The effect of the COVID-19 pandemic on domestic violence in Germany: a comparison of three representative population surveys

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Abstract

The COVID-19 pandemic has had profound societal and economic effects. Concerns were raised that domestic violence might increase because of the enacted infection control measures. Previous findings on this issue have been contradictory. Since existing studies mainly rely on official reports, administrative data, helpline calls or retrospective measures, their findings are likely to prove unreliable. Few population-based surveys include pre-pandemic data, limiting their ability to test for causality regarding increasing violence. Therefore, the aim of this study was to compare findings from population-representative surveys on the prevalence of intimate partner violence and violence against children before and during the COVID-19 pandemic. Based on the data of $N = 3639$ individuals living with a romantic partner and $N = 1313$ parents living with at least one of their children from three German representative population surveys, we estimated average marginal effects for the temporal trends (i.e., pre vs. post infection control measures) of domestic violence separately for males and females. To minimize bias across survey waves, inverse probability weighting was used. Results show no statistically significant increase in either physical or psychological forms of intimate partner violence or violence against children as a result of the implementation of COVID measures. On the contrary, the 1-year prevalence was decreasing for certain forms of violence. Our findings suggest that the assessment of the consequences of infection control measures needs an empirical basis. Further research should be conducted using high-quality data sources. Therefore, the present study should be considered a steppingstone for ongoing research efforts to examine the consequences of pandemic-related infection control measures on the general population.

Keywords

assessment, child abuse, domestic violence, mental health and violence

Introduction

Since the outbreak of the COVID-19 pandemic, there has been a heightened concern about an increase of domestic violence, including intimate partner violence (IPV) and violence against children (VAC) (Campbell, 2020; Eisner & Nivette, 2020; UN Women, 2020) as a result of the various infection control measures that have been implemented worldwide since March 2020 (e.g., contact and travel restrictions, working from home, school closures). Although mitigating the virus' spread and preventing a health system overload (Nussbaumer-Streit et al., 2020), these regulations have enhanced potential violence-related risk factors such as social isolation, reduced accessibility to help and support services (Boxall, Morgan & Brown, 2020), increased parenting responsibilities and loss of income leading to financial worries (Ebert & Steinert, 2021). In terms of the serious physical, psychological, and economic effects of IPV (Campbell, 2002) and VAC (Norman et al., 2012), research addressing this topic is needed.

Previous studies show mixed results

There are multiple studies investigating this matter which rely on various data sources and provide inconsistent evidence. Based on a recent meta-analysis including 18 studies with a total of 37 estimates (pre-post-percentage-differences), domestic violence (including IPV) has increased by an average of 7.86%, with the majority of the included studies showing a significant increase after lockdown orders came into effect (Piquero, Jennings, Jemison, Kaukinen & Knaul, 2021). Helpline calls about domestic violence have risen by 12.0%–75.0% in the early months of the pandemic worldwide (Kourti et al., 2021). Conversely, VAC seems to have decreased remarkably (Cappa & Jijon, 2021; Whelan et al., 2021), which might also be explained by the fact that cases are noticed less by outsiders due to temporary closures of schools and leisure facilities. Beyond that, there is evidence suggesting an increased severity of IPV (Gosangi et al., 2021) and VAC (Cappa & Jijon, 2021; Kovler et al., 2021) during the pandemic. It should be noted, however, that all of these studies are based on official reports and administrative data (i.e., crime statistics, hospital records, calls to support hotlines). Since only

a small proportion of domestic violence is actually reported (Allroggen et al., 2016; Anderberg, Rainer & Siuda, 2021; Boxall et al., 2020), this data suffers from serious reliability issues.

Representative population-based surveys, on the other hand, have the advantage of being independent of the initiative to report or an increase in social control by others (e.g., neighbors). There are a few of such surveys using retrospective assessments to estimate the development of domestic violence rates during the pandemic, presenting mixed results. According to an Australian study, 65.4% of women who experienced physical or sexual violence from a current or former partner, reported that the violence had just begun or increased in severity or frequency since the beginning of the pandemic (Boxall et al., 2020). In contrast, a study based on the data of $N = 15336$ participants from 30 different countries suggests a significant decrease of physical and sexual IPV from 9.2% before to 7.0% during the pandemic (Campbell et al., 2021). However, in this study convenience samples ($k = 23$) or online samples ($k = 6$) were predominantly pooled, which is linked to several limitations (e.g., selection and response bias; Bethlehem, 2010). Only two of the included samples were based on representative surveys. Furthermore, in all of the pooled surveys, the prevalence of IPV before the lockdown measures was estimated retrospectively, which is also associated with various limitations (e.g., hindsight, recall, and reporting bias; Coughlin, 1990).

Few surveys include pre-pandemic data

To date (04/24/2022), only one representative population-based study providing data on the prevalence of domestic violence before and during the COVID-19 pandemic from a European country could be identified. This study examined the rates of physical IPV as well as physical and psychological VAC, comparing data from two representative survey studies conducted in 2016 and 2021 in Germany (Kliem, Baier & Kröger, 2021). According to the authors, no significant changes were found in the 12-months prevalence of either IPV or VAC. Moreover, one study that surveyed a representative sample of Iranian women before and during the pandemic found a relative increase of more than 20.0% for physical, psychological, or sexual

IPV as well as an incidence of first-time experience of violence during the pandemic of 25.5% (Fereidooni, Mootz & Sabaei, 2021).

These results highlight the need for further reliable data to assess the impact of the infection control measures on the prevalence of domestic violence. Therefore, the aim of the present study was to compare rates of IPV and VAC before and during the COVID-19 pandemic using data from three representative surveys, conducted among the German general population.

Method

The present study draws on data from three representative population surveys conducted among the general population in the Federal Republic of Germany. The first survey was conducted in the period of January to March 2016 (Survey A: "Pre COVID-19 Survey"), the second survey (2021a) in the period of February to March 2021 and the third (2021b) in the period of June 2021 to October 2021 (Surveys B and C: “during general infection control measures"). All surveys used the same questionnaires to record the rates of domestic violence (physical violence in a romantic partnership, sexual violence in a romantic partnership, psychological violence against children, physical violence against children) within the last year (12-months prevalence). Figure 1 illustrates the procedure and presents the observation periods to which the surveys refer, as well as a rough overview of the lockdown phases with the corresponding infection control measures.

Survey design

For the surveys during 2016 as well as 2021b, sampling was carried out following a three-step procedure. First, sample points were drawn from non-overlapping regions representative of the Federal Republic of Germany. Within these areas, the target household was randomly identified via a given starting address. In a third and final step, the target person within a target household was identified via a kish selection grid (“true random sampling”). The 2021a survey is based on two complementing sampling strategies: (1) a multi-level, multi-stage stratified random sample and (2) a multistage quota sample (non-random sampling). Accordingly, it is not

possible to obtain a response rate for the 2021a survey. Interviews were conducted in the participant's home. For all interviews the interviewer assessed eligibility on location (i.e., age ≥ 16 years and sufficient ability to understand the written German language). After interviewers provided detailed background information on the study as well as on data privacy protection, informed consent was obtained from each participant. In case a target person was not at home, a maximum of four additional attempts were made to contact the potential participant. The first part of the survey consisted of an interviewer lead structured interview assessing basic sociodemographic variables. After that, the interviewer provided the participant with a questionnaire to be filled out by the participant in the presence of but without interference from the interviewer. The study design was approved by the ethics committee of the medical faculty of Leipzig University (Survey A: 452–15–21122015; Survey C: 298/21-ek) and the ethics committee of Hildesheim University (Survey B: #172). Survey A comprised $N = 2524$ interviews (response rate 51.9%, see eFigure 1 for details). Survey B collected data from $N = 2029$ participants (response rate cannot be computed due to quota sampling), and Survey C collected data from $N = 2515$ participants (response rate 42.4%, see eFigure 2 for details). Of all participants (A) $N = 1317$ (52.2%) / (B) $N = 1005$ (49.5%) / (C) $N = 1317$ (52.4%) reported living in the same household with their partner and (A) $N = 508$ (20.1%) / (B) $N = 378$ (18.6%) / (C) $N = 427$ (17.0%) of participants reported having at least one child living in the same household. Survey B (2021a) and C (2021b) will be combined for all subsequent analyses. Table 1 and table 2 present sample descriptives for the subsample of participants living with a partner and the subsample of participants living with at least one child.

Assessment of domestic violence

The different facets of domestic violence were assessed with three modules from the *Family Maltreatment Measure* (FM; Heyman, Snarr, Smith Slep, Baucom & Linkh, 2020). The FM assesses victimization experiences of clinically relevant sexual (only within an existing relationship), physical and psychological violence against a partner or the youngest child. Items

are based on relevant Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) and International Statistical Classification of Diseases and Related Health Problems (ICD-11; Heyman et al., 2018) criteria. The FM was developed by the US air force during several assessment waves in 2006, 2008, 2011 and 2014 based on data from > 150000 participants (Foran, Smith Slep & Heyman, 2011).

Physical violence in the context of an intimate partnership. Different aspects of physical violence (pushed or shoved; grabbed; hit with an open hand; item thrown at with the intention to hurt; bitten) were assessed with six items. The items were rated on a seven-point scale (ranging from 0 = "never" to 6 = "more than 20 times in the past 12 months") and subsequently dichotomized (0 = none of the described behavior has occurred; 1 = at least one of the described behaviors has occurred at least once).

Sexualized violence in the context of an intimate partnership. Two items assessed sexualized violence from the victim's perspective (being violently forced to engage in sexual activities; engaged in sexual activities out of fear of the partner's reaction). As for physical violence, the items were subsequently dichotomized (0 = none of the described behavior has occurred; 1 = at least one of the described behaviors has occurred at least once).

Psychological violence against children. Four items assessed different aspects of physical violence against children (i.e., hurtful name-calling and verbal abuse [slut, worthless]; destroying or damaging objects which are of special importance to the child [pet, favorite doll]; threatening to leave the child or physically hurt him or her; degrading the child in front of others, ridiculing or spitting at him or her). In order to minimize effects of social desirability the questionnaire offered various response options ("I have done this to teach a lesson"; "I have done this because I lost composure"; "I have done this to discipline my child"; "I have never done this"). Items were dichotomized (0 = none of the described behavior has occurred; 1 = at least one of the described behaviors has occurred at least once).

Physical violence against children. Four items assessed physical violence against children (slapped on the bottom; slapped on the hand; grabbed the child; hit the child with an object). As for psychological violence the questionnaire offered various response options to minimize socially desired answers. Items were dichotomized (0 = none of the described behavior has occurred; 1 = at least one of the described behaviors has occurred at least once).

Statistical analyses

Even though the surveys can be regarded as representative, it cannot be ruled out that minor deviations in relevant characteristics might bias the comparison between groups. Therefore, the present study employs an inverse probability of treatment weighting (IPTW) approach. The basic idea of the IPTW-approach is to weigh individual observations from the different surveys (2016 vs. 2021[B and C]) according to their propensity scores (PS). PS's were estimated from the data taking into account potentially confounding variables (i.e., factors that were unevenly distributed across survey times). A binary logistic regression model was estimated with membership of one of the two assessment points as the dependent variable. PS's for each participant were computed from the parameter estimates of this model. In eTable 1 (living with a partner) and eTable 2 (living with at least one child) the relevant sociodemographic characteristics are tabulated and compared regarding statistically significant differences (via binary logistic regression) across surveys (2016 vs. 2021[B and C]). Differences regarding these factors across survey points were accounted for in subsequent analyses via a weight (IPTW; Kuss, Blettner & Börgermann, 2016). In the next step, random effect binominal logistic models were estimated for males and females including time points (2016 vs. 2021 [B and C]) as covariates. The multi-level structure of the data consisted of individual observations (level 1) being nested in (federal) states (i.e., Bundesländer, level 2). We estimated average marginal effects (AMEs; Norton, Dowd & Maciejewski) to facilitate interpretation. The AMEs (multiplied by 100) indicate the average change in the prevalence of the respective outcome in percentage points (PP) for the temporal trends separately for male and female gender. Since the

underlying models are nonlinear models (bivariate outcome), this effect varies from person to person. When calculating the average marginal effect, the marginal effect is determined for each individual and then the average is calculated.

Occasionally, questionnaires were not (completely) filled out. The rate of such missing values on the item level was below two percent across all questionnaires. Missing data was estimated using chained equation modeling and imputed via predictive mean matching (White, Royston & Wood, 2011).

Results

Physical and sexualized violence in intimate partner relationships

Table 3 presents the results of the (weighted) multi-level analysis regarding the prevalence development of physical violence in intimate partner relationships. In 2016, the estimated Odds Ratios (OR) correspond to a 12-months prevalence of victimization of 10.1% for male participants and of 8.1% for female participants. In both groups, the 12-months prevalence decreased in the 2021 survey. For male participants, AMEs indicate a decrease of 3.1 PP ($p < 0.001$) down to a prevalence of 7.0% and for female participants a decrease of 1.7 PP ($p = 0.049$) down to a prevalence of 6.4%.

The 12-months prevalence rate of sexualized violence for 2016 was estimated at 0.6% for male participants and 2.4% for female participants. Based on the estimated AMEs (males: -0.5 PP, $p = 0.152$; females +0.8 PP, $p = 0.181$), the prevalence rates for 2021 correspond to a prevalence rate of 0.1% for male participants and of 3.2% for female participants. Neither of these changes was found to be statistically significant on the 0.05 level.

Domestic violence against children

Table 3 presents the results of the (weighted) multi-level analysis regarding the prevalence rates of physical and psychological violence against the reference child. The prevalence rates of physical violence against children for 2016 were estimated at 24.4% for male caregivers and at 20.1% for female caregivers. For both genders, the change in prevalence rate based on estimated

AMEs was found to be statistically significant (male caregivers: decrease of 9.6 PP to 14.8%, $p < 0.001$; female caregivers: decrease of 6.5 PP to 13.6%, $p < 0.001$).

For psychological violence, the 12-months prevalence rates were estimated to be 7.8% for male caregivers and 6.5% for female caregivers in 2016. Changes in the prevalence rates based on estimated AMEs were not found to be statistically significant for either gender (female caregiver: decrease of 1.2 PP to 6.6%, $p = 0.315$; male caregiver: decrease of 1.9 PP to 5.9%, $p = 0.247$).

Discussion

The present study examined potential effects of pandemic-related infection control measures on the prevalence of different forms of domestic violence. It compared pre-pandemic survey data from 2016 to survey data from 2021 obtained during the COVID-19 pandemic. Results show no statistically significant increase neither for physical nor sexual forms of violence in intimate partner relationships or violence against children across the different assessment points. On the contrary, the 12-months prevalence was even going down in some instances. The present study hence shows that the measures implemented in Germany did not have such immediate negative consequences as suggested in media and political discussions. Parallel findings from other countries (some of which implemented far more restrictive measures) are still pending. Our findings suggest that evaluating the consequences of pandemic-related infection control measures needs an empirical basis and that further research based on high quality data sources should be conducted. The present study should hence be viewed as a steppingstone in the ongoing research endeavor of investigating the consequences of pandemic-related infection control measures on the general population. Given the detrimental health consequences which have been frequently documented in the literature (Garcia-Moreno et al., 2006; Gilbert et al., 2009) focusing further research resources on domestic violence seems warranted.

Limitations, Strengths and Future Studies

This study suffers from several limitations. It has to be noted that due to the study design at hand (a survey among the general population), it cannot be ruled out that within specific risk groups (e.g., socially disadvantaged families, single parents, families with special needs children) domestic violence rates substantially increased as a consequence of pandemic-related measures. Furthermore, it could not be assessed whether families already affected by domestic violence might have been subjected to increasing levels of violence. Moreover, the survey only assessed a limited number of violent behaviors. Certain forms of violence such as coercion, threatening to destroy objects or hurting pets could not be assessed due to the limited scope of the surveys at hand. Prevalence estimates of intimate partner violence and their change across time, however, are highly dependent on operationalization. Further studies that take into account finer nuances of the concept with regards to both content facets as well as intensity are thus warranted. In this context, it should also be mentioned that the increase in the rates of sexual violence against women, although statistically not significant, should not be neglected. It seems conceivable that this increase also did not become statistically significant due to the lack of statistical power. Future analyses might examine this increase using larger sample sizes.

There are also some limitations regarding the generalizability of our findings. We surveyed representative samples of the German general population, so the results might not apply to all persons of other race, ethnicity, nationality, culture or religion since sociocultural factors might influence the definition, perception, and experience of interpersonal violence (Bent-Goodley, 2021; Tajima, 2021). However, the questionnaire we used asked about explicit acts of IPV (e.g., “hit with an open hand” or “being violently forced to engage in sexual activities”) or VAC (e.g., “hurtful name-calling and verbal abuse” or “slapped on the bottom”) rather than more abstract constructs (e.g., "emotional abuse” or “violent behavior”), providing little room for interpretation regardless of culturally different definitions of violence. These limitations especially apply to studies based on official reports or administrative data, as the

initiative to report is highly dependent on the culturally shaped definition and acceptance of violence. In addition, due to our sample size, minority groups are most likely underrepresented. For example, our results cannot be generalized to persons of all sexual orientations or gender identities. This is particularly relevant because, according to various studies, individuals with gay, lesbian or bisexual orientation are more likely to experience domestic violence (e.g., Ayhan Balik & Bilgin, 2021; Stephenson & Finneran, 2017). Beyond that, the inclusion criterion of a sufficient ability to understand the written German language might have led to an underrepresentation of people with a migration background, who were excluded from the study if their language skills were insufficient. Furthermore, we surveyed residents of Germany, a high-income country. Our results are therefore not generalizable to middle- or low-income countries where violence-related risk factors such as job loss and resulting financial worries, that were enhanced as a result of the pandemic, might have had an even greater impact on the population (Fereidooni et al., 2021). Since our study is part of a larger survey, variables that would have allowed consideration of sociocultural influences (e.g., sexual orientation, gender identity, culture, religion or ethnicity) were not explicitly recorded. In future studies, corresponding factors should be taken into account.

Strengths of the study include the fact that our sample covers a wide age range. Furthermore, we included both women and men as perpetrators and victims of IPV, as well as female and male caregivers as perpetrators of VAC. Often, studies on IPV focus on female victims and male perpetrators although various studies show no gender differences regarding perpetration or victimization of IPV (e.g., Archer, 2002; Stoltenborgh et al., 2013).

Conclusions

To our knowledge, the present study is the largest conducted to date combining representative population-based data on IPV and VAC before and during the COVID-19 pandemic from a European country. Results show no statistically significant increase in either physical or psychological forms of IPV or VAC, suggesting that the implementation of infection control

measures have not had the feared impact on IPV and VAC. On the contrary, the 1-year prevalence was decreasing for certain forms of violence. This finding contrasts several other studies based on official reports, administrative data or retrospective measures and underlines the need for further research based on reliable data sources.

Declaration of Conflicting Interests

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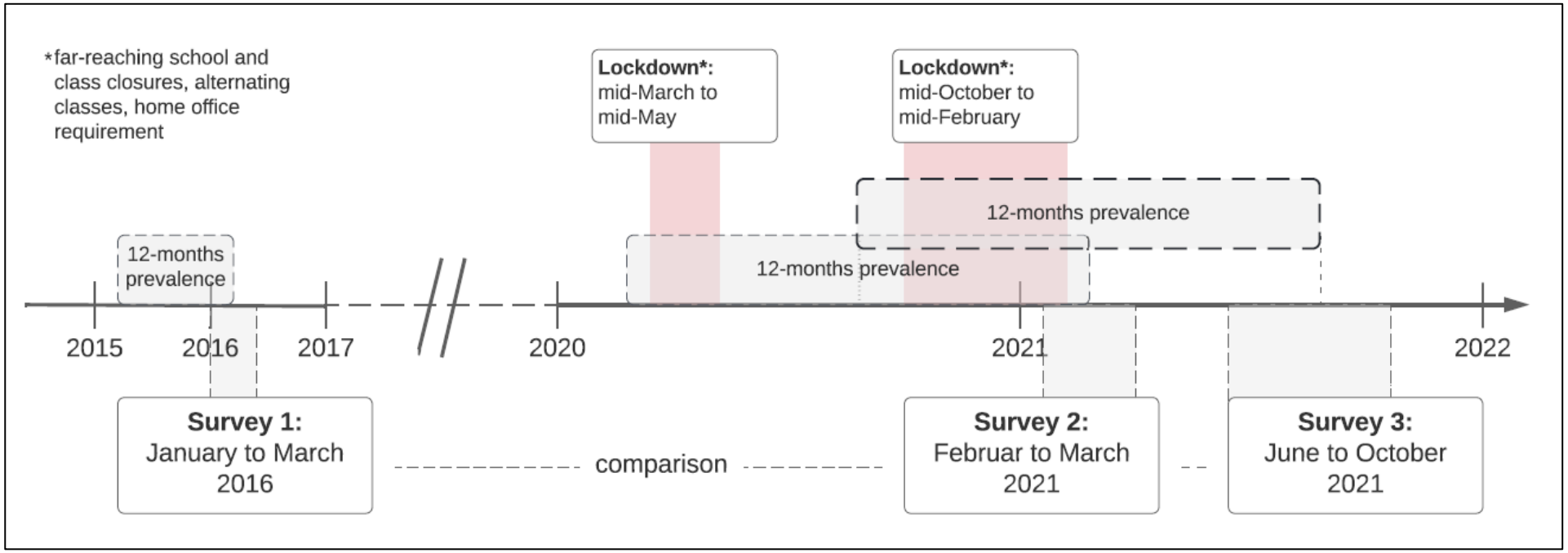
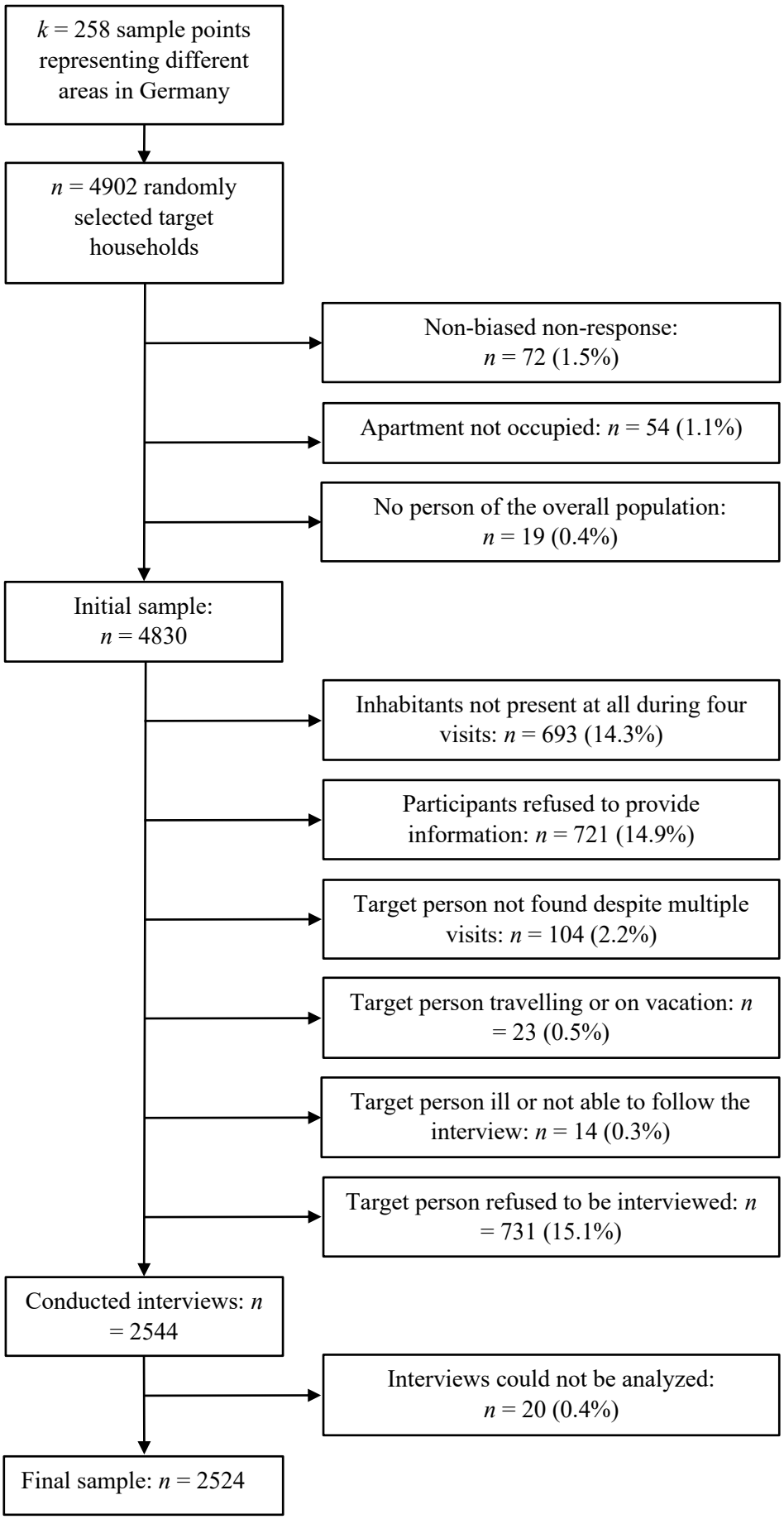
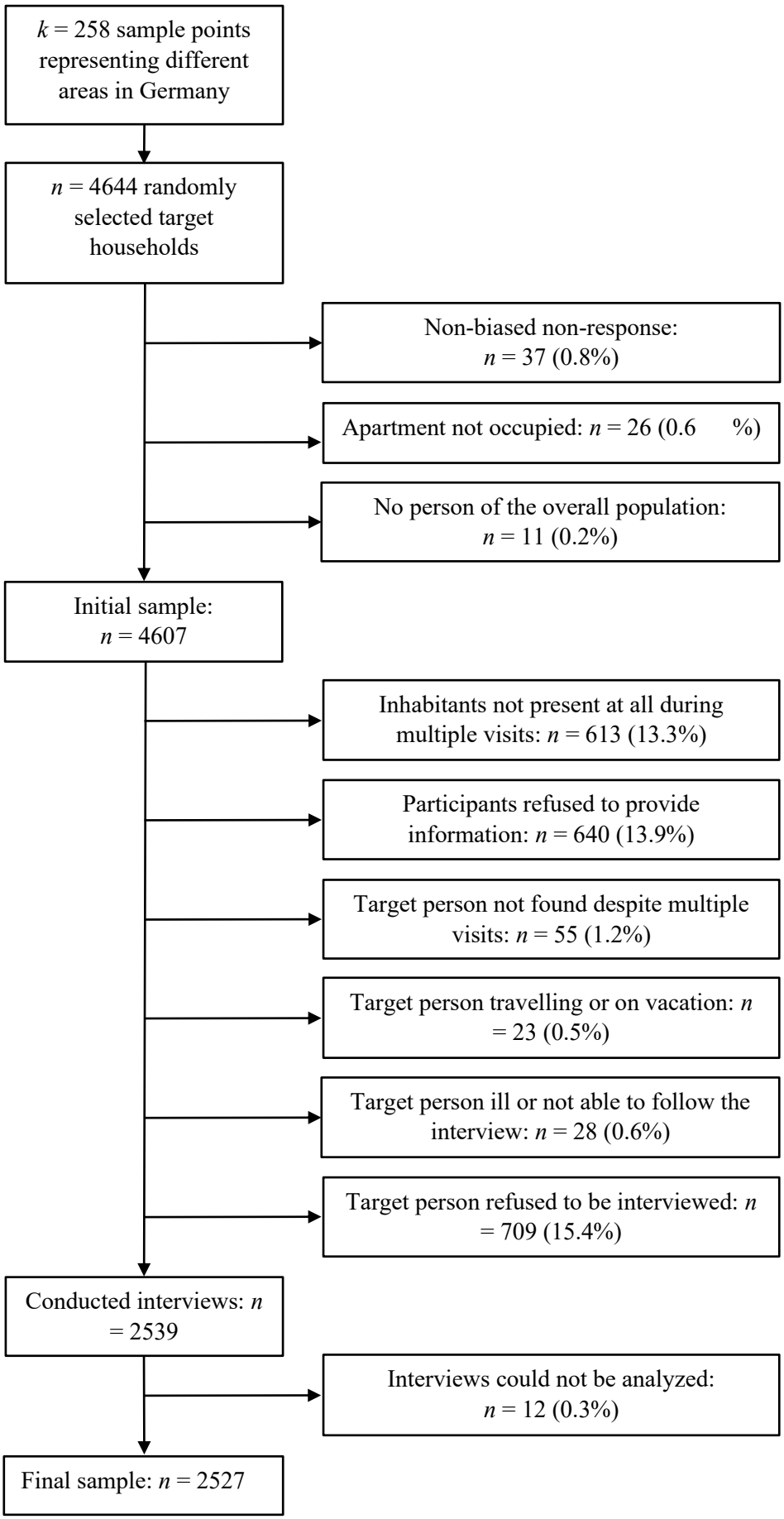


Figure 1. **Overview of the study design.**



eFigure 1. **Flowchart of Survey 2016.E**



eFigure 2. **Flowchart of Survey 2021b.**

	Survey 2016 (*N* = 1317)	Survey 2021a (*N* = 1005)	Survey 2021b (*N* = 1317)
Gender			
Male	635 (48.2)	482 (48.0)	675 (51.3)
Female	682 (51.8)	523 (52.0)	642 (48.7)
Age in years			
Respondents	50.09 (15.00); 17-92	52.17 (15.68); 18-91	50.40 (15.62); 17-101
Partners	50.09 (14.84); 18-90	52.40 (15.79); 16-99	50.28 (15.61); 16-99
Age group: Respondents			
14-29	127 (9.6)	83 (8.3)	136 (10.3)
30-59	822 (62.4)	585 (58.2)	787 (59.8)
60-99	368 (27.9)	337 (33.5)	394 (29.9)
Marital status			
Married	1049 (79.7)	820 (81.6)	1020 (77.4)
Unmarried	268 (20.3)	185 (18.4)	297 (22.6)
Relationship duration in years			
	21.75 (15.02); 0-70	23.49 (15.83); 1-68	21.47 (15.16); 0-65
Relationship duration in years group			
0-9	338 (25.7)	220 (21.9)	361 (27.4)
10-29	577 (43.8)	421 (41.9)	563 (42.7)
30-49	322 (24.4)	285 (28.4)	316 (24.0)
50 or more	80 (6.1)	79 (7.9)	77 (5.8)
Number of children in household			
None	891 (67.7)	700 (69.7)	986 (74.9)
1	208 (15.8)	145 (14.4)	176 (13.4)
2	183 (13.9)	131 (13.0)	131 (9.9)
3 or more	35 (2.7)	29 (2.9)	24 (1.8)
Educational background			
No / basic school leaving certificate	409 (31.1)	247 (24.6)	331 (25.1)
Intermediate school leaving certificate	623 (47.3)	385 (38.3)	662 (50.3)
Advanced school leaving certificate (university entrance level or university degree)	285 (21.6)	373 (37.1)	324 (24.6)
Job status			

Studying	23 (1.7)	17 (1.7)	34 (2.6)
(Currently) Unemployed	131 (9.9)	76 (7.6)	82 (6.2)
Employed (marginally / part-time)	251 (19.1)	186 (18.5)	244 (18.5)
Employed (full-time)	607 (46.1)	432 (43.0)	651 (49.4)
Retired	290 (22.0)	262 (26.1)	293 (22.2)
Other	15 (1.2)	32 (3.1)	13 (1.1)
Household income in € per month			
< 500	5 (0.4)	5 (0.5)	2 (0.2)
500 - 1000	18 (1.4)	4 (0.4)	10 (0.8)
1000 - 1500	96 (7.3)	32 (3.2)	58 (4.4)
1500 - 2000	188 (14.3)	62 (6.2)	110 (8.4)
2000 - 2500	262 (19.9)	115 (11.4)	240 (18.2)
2500 - 3500	423 (32.1)	314 (31.2)	415 (31.5)
3500 - 5000	255 (19.4)	292 (29.1)	352 (26.7)
> 5000	70 (5.3)	181 (18.0)	130 (9.9)
Nationality			
German citizen	1255 (95.3)	895 (89.1)	1273 (96.7)
Foreign citizen	62 (4.7)	110 (10.9)	44 (3.3)
Data are presented as the frequency *n* (%) or mean (SD); Range.			
Table 1. **Sociodemographic characteristics of the subsample participants living with partner.**			

	Survey 2016 (*N* = 508)	Survey 2021a (*N* = 378)	Survey 2021b (*N* = 427)
Gender: Caregiver			
Male	187 (36.8)	146 (38.6)	162 (37.9)
Female	321 (63.2)	232 (61.4)	265 (62.1)
Gender: Child			
Male	235 (46.3)	190 (50.3)	204 (47.8)
Female	273 (53.7)	188 (49.7)	223 (52.2)
Age in years			
Caregiver	39.67 (8.78); 21-89	39.47 (10.11); 18-79	39.40 (7.92); 19-61
Child	8.30 (4.82); 0-17	7.80 (5.42); 0-17	8.41 (5.12); 0-17
Age group: Caregivers			
14-29	53 (10.4)	60 (15.9)	51 (11.9)
30-59	442 (87.0)	309 (81.7)	375 (87.8)
60-99	13 (2.6)	9 (2.4)	1 (0.2)
Marital status			
Married	350 (68.9)	262 (69.3)	309 (72.4)
Unmarried	158 (31.1)	116 (30.7)	118 (27.6)
Single parent			
Yes	110 (21.7)	73 (19.3)	77 (18.0)
No	398 (78.3)	305 (80.7)	350 (82.0)
Number of children in household			
None	1 (0.2)	0 (0.0)	55 (12.9)
1	255 (50.2)	196 (51.9)	204 (47.8)
2	206 (40.6)	149 (39.4)	143 (33.5)
3 or more	46 (9.1)	33 (8.8)	25 (5.8)
Educational background			
No / basic school leaving certificate	109 (21.5)	59 (15.6)	74 (17.3)
Intermediate school leaving certificate	272 (53.5)	159 (42.1)	234 (54.8)
Advanced school leaving certificate (university entrance level or university degree)	127 (25.0)	160 (42.3)	119 (27.9)
Job status			
Studying	5 (1.0)	16 (4.2)	4 (0.9)
(Currently) Unemployed	87 (17.1)	41 (10.8)	43 (10.1)

Employed (marginally / part-time)	146 (28.7)	105 (27.8)	150 (35.1)
Employed (full-time)	249 (49.0)	183 (48.4)	215 (50.4)
Retired	7 (1.4)	8 (2.1)	3 (0.7)
Other	14 (2.8)	25 (6.7)	12 (2.8)
Household income in € per month			
< 500	6 (1.2)	4 (1.1)	2 (0.5)
500 - 1000	19 (3.7)	8 (2.1)	4 (0.9)
1000 - 1500	56 (11.0)	13 (3.4)	22 (5.2)
1500 - 2000	56 (11.0)	22 (5.8)	32 (7.5)
2000 - 2500	90 (17.7)	35 (9.3)	55 (12.9)
2500 - 3500	167 (32.9)	115 (30.4)	155 (36.3)
3500 - 5000	87 (17.1)	110 (29.1)	124 (29.0)
> 5000	27 (5.3)	71 (18.8)	33 (7.7)
Nationality			
German citizen	475 (93.5)	321 (84.9)	396 (92.7)
Foreign citizen	33 (6.5)	57 (15.1)	31 (7.3)

Data are presented as the frequency n (%) or mean (SD); Range.

Table 2. **Sociodemographic characteristics of the subsample participants living with child.**

	Comparison of survey waves		
	β	**95-%-CI**	***p****
Intercept			
	1.61	0.24 – 3.04	**0.049**
Gender			
Male (reference category)	–	–	–
Female	-0.09	-0.26 – 0.08	0.309
Age in years			
Respondents	0.01	-0.21 – 0.23	0.922
Partners	0.08	-0.12 – 0.29	0.433
Marital status			
Unmarried (reference category)	–	–	–
Married	-0.15	-0.37 – 0.06	0.155
Relationship duration in years			
	-0.03	-0.16 – 0.11	0.690
Number of children in household			
	-0.09	-0.22 – 0.03	0.143
Number of individuals in household			
	-0.02	-0.14 – 0.11	0.767
Educational background			
No / basic school leaving certificate (reference category)	–	–	–
Intermediate school leaving certificate	0.13	-0.05 – 0.30	0.157
Advanced school leaving certificate (university entrance level or university degree)	0.18	-0.03 – 0.39	0.098
Job status			
Other (reference category)	–	–	–
Studying	-0.20	-1.02 – 0.61	0.637
(Currently) Unemployed	-0.71	-1.39 – -0.08	**0.033**
Employed (marginally / part-time)	-0.67	-1.33 – -0.07	**0.035**
Employed (full-time)	-0.89	-1.54 – -0.29	**0.005**
Retired	-0.42	-1.11 – 0.23	0.216

Household income in € per month			
< 500 (reference category)	–	–	–
500 - 1000	-0.65	-2.07 – 0.71	0.350
1000 - 1500	-0.60	-1.87 – 0.61	0.335
1500 - 2000	-0.60	-1.85 – 0.59	0.329
2000 - 2500	-0.12	-1.37 – 1.06	0.841
2500 - 3500	0.28	-0.97 – 1.45	0.644
3500 - 5000	0.66	-0.58 – 1.84	0.271
> 5000	1.27	-0.00 – 2.46	**0.040**
Nationality			
German citizen (reference category)	–	–	–
Non-German citizen	-0.54	-0.87 – -0.23	**0.001**

95-%-confidence interval; β, β-coefficient; *p**= p-value based on multivariate analysis

eTable 1. **Comparison between survey waves via binary logistic regression analysis for the subsample of participants living with partner.**

	Comparison of survey waves		
	β	**95-%-CI**	***p****
Intercept			
	1.01	-0.54 – 2.56	0.732
Gender Respondents			
Male (reference category)	–	–	–
Female	-0.25	-0.60 – 0.09	0.153
Gender Child			
Male (reference category)	–	–	–
Female	0.20	-0.05 – 0.44	0.115
Age in years			
Respondents	-0.12	-0.32 – 0.09	0.270
Partners	0.16	-0.03 – 0.36	0.111
Children	-0.35	-0.52 – -0.17	**<0.001**
Marital status			
Unmarried (reference category)	–	–	–
Married	-0.43	-0.80 – -0.07	**0.022**
Single parent			
no (reference category)	–	–	–
Yes	0.96	0.47 – 1.47	**<0.001**
Relationship duration in years			
	0.16	-0.03 – 0.35	0.103
Number of children in household			
	-0.80	-1.06 – -0.55	**<0.001**
Number of individuals in household			
	0.68	0.38 – 0.99	**<0.001**
Educational background			
No / basic school leaving certificate (reference category)	–	–	–
Intermediate school leaving certificate	-0.01	-0.34 – 0.32	0.954
Advanced school leaving certificate (university entrance level or university degree)	0.04	-0.34 – 0.42	0.822

Job status			
Other (reference category)	–	–	–
Studying	-0.08	-1.37 – 1.30	0.904
(Currently) Unemployed	-0.55	-1.32 – 0.18	0.151
Employed (marginally / part-time)	-0.32	-1.05 – 0.36	0.369
Employed (full-time)	-0.73	-1.47 – -0.02	**0.049**
Retired	-0.77	-2.08 – 0.55	0.243
Household income in € per month			
< 500 (reference category)	–	–	–
500 – 1000	-0.42	-1.93 – 1.11	0.583
1000 – 1500	-0.45	-1.80 – 0.94	0.516
1500 – 2000	0.19	-1.15 – 1.56	0.781
2000 – 2500	0.30	-1.01 – 1.64	0.655
2500 – 3500	0.89	-0.41 – 2.23	0.178
3500 – 5000	1.49	0.18 – 2.85	**0.026**
> 5000	1.80	0.44 – 3.21	**0.010**
Nationality			
German citizen (reference category)	–	–	–
Non-German citizen	-0.67	-1.15 – -0.22	**0.004**

95-%-confidence interval; β, β-coefficient; *p**= p-value based on multivariate analysis

eTable 2. **Comparison between survey waves via binary logistic regression analysis for the subsample living with child.**

	Intimate partner violence								Violence against youngest child							
	Physical				Sexual				Physical				Psychological			
Fixed Effects																
	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*
male participants 2016	0.112 [0.080; 0.158]	<0.001	–		0.006 [0.002; 0.017]	<0.001	–		0.323 [0.223; 0.467]	<0.001	–		0.084 [0.049; 0.145]	<0.001	–	
male participants 2021	0.626 [0.487; 0.806]	<0.001	-0.031 [-0.049; 0.013]	<0.001	0.484 [0.222; 1.053]	0.067	-0.005 [-0.012; 0.002]	0.152	0.507 [0.363; 0.708]	<0.001	-0.096 [-0.144; -0.049]	<0.001	0.757 [0.473; 1.214]	0.248	-0.019 [-0.052; 0.013]	0.247
Random Effects																
τ_{00}	0.34				1.15				0.32				0.61			
ICC	0.09				0.26				0.09				0.16			
observations	1792				1792				495				495			
Fixed Effects																
	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*	OR [95-%-CI]	*p*	AME (±PP) [95-%-CI]	*p*
female participants 2016	0.088 [0.064 – 0.120	<0.001	–		0.025 [0.016; 0.039]	<0.001	–		0.252 [0.185; 0.344]	<0.001	–		0.069 [0.044; 0.107]	<0.001	–	
female participants 2021	0.783 [0.614; 0.999	0.049	-0.017 [-0.034; -0.000]	0.049	1.338 [0.896; 1.998]	0.155	0.008 [-0.004; 0.019]	0.181	0.624 [0.479; 0.813]	<0.001	-0.065 [-0.101; 0.028]	<0.001	0.822 [0.561; 1.205]	0.315	-0.012 [-0.037; 0.012]	0.315
Random Effects8																
τ_{00}	0.24				0.42				0.21				0.33			
ICC	0.07				0.11				0.06				0.09			
observations	1847				1847				818				818			

%, 12-months prevalence rates of male and female participants in 2016 /2021; OR = odds ratio; AME = average marginal effects; PP, percentage points; ±PP, change in PP compared to reference year; 95-%-CI, 95-%-*confidence interval*; τ_{00}, between state variance; ICC = intra class correlation.

Table 3. **Results of the multilevel analysis modelling temporal development of domestic violence (12-months prevalence rate).**

Author Biographies

Sören Kliem, PhD, is a professor with the social welfare department at the EAH Jena University of Applied Sciences. His work focuses on psychological assessment with a special interest in epidemiological surveys as well as evaluation research. He specializes in psychopathology, affective disorders, parenting as well as (intimate partner and parental) violence.

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Christoph Kröger, PhD, is a full professor for Clinical Psychology and Psychotherapy at University Hildesheim. He is a state-licensed psychotherapist and clinical supervisor with focus on cognitive behavior therapy. His research interests are psychological assessment and psychosocial treatments for mental illnesses, in particular posttraumatic stress disorders and borderline personality disorder, as well as counselling for couples and parents.

Dirk Baier, PhD, is a professor in the School of Social Work at Zurich University of Applied Sciences, Switzerland. His research focuses on violent crime, youth crime and extremism. Using comprehensive survey studies, he examines the prevalence and influencing factors of various deviant behaviors, with a particular focus in recent years on intimate partner violence.