house prices in an open labour market. *Economic and Social Review*, 36(3), 251–272.
- European Social Survey. (2016). ESS8 – 2016 data download: Integrated file edition 2.1. London, United Kingdom: ESS ERIC. <https://doi.org/10.21338/NSD-ESS8-2016>
- Ferguson, D. A. (2009). Name-based cluster sampling. *Sociological Methods & Research*, 37(4), 590–598.
- Groves, R. M. (2004). *Survey errors and survey costs* (Vol. 536). Hoboken, NJ: John Wiley & Sons.
- Groves, R. M., Fowler, F. J., Jr., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2011). *Survey methodology* (Vol. 561). Hoboken, NJ: John Wiley & Sons.
- Jaeger, F. N., Pellaud, N., Laville, B., & Klauser, P. (2019). The migration-related language barrier and professional interpreter use in primary health care in Switzerland. *BMC Health Services Research*, 19(1), 429.
- Kalsbeek, W. D. (2003). Sampling minority groups in health surveys. *Statistics in Medicine*, 22(9), 1527–1549.
- Kappelhof, J. W., & De Leeuw, E. D. (2019). Estimating the impact of measurement differences introduced by efforts to reach a balanced response among non-Western minorities. *Sociological Methods & Research*, 48(1), 116–155.
- Karon, J. M. (2005, March). The analysis of time-location sampling study data. In *Proceeding of the Joint Statistical Meeting, Section on Survey Research Methods* (pp. 3180–3186). Minneapolis, MN: American Statistical Association.
- Kreuter, F. (Ed.). (2013). *Improving surveys with paradata: Analytic uses of process information* (Vol. 581). Hoboken, NJ: John Wiley & Sons.



- Lohr, S. L. (2008). Coverage and sampling. In *International handbook of survey methodology* (pp. 97–112). New York, NY: Taylor & Francis.
- Mucci, N., Traversini, V., Giorgi, G., Garzaro, G., Fiz-Perez, J., Campagna, M., & Arcangeli, G. (2019). Migrant workers and physical health: An umbrella review. *Sustainability*, *11*(1), 232.
- Raymond, H. F., Chen, Y. H., & McFarland, W. (2019). “Starfish sampling”: A novel, hybrid approach to recruiting hidden populations. *Journal of Urban Health*, *96*(1), 55–62.
- Razum, O., Zeeb, H., Meesmann, U., Schenk, L., Bredehorst, M., Brozka, P., & Saß, A. C. (2008). Schwerpunktbericht der gesundheitsberichterstattung des bundes. *Migration und gesundheit*. [Federal focus report on health. *Migration and health*.] Berlin, Germany: Robert-Koch-Institut.
- Reichel, D., & Morales, L. (2017). Surveying immigrants without sampling frames—Evaluating the success of alternative field methods. *Comparative Migration Studies*, *5*(1), 1.
- Schnell, R., Gramlich, T., Bachteler, T., Reiher, J., Trappmann, M., Smid, M., & Becher, I. (2013). A new name-based sampling method for migrants using n-grams. German Record Linkage Center Working Paper Series. Retrieved from <https://pdfs.semanticscholar.org/812f/18bfbf9695e2f93df742791770f82a482b0e.pdf>
- Schnell, R., Trappmann, M., & Gramlich, T. (2014). A study of assimilation bias in name-based sampling of migrants. *Journal of Official Statistics*, *30*(2), 231–249.
- Shi, Y., Cameron, C. J., & Heckathorn, D. D. (2019). Model-based and design-based inference: Reducing bias due to differential recruitment in respondent-driven sampling. *Sociological Methods & Research*, *48*(1), 3–33.
- South, S., Crowder, K., & Chavez, E. (2006). Geographical mobility and spatial assimilation among U.S. Latino immigrants. *International Migration Review*, *39*(3), 577–607.
- Spallek, J., Zeeb, H., & Razum, O. (2010). Prevention among immigrants: The example of Germany. *BMC Public Health*, *10*(1), 92.
- Statistics Norway. (2009). *Living conditions among immigrants in Norway 2005/2006*. Reports 2009/2. Oslo, Norway: Author.

- Sun, L. (2019). Work-related injuries: Injured but not entitled for legal compensation. In *Rural urban migration and policy intervention in China* (pp. 137–151). Singapore: Palgrave Macmillan.
- Tourangeau, R., Edwards, B., & Johnson, T. P. (Eds.), (2014). *Hard-to-survey populations*. Cambridge, UK: Cambridge University Press.
- Tyldum, G., & Johnston, L. (2014). *Applying respondent driven sampling to migrant populations: Lessons from the field*. London, UK: Palgrave Macmillan UK.
- Warfa, N., Bhui, K., Craig, T., Curtis, S., Mohamud, S., Stansfeld, S., ... Thornicroft, G. (2006). Post-migration geographical mobility, mental health and health service utilisation among Somali refugees in the UK: A qualitative study. *Health & Place, 12*(4), 503–515.
- Watson, H., Harrop, D., Walton, E., Young, A., & Soltani, H. (2019). A systematic review of ethnic minority women's experiences of perinatal mental health conditions and services in Europe. *PloS One, 14*(1), e0210587.
- Willis, G. B., Smith, T. W., Shariff-Marco, S., & English, N. (2014). Overview of the special issue on surveying the hard-to-reach. *Journal of Official Statistics, 30*(2), 171–176.