Using the Parent-Infant Relationship Global Assessment Scale (PIR-GAS) to identify caregiver – infant/toddler dyads with abusive relationship patterns in six European countries

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Abstract

The study examined whether DC: 0-3R's Parent-Infant Relationship Global Assessment Scale (PIR-GAS) is applicable to six European countries and contributes to the identification of caregiver–infant/toddler dyads with abusive relationship patterns. The sample consisted of 115 dyads with children's ages ranging from 1 to 47 months. Sixty-four dyads were recruited from community settings without known violence problems, and 51 dyads were recruited from clinical settings and had already been identified with violence problems or as being at risk for violence problems. To classify the dyads on the PIR-GAS categories, caregiver-child interactions were video-recorded and coded with observational scales appropriate for child age. To test whether the PIR-GAS allows for reliable identification of dyads with abusive relationship patterns, PIR-GAS ratings were compared with scores on the ICAST-P, a questionnaire measuring abusive parental disciplinary practices. It was found that PIR-GAS ratings differentiated between the general and the clinical sample, and the dyads with abusive patterns of relationship were identified by both PIR-GAS and ICAST-P. The inter-rater reliability for PIR-GAS ranged from moderate to excellent. The value of a broader use of tools such as the DC: 0-3R to promote early identification of families at risk for infant and toddler abuse and neglect is discussed.

Keywords: PIR-GAS, DC: 0-3R, infant and toddler abuse and neglect, relationship classification

Abuse, mostly physical, and neglect in infants and toddlers is usually diagnosed at the Emergency Departments of Pediatric Hospitals. At that point, harm has already been done and the focus is on intervention provided abuse and neglect are not fatal. This is principally because infants and toddlers are a largely invisible population for public health and social services, as children of this age usually spend the majority of their time at home, or at daycare. According to U.S. government statistics, infants and toddlers from 0 to 4 years of age are at elevated risk for fatal and nonfatal maltreatment (U.S. Department of Health and Human Services, 2013). Specifically, data from 52 U.S. states shown that 27.3% of victims were younger than 3 years, and 19.7% of victims were 3 to 5 years of age. In addition, the victimization rate was highest for children younger than 1 year (23.1 per 1,000 children in the population of the same age), whereas the rate of victimization decreased with age. In particular, concerning fatalities due to abuse and neglect, children younger than 3 years old accounted for 73.9% of all fatalities due to abuse and neglect whereas children younger than 1 year of age had a fatality rate three times greater than of 1-year-olds (U.S. Department of Health and Human Services, 2013). At the same time, research has shown that the majority of violent incidences against children take place within or around family – in what is called a *circle of trust* (Finkelhor, 1994; Nikolaidis, 2009). Therefore, a major concern should be the early identification of families who are at risk for infant and toddler abuse and neglect, have adopted abusive patterns of relationships, and are neglectful with their youngsters. Early identification will allow professionals to offer prevention and early intervention services to such at risk families.

Nevertheless, early identification of families at risk for infant/toddler abuse and neglect depends on the availability of age-specific tools and appropriately informed and trained professionals. A literature review conducted in a research project in six European countries (Greece, Italy, Portugal, Spain, Cyprus, and U.K.), showed no published manuals, diagnostic protocols or screening tools specifically constructed to identify families at risk for infant and toddler maltreatment (Hatzinikolaou, 2015). In some countries, there are National Guidelines; however, they do not have any specificities and peculiarities of infancy and toddlerhood's maltreatment. That is, signs of abuse and neglect in infancy and toddlerhood may be different from those in other ages and, for this reason, they may require a different type of investigation. In addition, infants do not speak, and toddlers have a limited capacity for understanding complex questions

and/or explaining their experiences, and/or putting them in a continuum of time. Furthermore, the relationship with the primary caregiver is paramount for this age band, and its consideration concurrently with the evaluation of the child's development would provide important information on whether an infant or a toddler is at risk for abuse and neglect.

The only classification system which focuses on the ages from 0 to 4 and makes special reference to infant and toddler abuse and neglect, either as a diagnostic category describing the signs and the developmental consequences of such a condition in these ages, or as a caregiver – infant/toddler relationship pattern (of an abusive type), is the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, Revised Edition (DC: 0-3R) published by the organization Zero to Three (2005). This classification system has been described as a useful system on infant mental health clinical routines (Keren, Feldman & Tyano, 2003), as being more sensitive to developmental factors (Evangelista & McLellan, 2004), and consistent with the importance of evaluating infant mental health from a transactional perspective (i.e., considering the infant and the caregiver together, taking notice of their relationship patterns) (Keren et al., 2003). Furthermore, the DC-03 implies a conceptualization of disorders considering the intensity and the degree of dysfunctional symptoms and not merely the categorical approach (Keren et al., 2003). However, this classification system has not been widely used and evaluated in Europe, and, thus, further applied research (Egger & Emde, 2011), as well as further evidence on the reliability and validity using the Axis II of DC-03 (Evangelista & McLellan, 2004; Keren et al., 2003) are needed.

THE CURRENT STUDY

Therefore, the present pilot study aimed to investigate whether the Parent-Infant Relationship Global Assessment Scale (PIR-GAS), a tool used to assist Relationship Classification in the Axis II of the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, DC: 0-3R (Zero to Three, 2005) is applicable to the populations of six European countries (Cyprus, Greece, Italy, Portugal, Spain and U.K) and whether it could contribute to the identification of caregiver – infant/toddler (from 0 to 3 ½ years of age) dyads who have either adopted abusive patterns of relationship,

or are at risk to adopt abusive patterns of relationship. Although the Axis II: Relationship Classification of the DC: 0-3R has already been used to some extent in some European countries, such as France (Viaux-Savelon, et. al., 2010) Portugal (Cordeiro, Da Silva & Goldschmidt, 2003) and Germany (Müller, Achtergarde, Frantzmann, et. al., 2013),it has not been tested before in a considerable number of European countries, following the same methodology. For this reason it was decided to apply to the same families who would be evaluated with the PIR-GAS, a modified version of the International Society for the Prevention of Child Abuse and Neglect's (ISPCAN) Child Abuse Screening Tool, the ICAST-Parental version (ISPCAN Child Abuse Screening Tool-Parental; Runyan et al., 2009) (see Appendix), as a criterion measure of abuse and neglect. The ICAST-P is a widely used tool for identifying abuse and neglect developed by ISPCAN, modified, translated and culturally adapted constantly through international research (Imola, Roth, David-Kacso, Mezel, Voicur, 2013; Petroulaki, et, al. 2013; Runyan et al., 2009).

METHOD

Sample

A total of 115 caregiver-infant/toddler dyads were recruited in the six participating countries. The age of infants and toddlers ranged from 1 month to 47 months. More specifically, 26 (22.6%) children were from 1 to 12 months old, and another 89 (77.4%) children were from 13 to 47 months. From those children, 55 (47.8%) were girls and 60 (52.2%) were boys. In relation to the caregivers, 95 (82.6%) were mothers and 15 (13%) were fathers of the participating children. The other 4.4% of primary caregivers consisted of 1 grandfather, 1 grandmother, 1 aunt, 1 grandfather's wife, and 1 mother's boyfriend. The range of the caregivers' age was from 18 to 57 years; *M* age was 33.7 years. Most participating families had only one child (*n* = 51, 46.4%), 30% had two children (*n* = 33), and the rest had three or more children (*n* = 26, 23.6%). Most families declared having a monthly income of at least 1000 € (*n* = 63, 55.8%), for 23.9% (*n* = 27) of the families the monthly income ranged from 500 to 1000 €), and 20.3% (*n* = 23) lived on less than 500 € per month (*n* = 23, 20.3%). At the time of their inclusion in this study, all participants resided in one of the six European countries participating in this study: Cyprus (*n* = 8, 7%), Greece (*n* = 17,

14.8%), Italy (*n* = 16, 13.9%), Portugal (*n* = 22, 19.1%), Spain (*n* = 18, 15.7%) and the United Kingdom (*n* = 34, 29.6%). Table 1 presents the number of participants per country and per sample group.

From the 115 dyads, 64 (55.7%) came from the general population with unknown domestic violence problems (e.g. child maltreatment, inter-partner violence, etc.). The general population was recruited from public health and social services institutions attending to families with young children for either routine health exams, vaccines, or other pediatric (emergency or non-emergency) conditions. Another 51 (44.3%) caregiver-infant/toddler dyads constituted the clinical sample. In the present study, "clinical sample" was considered either families with identified domestic violence problems (e.g. child maltreatment, intimate partner violence, etc.), or families for which the collaborating centers' professionals had serious suspicions that they were experiencing intrafamily violence problems. The clinical sample was recruited from child mental health clinics, children's hospitals, mother-child protection centers, children centers, community child health centers, child psychiatry clinics, social services of municipalities, and a child health education centre. Children with diagnosed mental health, or developmental, disorders, or other chronic health problems were excluded from both the general population and the clinical sample to not confuse the assessment and the use of PIR-GAS. If the family had more than one children under the age of 3 ½ years, only one of the children was included in the study.

The majority of the participants held the nationality of the country in which they were recruited. Specifically, only 20 dyads (17.5%) declared to be immigrants, and 14 (12.4%) declared to belong to an ethnic minority. The greatest percentage of immigrants was in the Greek sample (*n* = 7, 43.7%), and in the UK sample (*n* = 7, 20.6%). No migrant dyad was included in the Cypriot sample. Concerning ethnic minorities, only the UK (*n* = 12, 37.5%) and Portugal (*n* = 3, 13.6%) had dyads from ethnic minorities in their samples.

All collaborating settings which supported the recruitment of the participants attend to populations located in urban areas. Settings which are public institutions or NGOs, provide health and social services to families with babies and toddlers from 0 to 3 years of age, and accepted to sign a collaboration form with the national partners of this study were selected.

Measures

The caregivers and their infants and toddlers were videotaped while playing, since the DC: 0-3R considers important the observation of the child while interacting with her or his caregivers before any clinical conclusion is made. In addition, to examine the presence of depressive/anxiety symptoms in the caregivers, the Edinburgh Postnatal Depression Scale (Cox, Holden & Sagovsky, 1987) was administered to all caregivers.

The videotaped interactions between caregivers and their 0- to 12-month-old infants were coded with the Revised Global Ratings for Mother-Infant Interactions at 2 and 4 months (Hatzinikolaou, 2002; Hatzinikolaou & Murray, 2010), originally constructed by Murray, Fiori-Cowley, Hooper and Cooper (1996). The videotaped interaction between caregivers and their 13- to 40-month-old infants/toddlers were coded with the Coding Scheme for Structured Mother-Infant Play Interaction at 12 months (Murray et. al., 2008). For the purposes of this study, two core measures were used for both ages - maternal sensitivity and maternal intrusiveness - and each was coded on a 5-point scale (Murray, et. al., 1996). On this scale, a score of 5 indicates high sensitivity or low intrusiveness, and a score of 1 indicates low sensitivity or high intrusiveness.

Finally, the ICAST-Parental version (Runyan, et. al., 2009) was applied to the caregiver. The ICAST-P is a caregiver self-report instrument registering parental disciplinary practices and, thus, the number of violent experiences of disciplinary parenting that a child had during the last year or before that. A recent modification of ICAST-P also allows measuring how often caregivers use positive parenting techniques to discipline their children (Petroulaki et al., 2013). The ICAST-P was designed by an international group of experts in 2004, and a large bank of questions were subjected to two rounds of Delphi review before the final version of the instrument was created. Then, it was piloted in six countries and seven languages. This initial piloting study found that the instrument's subscales demonstrated very good internal consistency (Cronbach's α = .77 - .88), with the exception of the Neglect and Sexual Abuse subscales. Thus, the research team which led the study (Runyan, et. al., 2009) concluded that ICAST-P was well accepted and achieved to depict variations in and potentially harmful forms of child discipline. In

any case, one may state that parental self-report of child abuse is biased and, thus, any attempt to gather information from caregivers on whether they abuse or neglect their children may be unreliable. However, the ICAST-P asks the caregivers to state which disciplinary practices they use with their children. Some disciplinary strategies are, by nature, abusive (e.g., physical punishment, locking the child in a dark room), but are not always seen and/or interpreted by caregivers as such and thus could be reported. Of course, when asked, caregivers may choose to refer to some of the (abusive) disciplinary strategies they use and not to speak about others. For the purposes of this study, the ICAST-P's index of psychological violence and the index of verbal violence were grouped, based on the theoretical assumption that verbal violence is a form of psychological violence. Also, the rating categories of ICAST-P were organized in the following manner: NEVER was rated when the respondent replied "never" to all items of the scale, with missing values and nonapplicable values not accounting for it; YES was rated when the respondent replies "Yes, either in the past year or before" in at least one item of the scale, with missing values and not applicable (NA) values not accounting for it; "I don't want to answer" (DWA) was rated when the respondent replies in that way in all items of the scale, with missing values and NA values not accounting for it; NEVER and DWA were rated when the respondent replied "I don't want to answer" to some questions and "Never" to the remaining items of the scale, with missing values and NA values not accounting for it; finally, MISSING was rated when the respondent left blank all items of the scale.

The DC: 0 – 3R (ZERO TO THREE, 2005) provides two tools to support the professionals to arrive at a decision regarding the classification of the caregiver-child dyad on Axis II: the PIR-GAS and the Relational Problems Checklist (RPCL; see Appendix Table A1). The PIR-GAS allows for the evaluation of a caregiver-infant/toddler relationship's classification, and its rating categories range from "well adapted" to "severely impaired". A PIR-GAS score under 40 indicates a relationship disorder; therefore, it should be coded as such on Axis II. The RPCL is not a diagnostic tool; it intends to assist the clinician to define whether specific dysfunctional relationship patterns such as "underinvolved", "anxious/tense", "angry/hostile" among others, are present or absent in a relationship. Among the RPCL listed categories are those of abuse and neglect. Both tools were used for the purposes of this study. In addition, since the *DC: 0-3R* adopts the holistic approach in a child's and a dyad's evaluation, the

caregiver-child dyads were also evaluated based on DC: 0-3R's Axis IV: Psychosocial Stressors, and Axis V: Emotional and Social Functioning. The supporting tools provided by the DC: 0-3R for these two Axes were accordingly applied: the Psychosocial and Environmental Stressor Checklist, which assists the clinician to identify possible sources of stress experienced by an infant or toddler; and the Capacities for Emotional and Social Functioning Rating Scale, which is used to summarize a child's emotional and social functioning, respectively.

All the aforementioned instruments, except ICAST-P, were taken into consideration for deciding on whether a caregiver-infant/toddler dyad had violence problems and on which PIR-GAS category should be classified. To achieve the greatest independence possible of the data obtained from ICAST-P and other instruments, the person who administered and scored all instruments was different from the one who applied the ICAST-P to the caregiver.

Procedure

Each National research team submitted the research protocol to its Institution's Research Ethics Committee and applied for a permission to run the study; in the case of the Cyprus National research team, a permission was also granted from a governmental ethics committee.

The recruitment of the families took place in public and nonpublic health and social services institutions in the six participating countries. All collaborating institutions were asked to invite families attending those institutions to participate in the study based on specific selection criteria. Concerning the institutions' attending families from the general population, the instructions provided were to invite families with at least one child 0 to 3 years of age without mental health or serious health problems, and who had not been previously referred for violence problems or any other related condition. Regarding the institutions' attending families for mental health problems, the instructions provided were to invite families that have been referred to the collaborating institution for any violence problem (e.g., child abuse and neglect, witnessing intimate partner violence, etc.), or the professionals who attended the family at the collaborating institutions had evidence-based suspicions that a particular family has violence issues,

although the family had been referred to them for a different reason. Yet, in relation to both families from the general and the clinical sample, note that in the case of families with more than one child 0 to 3 years old, only one child would be included in the study. Children with chronic health conditions and other serious developmental disorders should not be included in the study. Finally, only new entries (to the collaborating centers and clinics) would be included in the study; that is, families already in interventional programs would not be eligible. For families who were accepted, the family's detailed were communicated to the national research team. Then, the national research team made contact with the family and made an appointment either at a designated room of the collaborating public health and social services centers, at the family's home, or at another agreed-upon location with the family.

All National research teams followed the same data-collection procedure for evaluating a caregiver-child's interaction based on DC: 0-3R and to classify the interaction according to PIR-Gas ratings and the Axis II: Relationship Classification. Specifically, the DC: 0-3R suggests to observe the child interacting with caregivers as well as obtaining information on the parental experience with the child. The interaction between the child and the caregiver was observed in real time during the nearly 2-hr data-collection procedure while free and structured play interactions also were video-recorded for each family. Information on the parental experience with the child was obtained through structured interviews on self-reporting questionnaires.

Two researchers (either two psychologists, or one psychologist and one social worker) carried out each appointment with the participating families. During the first appointment, each family was informed about the study and the infant/toddler's main caregiver then signed the consent form. Next, the main caregiver–infant/toddler's play interaction was video-recorded; if the infant was able to move around independently, and the play interaction was video-recorded with both caregiver and child having the possibility to move around freely. If the infant could not move independently, the play interaction was video-recorded with the infant sitting in a baby relax-chair or a baby feeding chair. For those cases, a mirror was placed next to the infant's chair, and the caregiver was positioned in front of the infant so that her or his face could be filmed through the mirror.

For infants under 12 months, 8 min of play interaction with the main caregiver were filmed. During the first 5 min, the caregiver was instructed to have a free-play interaction with the child without using toys. During the last 3 min, an age-appropriate toy was provided to the caregiver to play with the infant. For infants and toddlers above 12 months, 10 min of play interaction with the main caregiver were filmed. An age-appropriate toy was used for the first 5 min, and then the caregiver was provided with a more demanding toy (e.g., a toy which was labeled as for infants or toddlers older than those participating in the study) to use with the infant/toddler for the final 5 min of their play interaction.

Questionnaires were administered to the main caregiver. The meeting with the family lasted, on average, 1 hr 40 min. The caregiver was encouraged to attend to the infant/toddler's needs whenever needed (e.g., feeding, soothing, etc.).

In order to achieve the greatest independence possible of the data obtained from the different instruments applied in the context of this study, the person who administered the instruments also scored them, except that the ICAST-P administrator was different from the one who applied the ICAST-P to the caregiver. Particularly, the ICAST-P was administered by a second researcher, in a private room, away from other members of the family and the first researcher. This provided a more confidential space for the caregiver to respond to the ICAST-P questions. Furthermore, and to prevent probable bias in the caregivers' responses to the other measures, the ICAST-P was the last instrument applied in the protocol. The person who administered the ICAST-P to a caregiver did not participate in the video-analysis of that particular family, nor did he or she participate in the final DC: 0-3R–based decision to assign or not assign a diagnosis to this family.

RESULTS

Data Analytic Strategy

Before proceeding with the main analysis of the caregiver-infant/toddler dyads' classification into PIR-GAS's rating categories, the reliability of PIR-GAS is presented. Then, the participants' distribution into

PIR-GAS's rating categories follows, before the associations between PIR-GAS scores and sample characteristics are examined. Finally, descriptive statistics concerning the ICAST-P are presented.

PIR-GAS Reliability scores. In order to examine the PIR-GAS inter-rater reliability, the first 5 families recruited in each partner country were evaluated by 2 independent scorers. All National research teams achieved either moderate or very good inter-rater reliability score for the PIR-GAS, as Table 2 shows.

Sample distribution into PIR-GAS's rating categories. When the distribution of the participating caregiver-infant/toddler dyads into PIR-GAS original categories was examined, we found that some of the PIR-GAS's 10 rating categories presented zero or low frequencies. Thus, and consistently with the DC: 0-3R manual (ZERO TO THREE, 2005, p. 42), it was decided to rescale PIR-GAS into three rating categories: from 100 to 81 (including the rating categories "well adapted" and "adapted"), from 41 to 80 (including the rating categories "perturbed", "significantly perturbed", "distressed" and "disturbed"), and from 1 to 40 (including the rating categories "disordered", "severely disordered", "grossly impaired", and "documented maltreatment"). The rescaling of the PIR-GAS resulted in three rating categories: "well-adapted relationships", "perturbed relationships", whereas dyads need further evaluation and possibly early intervention, and "disordered relationships" (see Appendix Table A2). Table 3 presents the distribution of the participating families among the rescaled PIR-GAS categories.

Associations between PIR-GAS and Sample's characteristics. We examined whether the rescaled PIR-GAS was associated with any of the sample's characteristics such as sample group (general, clinical), child's sex, child's age (below or above 12 months), and family income. The rescaled PIR-GAS was shown to be significantly associated only with sample group, Fischer's exact test = 23.352, $p < .0001$, and family income Fischer's exact test = 8.847, $p < .05$. The majority of caregivers in the general population (68.8%) scored between 81 and 100 (i.e., well-adapted) whereas the majority (66.7%) in the clinical sample scored between 41 and 80 (i.e., perturbed). Relying on the percentages within the two categories,

note that scores were higher within the clinical sample for the lower categories of the PIR-GAS scale (i.e., 1 - 40 and 41 – 80), in contrast to the general population for which scores were higher in the upper categories of the scale (i.e., 81-100). In relation to family income, the majority of caregivers whose family had an income equal or greater than 1000 € received a PIR-GAS score between 81 and 100 (55.6%), in contrast to those families without income/income up to 500 € (30.4%), and families with income between 500 and 1000 € (48.1%). Families without income/income up to 500 € had a PIR-GAS score between 41 and 80 (60.9%). Table 4 demonstrates the results of the Fischer's tests carried out to investigate the associations between PIR-GAS and sample's characteristics.

A Kruskal-Wallis test was conducted to evaluate differences among the three groups of the rescaled PIR-GAS in caregiver's sensitivity as scored with Revised Global Ratings for Mother-Infant Interactions from the video-recorded caregiver-infant/toddler interactions. The test was significant, Kruskal-Wallis H χ^2 (2, n=115) = 31.423, $p < 0.0001$. Specifically, the better the score in the PIR-GAS, the higher the median caregiver sensitivity was found to be. Actually, all caregivers who received a sensitivity score equal to 4 or 5 belonged to caregiver-infant/toddler dyads who received a PIR-GAS score over 41; from those caregivers who received a sensitivity score equal to 5, all but 1 received a PIR-GAS score equal or over 81.

In relation to caregiver's intrusiveness, no difference was found between the three groups of the rescaled PIR-GAS for the dyads with infants under 12 months. However, for dyads with infants and toddlers over 12 months, there was a significant difference in caregiver's intrusiveness among the three groups of the rescaled PIR-GAS, Kruskal-Wallis H χ^2 (2, n = 74) = 7.406, $p < .05$. The dyads with higher PIR-GAS scores had caregivers who received lower intrusiveness scores, as compared to those dyads with lower PIR-GAS scores. More specifically, caregivers of those dyads who were classified as well adapted in the rescaled PIR-GAS (81-100) were less intrusive and coercive with their infant/toddler, n = 35, M=2.49, SD=4.49, than the caregivers classified as perturbed (41-80), n = 35, M = 4.51, SD = 4.88, and those classified as disordered (1-40), n = 4, M = 8.75, SD=10.14. Table 5 shows the association between PIR-GAS scores, and caregiver sensitivity and intrusiveness scores.

Descriptive statistics for ICAST-P. The ICAST-P was applied to the caregivers of the 115 dyads in this study. Experiences of sexual abuse were not reported by any of the caregivers; as such, the index for sexual abuse was not considered in any further analysis. In addition, positive parenting strategies were reported by almost all caregivers (92.9%), either in the past year or before, and only 5 (5.1%) caregivers replied negatively; hence, positive parenting was not used for any further analysis. Furthermore, as for the majority of cases, the index of prevalence and incidence was identical or similar, subsequent analysis was based on incidence. Table 6 presents the number of children's experiences of violent parenting, during the last year as reported by their main caregivers.

Most caregivers did not report any instances of neglecting their infant or toddler during the last year. However, 17.2% of the caregivers reported at least one instance of neglect. The most common expression of neglect on the part of the caregivers was the provision of inappropriate for the child's developmental stage supervision, which had resulted in the child being hurt or injured – all caregivers who reported instances of neglectful behaviour on their part referred to inappropriate supervision (17.2%, 17/99).

About 57.6% of the caregivers reported to have had exercised psychological violence at least once to their children during the last year; from those caregivers, 15.2% reported four or more instances of psychological violence in a year's time. The most commonly scored items of psychological violence were: "*I refused to speak to him/her (ignore him/her)*" (22.2%, 22/99); "*I threatened to leave or abandon him/her*" (15.2%, 15/99); "*I shouted, yelled, or screamed at her/him very loud and aggressively*" (23.2%, 23/99); "*I forbade something that s/he liked*" (36.4%, 36/99); "*I insulted him/her by calling him/her dumb, lazy or other names like that*" (12.1%, 12/99); and "*I threatened to hurt or kill her/him*" (18.2%, 18/99).

In addition, nearly half of the caregivers (49.5%) reported using physical violence to discipline their infant or toddler as shown in Table 6, and 9.1% of the caregivers reported that their child had at least three experiences of physical violence during the last year. The most commonly scored items of physical violence were: "*I grabbed him/her by clothes or some part of his/her body and shook him/her*" (12.1%, 12/99); "*I spanked her/him on the bottom with bare hand*", and "*I slapped him/her*" (46.5%, 46/99). Some

of the items presented lower frequencies; however, they were considered as examples of more violent behaviours towards the children of this sample: "*I hit her or him on the buttocks with an object such as a stick, broom, cane, or belt*" (5.1%, 5/99); "*I roughly twisted her/his ear*" (5.1%, 5/99); "*I pulled her/his hair*" (5.1%, 5/99); "*I hit him/her on head with knuckle or back of the hand*" (4%, 4/99); "*I pushed or kicked her/him*" (3%, 3/99); "*I forced him or her to hold a position that caused pain or humiliated him/her as a means of punishment*" (2%, 2/98); and "*I tied him/her up or tied him/her to something using a rope or a chain*" (1%, 1/99).

Association between rescaled PIR-GAS scores and ICAST-P's number of violent experiences. The next step of our analysis was to examine the extent to which the three groups of the rescaled PIR-GAS differed in the number of children's violent experiences (i.e., psychological violence, physical violence and neglect), as those were reported by the caregivers via the ICAST-P. The three groups of the rescaled PIR-GAS significantly differed only in the number of physically violent experiences, Kruskal-Wallis H χ^2 (2, n=99) =6.834, $p < .05$, where the number of the child's physically violent experiences decreased as the PIR-GAS score increased. Specifically, the caregivers of dyads classified in the PIR-GAS as well-adapted (PIR-GAS score between 81-100) reported that their children had fewer physically violent experiences during the last year, n=50, M=0.82, SD=1.17, than caregivers of dyads classified as perturbed (PIR-GAS score between 41-80), n=44, M=1, SD=1.44, and caregivers of dyads classified as disordered (PIR-GAS score between 1-40), n=4, M=3, SD=2.16.

There also was a difference among the three groups of the rescaled PIR-GAS in terms of the number of psychologically violent experiences, which only approximated significance, p = .064. The pattern was the same as for physical violence: As the PIR-GAS score was increasing, the number of the child's psychologically violent experiences was decreasing. In particular, the caregivers of dyads classified in PIR-GAS as well adapted (PIR-GAS scores between 81-100) reported that their children had fewer psychologically violent experiences during the last year, n = 49, M=1.29, SD=1.63, than did caregivers of

dyads classified as needing attention (PIR-GAS score between 41-80), n = 45, M=1.69, SD=1.86, and caregivers of dyads classified as disordered (PIR-GAS score between 1-40), n=4, M=4.75, SD=3.86.

No difference was found among the three groups of the rescaled PIR-GAS in neglect.

DISCUSSION

An important finding of the present study was that the PIR-GAS, the main tool based on which a caregiver-infant/toddler dyad receives or does not receive a classification under Axis II of the DC: 0-3R, can be reliably applied in six European countries: Greece, Cyprus, Italy, Portugal, Spain and the United Kingdom. In all participating countries, interrater reliability scores for PIR-GAS ranged from moderate to excellent, and the PIR-GAS differentiated between well-adapted caregiver-infant/toddler dyads and dyads who have adopted dysfunctional relationship patterns.

Furthermore, one of the main aims of the present study was to examine whether PIR-GAS could reliably identify caregiver-infant/toddler dyads with an abusive relationship pattern. However, taking into consideration previous research indicating that the Axis II of the DC: 0-3R needs further applied research to be established as valid and reliable (Egger & Emde, 2011), and the fact that the use of PIR-GAS in a considerable number of European countries has been limited, especially in the context of large international studies, it was decided to compare PIR-GAS ratings with the score of a worldwide used and accepted tool for measuring children's violent experiences, such as ICAST-P. We found that the caregiver-infant/toddler dyads' classification in the PIR-GAS's rating categories was significantly associated with ICAST-P's number of children's physically violent experiences. Thus, lower scores in PIR-GAS (indicating difficulties in the relationship) were associated with higher number of children's physically violent experiences in ICAST-P. For instance, one dyad which presented some evidence of both verbal and physical abuse according to the PIR-GAS also was identified by the ICAST-P as having violence problems. For example, a caregiver of a dyad who reported that during the last year, her child had six experiences of physical violence and seven experiences of psychological violence was classified as disordered (score: 31-40) according to the PIR-GAS's original rating scales.

However, note that the PIR-GAS provides the possibility to evaluate whether a caregiver – infant/toddler dyad is well-adapted is or is not well-adapted. A low score in PIR-GAS Scale requires further investigation in order for the professional to define the main dysfunctional features of the relationship. One of these possible dysfunctional features may be violence; other dysfunctional features included in the Axis II of the DC: 0-3R are underinvolvement, hostility, anxiety, among others. Thus, one may conclude that a caregiver-infant/toddler dyad's low PIR-GAS scores should alert the professional to further investigate whether violence is the main dysfunctional feature of such a dyad or whether other dysfunctional relational features are present. In any case, the DC: 0-3R is a useful system of classification of infancy and early childhood relationship disorders, as it recognizes the importance of contextual factors for infant and toddler development and underlines the transactional nature of development grounded on the developmental psychopathology framework (Evangelista & McLellan, 2004).

In conclusion, the use of PIR-GAS Scale, the main tool guiding the classification under Axis: II of the DC: 0-3R, could contribute to early identification of families with infants and toddlers who need attention, either because of violence problems or because of other dysfunctional relational features, in the six European countries where it was tested. By promoting early identification of such problems, more families will be promptly offered prevention or early intervention services. The DC: 0-3R does not need to substitute existing diagnostic systems, such as the *Diagnostic and Statistical Manual of Mental Disorders* 4th revision (American Psychiatric Association, 2000) or The ICD-10 classification of mental and behavioural disorders (World Health Organization, 2010) but it may be used in combination with them, in clinical practice and/or for research purposes.

Moreover, considering the applicability of PIR-GAS in routine clinical practice, we found some difficulties that are consistent with previous criticisms reported in the literature (Evangelista & McLellan, 2004); namely, the absence of precise and clear criteria for assigning the diagnosis on the Axis II. Such difficulties require greater awareness and focus on training both professionals and researchers to increase the validity and reliability of the Axis II of the DC: 0-3R, and its impact on intervention. Furthermore, based on the results of the present study, we suggest that the rescaling of the PIR-GAS Scale into three categories (i.e., well adapted, perturbed, disordered) may improve its application to both research and

clinical settings. In addition, the inclusion of more age-specific criteria in the range of ages from 0 to 4 in Axis II as well as the inclusion of more age-specific examples in the range of ages from 0 to 4 in the PIR-GAS's categories may facilitate the professionals with the application of the scale. Finally, the schematic decision tree for the Axis II of the DC: 0-3R (Wright & Northcutt, 2004) was considered useful by the researchers of this project, and in a future revision of the DC: 0-3R, its inclusion in the manual is strongly supported.

Note that 47% of the participating dyads were indicated by the PIR-GAS scale as perturbed and needing further investigation to define whether intervention is necessary. This large number of caregiver-infant/toddler dyads is more or less the same with the number of caregivers who reported on the ICAST-P using either physical, or psychological, or both physical and psychological violence to discipline their infant or toddler. In addition, from the caregivers who participated in this study, nearly 17% reported in the ICAST-P that their child had experienced at least one instance of neglectful parental behaviour during the last year. The most commonly reported symptom of neglectful parental behaviour was inappropriate for the child's developmental stage supervision. These findings underline the extent of domestic violence against infants and toddlers. Unfortunately, these numbers reinforce previous studies, which have indicated that children from 0 to 4 are more likely to suffer violence than older children (U.S. Department of Health and Human Services, 2013).

Also important is the fact that a good part of those families, which in the context of this study were found to need further attention concerning the dysfunctional patterns of relationship that they had created with their infant/toddler (i.e., perturbed scale of PIRGAS), were families who had not been previously identified by public health and social services. For such cases, note that other studies have suggested that child abuse may frequently reappear (e.g., ~ 35%) without appropriate detection and intervention (Skellern, Wood, Murphy & Crawford, 2000).

Limitations

Despite the relevance of the results for the timely identification of caregiver-infant/toddler dyads who have adopted abusive relationship patterns, there are some limitations of the present study. Specifically, the sample size in the present study was relatively small, principally for two reasons. Data collection for this study had to take place in a particular time framework since it was part of a larger, 2-year project funded by the European Union, with bureaucratic delays which were somehow inevitable because the project consortium had to established collaboration with numerous public and nonpublic institutions that further reduced the time-framework of data collection. However, more interesting and relevant to the scope of this study may be the second reason for attaining a small sample: Each national partner asked the collaborating child mental health clinics to locate and invite families that have been referred to the collaborating institution for any violence problem (e.g., child abuse and neglect, witnessing intimate partner violence, etc.) or families for which the collaborating professionals had suspicions that were facing violence issues. However, the number of such families referred by the collaborating institutions in a year's time was particularly small (as the size of the sample shows). For this reason and to balance the sample, the number of families from the general population was maintained more or less the same as that of the clinical sample families. The "invisibility" of families with infants and toddlers who have violence problems already has been noted, and it constitutes an important reason for developing age-appropriate screening tools to identify families with violence issues in the community. Thus, future studies should include a larger sample in order to investigate further early indices of, or risk for, domestic violence against infant and toddlers. In addition, the present study applied the PIR-GAS Scale and in the context of a research project. Future piloting of PIR-GAS in clinical settings in the six European countries which participated in this study is advisable.

Furthermore, the present study used the self-report instrument ICAST-P to collect data on (abusive and nonabusive) caregivers' disciplinary practices towards their children. Dyads' scores on ICAST-P were then compared to dyads' classification into PIR-GAS's rating categories to investigate whether both tools agreed on which dyads presented abusive patterns of relationship. However, the ICAST-P has some limitations as a tool; for example, it is not specific for infants and toddlers, and the person who provides the information is the main caregiver of the child. Specifically, as ICAST-P is a self-report instrument,

there is always the possibility that an abusive caregiver may choose not to report some of the abusive disciplinary practices that she or he uses with the child. However, since the focus of the present study was children from 0 to 3 years, it was difficult to obtain information on abusive patterns of relationship taking place between caregiver-child at home from an independent informant. Future methodological advances may provide more reliable solutions to this problem.

Conclusion

The evidence of the present study underlines the value of broadening the use of tools such as the DC: 0-3R which would promote early identification of families at risk for infant and toddler maltreatment. Early identification of risk for infant and toddler maltreatment would extend to more families the possibility to be included in prevention and early intervention programs to decrease the likelihood of future infant and toddler maltreatment.

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Table 1. *Participants Per Country and Per Sample Group*

Partner			
Country name	**Total No of Participants N (%)**	**General Population N (%)**	**Clinical Sample N (%)**
Greece	17 (14.8)	10 (58.8)	7 (41.2)
Cyprus	8 (7)	8 (100)	-
UK	34 (29.6)	17 (50)	17 (50)
Italy	16 (13.9)	7 (43.8)	9 (56.2)
Spain	18 (15.7)	10 (55.6)	8 (44.4)
Portugal	22 (19.1)	12 (54.5)	10 (45.5)
Total	**115 (100)**	**64 (55.65)**	**51 (44.35)**

Table 2. *PIR-GAS Inter-rater Reliability Scores Per Country*

Country	**Kendall's tau-b**	**Significance**
Greece	.96	$p < .05$
Cyprus	.71	$p < .05$
Italy	.63	$p < .05$
Portugal	.54	$p = .001$
Spain	.84	$p < .001$
U.K.	.71	$p < .05$

Table 3. *Distribution of Families Among the Rescaled Parent-Infant Relationship Global Assessment Scale (PIR-GAS) Categories*

	Disordered dyads	**Perturbed dyads**	**Well adapted dyads**
PIR-GAS Rating Categories	0-40	41-80	81-100
Frequency (%)	4 (3.5%)	54 (47%)	57 (49.5%)

Table 4. *Association Between Parent-Infant Relationship Global Assessment Scale (PIR-GAS) and Sample Characteristics*

Variables	Statistical tests and results
PIR-GAS * Sample	Fisher's Exact Test= 23.352, sig.= 0.000003
PIR-GAS * Child's sex	Fisher's Exact Test= 0.892, sig.= 0.710
PIR-GAS * Child's age (grouped)	Fisher's Exact Test=3.298, sig.=0.155
PIR-GAS * Income per month	Fisher's Exact Test=8.847, sig.= 0.041921

Table 5. *Association Between Rescaled DC: 0-3R's Parent-Infant Relationship Global Assessment Scale (PIR-GAS) Scores and Caregiver Sensitivity and Intrusiveness*

Variables	Statistical test applied	Result
PIR-GAS * Caregiver Sensitivity	Kruskal-Wallis H test	Chi-square=31.423, $p < 0.0001$
PIR-GAS * Caregiver Intrusiveness (0-12 months)	Fisher's Exact Test	Fisher's Exact Test=4.281, sig.= 0.339
PIR-GAS * Caregiver Intrusiveness (12+ months)	Kruskal-Wallis H test	Chi-square=7.406, Asymptotic $p = 0.025$

Table 6. *Children's Experiences of Neglect, Psychological Violence, and Physical Violence Within the Last Year as reported in the International Society for the Prevention of Child Abuse and Neglect's Child Abuse Screening Tool -Parental Version (ICAST-P)*

	No. of Experiences Within the Last Year						
	Never	**Yes**					
	0	1	2	3	4	≥ 5	Never/ DWA
Neglect *n* (%)	82 (82.8)	14 (14.1)	2 (2)	1(1)	NA	NA	-
Psychological violence *n* (%)	41 (41.1)	16 (16.2)	15 (15.2)	11 (11.1)	7 (7.1)	8 (8.1)	1 (1)
Physical violence *n* (%)	49 (49.5)	23 (23.2)	17 (17.2)	3 (3)	2 (2)	4 (4)	1 (1)

Note. *n*: 99 valid cases (16 cases missing). DWA: Do not want to answer; n.a.: not applicable.

Annex 1. The rescaled DC: 0-3R's Parent-Infant Relationship Global Assessment Scale (PIR-GAS)

PIR-GAS Ratings		
Score	**Description of rating category**	**Description of further action**
81-100	Well adapted caregiver-infant/toddler dyads	No further action is needed
41-80	Perturbed caregiver-infant/toddler dyads	Further assessment and/or intervention is needed
1-40	Disordered caregiver-infant/toddler dyads	Immediate intervention is needed to ensure child's protection

Annex 2. DC: 0-3R's Relationship Problems Checklist (RPCL)

Relationship Problems Checklist			
Relationship quality	**No evidence**	**Some evidence**	**Substantial evidence**
Overinvolved			
Underinvolved			
Anxious/Tense			
Angry/Hostile			
Verbally Abusive			
Physically Abusive			
Sexually Abusive			

Annex 3. ***ISPCAN PARENT QUESTIONNAIRE: DISCIPLINE AND PUNISHMENT IN THE HOME***

All adults use certain methods to teach children the right behavior or to address a behavior problem. The questions I am going to ask you refer to the methods you have used to discipline your child (or *index child's name*). I will read you various methods that might be used and I want you to tell me how often you (or your husband/partner or any other person who takes care of the child) have used each method with (*index child's name*) in the last year. That means that you should bring to your mind the last 12 months and first tell me **if** during that year **YOU had used this method** with him/her. If you have done it (during the last year), please tell me how many times **[show card with the scale]:** *1-2 times the entire year; 3-5 times (namely several times a year); 6-12 times (namely, monthly or bimonthly); 13-50 times (namely, several times a month); or more than 50 times (once a week or more often).* ***If you*** *had not done this during the last year but you* ***had done it previously****, please answer: Not in the past year, but it has happened before (whenever applicable according to child's age).* ***If you*** *have* ***never done this****, please answer "never in my life"; and there is also the option: "I don't want to answer"*. Then, I want you to answer the same questions for the other person who looks after (*index child's name*) during the last year. **Which is the second person for whom you will answer?**

7.1. The second person (other parent/adult carer for whom, I will complete the questions 8-39, in the following table is:

☐ The other parent of the child

☐ My spouse/partner, who is not the physical parent of the child

☐ The person that I declared in question B.10 (Short Social & Mental History Q.) that is looking after this child

☐ Other person: Who?_____

☐ There is no other person that is looking after this child; I will answer only for myself

Has this ever happened, during the last year or before:	**Parent/Adult carer**	**During the past year (previous 12 months)**					*Not in the past year, **but it has happened before***	***Never in my life***	***I don't want to answer***
		1-2	**3-5**	**6-12**	**13-50**	**more than 50**			
		Once or twice a year	***Several times a year***	***Monthly or bimonthly***	***Several times a month***	***Once a week or more often***			
8. Explained him/her why something s/he did was wrong?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
8.1. Gave him/her an award for behaving well?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
10a. Grabbed him/her by clothes or some part of his/her body and shook him/her?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
11. Hit her or him on the buttocks with an object such as a stick, broom, cane, or belt?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
12. Hit elsewhere (not buttocks) with an object such as a stick, broom, cane, or belt?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
14a. Roughly twisted her/his ear?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult	☐	☐	☐	☐	☐	☐	☐	☐

Has this ever happened, during the last year or before:	Parent/Adult carer	During the past year (previous 12 months)					Not in the past year, *but it has happened before*	*Never in my life*	*I don't want to answer*
		1-2	3-5	6-12	13-50	more than 50			
		Once or twice a year	*Several times a year*	*Monthly or bimonthly*	*Several times a month*	*Once a week or more often*			
	carer								
15. Hit him/her on head with knuckle or back of the hand?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
16. Pulled her/his hair?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
17a. Threatened to leave or abandon him/her?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
18a. Shouted, yelled, or screamed at her/him very loud and aggressively?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
19. Threatened to invoke ghosts or evil spirits or harmful people against him/her?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
20a. Pushed or kicked her/him?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
21. Put chili pepper, hot pepper, or spicy food in his/her mouth (to cause pain)?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
22a. Forced him or her	Me	☐	☐	☐	☐	☐	☐	☐	☐

Has this ever happened, during the last year or before:	Parent/Adult carer	During the past year (previous 12 months)					Not in the past year, **but it has happened before**	**Never in my life**	**I don't want to answer**
		1-2	3-5	6-12	13-50	more than 50			
		Once or twice a year	***Several times a year***	***Monthly or bimonthly***	***Several times a month***	***Once a week or more often***			
to hold a position that caused pain or humiliated him/her as a means of punishment?	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
23. Cursed him/her?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
24. Spanked her/him on the bottom with bare hand?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
25a. Choked or smothered him/her (prevent breathing by use of a hand or pillow) or squeezed his/her neck with hands (or something else)?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
26a. Threatened to kick out of house or send away?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
27. Locked out of home?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
28b. Forbade something that s/he liked?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐

Has this ever happened, during the last year or before:	Parent/Adult carer	During the past year (previous 12 months)					Not in the past year, but it has happened before	Never in my life	I don't want to answer
		1-2	3-5	6-12	13-50	more than 50			
		Once or twice a year	Several times a year	Monthly or bimonthly	Several times a month	Once a week or more often			
29. Insulted him/her by calling him/her dumb, lazy or other names like that?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
30a. Pinched her/him roughly?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
31a. Slapped him/her?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
32. Refused to speak to him/her (ignore him/her)?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
32.1. Blamed him/her for your bad mood?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
33.1. Told her/him that you wished s/he was dead or had never been born?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
34a. Threatened to hurt or kill her/him?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
35a. Intentionally burned or scalded him/her?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
36. Hit her or him over and over again	Me	☐	☐	☐	☐	☐	☐	☐	☐

Has this ever happened, during the last year or before:	**Parent/Adult carer**	**During the past year (previous 12 months)**					*Not in the past year,* ***but it has happened before***	***Never in my life***	***I don't want to answer***
		1-2	**3-5**	**6-12**	**13-50**	**more than 50**			
		Once or twice a year	***Several times a year***	***Monthly or bimonthly***	***Several times a month***	***Once a week or more often***			
with object or fist ("beat-up")	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
37. Threatened him/her with a knife or gun?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐
38a. Locked her or him up in a small place or in a dark room?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐

Has this ever happened, during the last year or before:	Parent/ Adult carer	During the past year (previous 12 months)					Not in the past year, **but it has happened before**	Never in my life	I don't want to answer
		1-2	3-5	6-12	13-50	more than 50			
		Once or twice a year	*Several times a year*	*Monthly or bimonthly*	*Several times a month*	*Once a week or more often*			
38.1. Tied him/her up or tied him/her to something using a rope or a chain?	Me	☐	☐	☐	☐	☐	☐	☐	☐
	Other parent/adult carer	☐	☐	☐	☐	☐	☐	☐	☐

40a. Was there a time in the past year that your child did not taken care of when s/he was sick or injured, for example not taken to see a doctor when she or he were hurt or not given the medicines s/he needed?

During the past year (previous 12 months)					Not in the past year, **but it has happened before**	Never in my life	I don't want to answer
1-2	3-5	6-12	13-50	more than 50			
Once or twice a year	*Several times a year*	*Monthly or bimonthly*	*Several times a month*	*Once a week or more often*			
☐	☐	☐	☐	☐	☐	☐	☐

Would you like to say more?

41a. Was there a time in the last year that your child did not get enough to eat (went hungry) and/or drink (was thirsty) even though there was enough for everyone, as a means of punishment?

During the past year (previous 12 months)					Not in the past year, **but it has happened before**	Never in my life	I don't want to answer
1-2	3-5	6-12	13-50	more than 50			
Once or twice a year	*Several times a year*	*Monthly or bimonthly*	*Several times a month*	*Once a week or more often*			
☐	☐	☐	☐	☐	☐	☐	☐

Would you like to say more?

41.1. Was there a time in the last year that your child had to wear clothes that were dirty, torn, or inappropriate for the season, as a means of punishment?

During the past year (previous 12 months)					Not in the past year, **but it has happened before**	Never in my life	I don't want to answer
1-2	3-5	6-12	13-50	more than 50			
Once or twice a year	*Several times a year*	*Monthly or bimonthly*	*Several times a month*	*Once a week or more often*			
☐	☐	☐	☐	☐	☐	☐	☐

Would you like to say more?

42a. Was there a time, in the past year that your child was hurt or injured because no adult was supervising him or her?

During the past year (previous 12 months)					Not in the past year, **but it has happened before**	Never in my life	I don't want to answer
1-2	3-5	6-12	13-50	more than 50			
Once or twice a year	*Several times a year*	*Monthly or bimonthly*	*Several times a month*	*Once a week or more often*			
☐	☐	☐	☐	☐	☐	☐	☐

Would you like to say more?

43.2 Did you ever happen to learn/be informed that someone made your child to watch a sex video or look at sexual pictures in a magazine or computer?

☐ Yes

☐ No

☐ I don't want to answer → *go to question 43.3*

43.2[a]. ***If "Yes",*** *this person was*: ***(please, check all that apply)***

Adult male	Adult female	Child/adolescent male	Child/adolescent female
○	○	○	○

43.2[b]. What was **his relation to the child?**			What was **her relation to the child?**			What was **his relation to the child?**			What was **her relation to the child?**		
Unknown person	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**
○	○	○	○	○	○	○	○	○	○	○	○

Would you like to say more?

43.3 Did you ever happen to learn/be informed that someone made your child to look at his/her private parts or wanted to look at your child's?

☐ Yes

☐ No

☐ I don't want to answer

➔ *go to question 43.4*

43.3[a]. ***If "Yes",*** *this person was*:				***(please, check all that apply)***			
Adult male			**Adult female**			**Child/adolescent male**			**Child/adolescent female**		
○			○			○			○		
43.3[b]. What was **his relation to the child?**			What was **her relation to the child?**			What was **his relation to the child?**			What was **her relation to the child?**		
Unknown person	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**
○	○	○	○	○	○	○	○	○	○	○	○

Would you like to say more?

43.4 Did you ever happen to learn/be informed that someone made a sex video or took photographs of your child alone, or with other people, doing sexual things?

☐ Yes

☐ No

☐ I don't want to answer → *go to question 43.A*

43.4[a]. ***If "Yes",*** *this person was*:												***(please, check all that apply)***
Adult male			**Adult female**			**Child/adolescent male**			**Child/adolescent female**			
○			○			○			○			
43.4[b]. What was **his relation to the child?**			What was **her relation to the child?**			What was **his relation to the child?**			What was **her relation to the child?**			
Unknown person	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	
○	○	○	○	○	○	○	○	○	○	○	○	

Would you like to say more?

43.A. Did you ever happen to learn/be informed that someone touched your child's private parts in a sexual way, or made her/him to touch his/hers?

☐ Yes

☐ No

☐ I don't want to answer → *go to question 44.A*

43.A[a]. ***If "Yes",*** *this person was*:												***(please, check all that apply)***
Adult male			**Adult female**			**Child/adolescent male**			**Child/adolescent female**			
○			○			○			○			
43.A[b]. What was **his relation to the child?**			What was **her relation to the child?**			What was **his relation to the child?**			What was **her relation to the child?**			
Unknown person	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	
○	○	○	○	○	○	○	○	○	○	○	○	

Would you like to say more?

43.A[a]. ***If "Yes",*** *this person was*:												***(please, check all that apply)***
Adult male			**Adult female**			**Child/adolescent male**			**Child/adolescent female**			
○			○			○			○			
43.A[b]. What was **his relation to the child?**			What was **her relation to the child?**			What was **his relation to the child?**			What was **her relation to the child?**			
Unknown person	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	
○	○	○	○	○	○	○	○	○	○	○	○	

44.A. Did you ever happen to learn/be informed that someone tried to have sex with your child?

☐ Yes

☐ No

☐ I don't want to answer → *go to question 45*

44.A[a]. ***If "Yes",*** *this person was*:												***(please, check all that apply)***
Adult male			**Adult female**			**Child/adolescent male**			**Child/adolescent female**			
○			○			○			○			
44.A[b]. What was **his relation to the child?**			What was **her relation to the child?**			What was **his relation to the child?**			What was **her relation to the child?**			
Unknown person	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	**Unknown person**	**Familiar person**	**A relative**	
○	○	○	○	○	○	○	○	○	○	○	○	

Would you like to say more?

45. Which of the following do you do, which convinces your child to change his/her behavior?

1. _____ 5. _____

2. _____ 6. _____

3. _____ 7. _____

4. _____ 8. _____

46. Do you believe that corporal punishment of children must be used as a method of discipline?

☐ No

☐ Rather not

☐ Rather yes

☐ Yes

When you were a child, did it ever happen to you to experience any of the following?	Many times	Sometimes	Once or twice	Never	I don't know/ don't remember	I don't want to answer
49a. Your father/stepfather was insulting or swearing at your mother/stepmother?	☐	☐	☐	☐	☐	☐
49b. Your father/stepfather was hitting your mother/stepmother?	☐	☐	☐	☐	☐	☐
49c. Your father/stepfather was forcing your mother/stepmother to have sexual contact with him?	☐	☐	☐	☐	☐	☐
49d. Your mother/stepmother was insulting or swearing at your father/stepfather?	☐	☐	☐	☐	☐	☐
49e. Your mother/stepmother was hitting your father/stepfather?	☐	☐	☐	☐	☐	☐
49f. Your mother/stepmother was forcing your father/stepfather to have sexual contact with her?	☐	☐	☐	☐	☐	☐
49g. Were they insulting or swearing at you?	☐	☐	☐	☐	☐	☐
	(If yes, who?_____)					
49h. Were they hitting you?	☐	☐	☐	☐	☐	☐

When you were a child, did it ever happen to you to experience any of the following?	Many times	Sometimes	Once or twice	Never	I don't know/ don't remember	I don't want to answer
	(If yes, who?_____)					
49i. Had any adult sexually assaulted you?	☐	☐	☐	☐	☐	☐
	(If yes, who?_____)					
49j. Did any adult force you to have sex when you didn't want to?	☐	☐	☐	☐	☐	☐
	(If yes, who?_____)					

50. Do you think that corporal punishment is effective as a method of children's discipline?

☐ No, it is never effective

☐ Most of the times it is not effective

☐ Most of the times it is effective

☐ Yes, it is always effective