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Professionals' characteristics, victim's gender, and case assessments as predictors of professional judgments in child protection

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Scant research on child protection professionals' decision-making demonstrates complexity of identifying and responding to child maltreatment. In order to understand processes involved in professionals' judgements, methodological approaches are needed which allow that multiple potentially relevant factors are evaluated. A technique of vignettes was used in this study of 87 Croatian and 72 Swedish social workers. The first aim was to investigate if professional's individual characteristics and experiences and their social welfare system/culture were related to professionals' reactions to a case of alleged child abuse depicted in a vignette. Results showed that age, parenthood status, length of professional experience, frequency of corporal punishment and bruises in childhood and a country of residence correlated with particular variables from the domain of case assessments and judgements about appropriate interventions. The second aim was to determine the relative contributions of professionals' characteristics, victim's gender and case assessments to explaining differences in judgements about appropriateness of removing a child from home compulsorily and maintaining a child at home with social support being offered. Female gender of the abused child, perceptions of father's violence, previous judgements about appropriate interventions and assessment of risk and main problem/s at the final stage predicted judgements about removing a child from home.

Key words: child abuse, child protection, professional judgements, vignette

Evidence based and effective social response to child abuse relies on applied research in which the focus is expanded from the abusive family to include professionals who intervene in it. On a daily basis, professionals, relying on their professional judgements, make decisions that can be of immeasurable significance to their clients' lives – like, for instance, whether to remove a child from parents and commit him/her to involuntary care. Difficulties inherent in professional judgements in the field of child protection are that most of these decisions are made under some degree of uncertainty, due to lacking information or evidence, or even contradictory information from different informants. Usually, minority of extreme cases are unanimously recognized as constituting abuse. In most other cases child protection decisions are the result of case by case deliberations, based on general legal definitions and the personal discretion of professionals in centres of social welfare who are in a position to make these decisions.

The growing body of research of child welfare professionals' judgements is demonstrating complexity of the processes of identifying and responding to child maltreatment (Ashton, 2004; Gambrill, 2005; Munro, 1999), and inconsistencies of decisions about removal of a child from parents, in particular (Rossi, Schuerman, & Budde, 1999; Britner & Mossler, 2002). There is also evidence how prone to error these important judgements and decisions are (Benbenishty, Osmo, & Gold, 2003; Howitt, 1992). Many errors occur because of confirmation biases evident in searching only for data in support of a preferred view (Nickerson, 1998, according to Gambrill, 2005). Studies of decision making in child welfare have also documented persisting with a point of view in spite of evidence that it is wrong (Howitt, 1992). Decision-making in the area of child welfare manifests biases and shortcomings evident in other areas of judgement. The field of social cognition is concerned with explaining how people select, interpret, remember and use social information to make judgements and decisions. Schemes, mental structures used automatically to organize knowledge about the social world, influence perception and memory in a way that information contradictory to or inconsistent with schema is ignored or forgotten (Aronson, Wilson, & Akert, 2002). Dual process theories of decision making suggest that we use both rapid effortless styles based, for example, on the recognition heuristic, as well as more

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deliberative, analytic styles as needed (Gilovich & Griffin, 2002 according to Gambrill, 2005). Intuitive reasoning, frequently used by social workers in child welfare, is prone to biases and error (Munro, 1999).

Factors affecting assessments and interventions in child protection

Professional's judgements in child protection are to a certain degree determined by legal regulations and professional knowledge, but legal and theoretical definitions of what constitutes abuse and/or grounds for removing a child from home may be modified by professional's beliefs, values, attitudes and experiences. Those beliefs and experiences may be related to socio-demographic characteristics. Ashton (2004) argues that the processes of observing a given situation, assessing and labelling parental behaviour, and responding to that behaviour are filtered through the personal characteristics of the observer (Ashton, 2004). Socio-demographic characteristics - gender (Rossi et al., 1999), age (Roscoe, 1990) and being a parent (Portwood, 1998) - have been found to predict the perception and reporting of child abuse, although not in all studies (Ashton, 1999; Ashton, 2004). Other research has found attitudes and beliefs about corporal punishment to influence professional's assessment of the severity of parental behaviour and relate to the likelihood of reporting an incident (Ashton, 2001).

The influence of childhood history of abuse on child protection practice has also been researched although results are inconsistent as to the direction and the effect of abuse histories on professional functions. According to Yoshihama and Mills (2003), studies have found that workers with a history of childhood sexual and physical abuse were more likely to believe allegations of child sexual abuse (Nutall & Jackson, 1994) and tended to judge vignettes of parental punishment as more severe and as having more adverse effects on children's development (Howe et al., 1988). Yoshihama and Mills (2003) found that social workers' history of childhood sexual abuse is associated with increased support for removal of children whose mother is being abused by her partner. On the other hand, Portwood (1998) found that having been abused (e.g. spanked) as a child does not affect an individual's likelihood of rating a particular act (e.g. spanking) as abusive. Bensley et al. (2004) have found that participants who experienced parental violence in childhood (spanking, slapping) were less likely to consider it abusive than participants who were not victims of such parental acts.

The amount of *professional experience* with child abuse may also modify professional's definitions of abuse (Portwood, 1998) and may consequently impact decisions about interventions (Gold, Benbenishty, & Osmo, 2001).

Beside *individual characteristics* of social workers (socio-demographic, personal, and professional), this study also

examines the role of the wider contextual influence of the social welfare system and culture in explaining differences in professionals' judgements. Gambrill (2005) suggests that decisions in child protection are influenced by personal characteristics of the social worker as well as by the context in which the decisions are made. Cross-cultural research has found differences in assessments and recommended interventions to identical case between social workers from different countries (Gold et al., 2001; Jegerby & Soydan, 2002; Brunnberg & Pećnik, in press). With respect to child protection in Croatia and Sweden, while the legal framework is similar, social welfare systems differ in available resources and services and cultures differ in social norms regarding corporal punishment (Council of Europe, 2005).

Case-specific characteristics

Another domain of potential influences on professional judgements in the field of child protection concerns characteristics of parental behaviours, environmental factors and characteristics of the abused child or child at risk. Professionals' responses to child abuse vignettes were found to be related to the characteristics of the case like age of the child and resourcefulness of neighbourhood (Mandel, Lehman, & Yuille, 1995), perceived seriousness of maltreatment (Ashton, 1999) and perceived cooperativeness of a parent with the social services (Gold et al., 2001). Gender of the child has also been suggested to influence professionals' assessments of the case (Brunnberg, 2002).

Purpose of the study

The first goal of this study was to investigate if professional's individual characteristics, the social welfare system/culture within which they operate and a case characteristic (victim's gender) were related to professionals' reactions to a case of alleged child abuse depicted in a vignette.

The second goal of the study was to examine the professional's characteristics and a case characteristic as they relate particularly to the judgements about appropriateness of maintaining a child at home and about appropriateness of removing him/her from home in the final stage of the case vignette. The main study questions were: What accounts for the lack of agreement among social workers as to how appropriate maintaining the child at home or placing it in care is in given situation? What are the relative contributions of individual worker's characteristics, contextual/social welfare influence, victim's gender and case assessments to explaining differences in judgements of appropriate interventions?

Two hypotheses guided this study: (1) social workers' professional reactions to a case vignette are related to their individual characteristics and their social welfare system/culture, and (2) judgements of appropriateness of maintain-

ing a child at home and removing a child from home compulsorily are better explained by case assessments and a case characteristic than by social workers' characteristics. More specifically, we expected social workers' risk assessments, perception of main problems and previous judgements about appropriateness of interventions to have a larger contribution to prediction of judgements about appropriateness of interventions at the last stage of the case vignette than the more 'distal' predictors such as socio-demographic and personal characteristics of the professional, social welfare system/culture or the victim's gender.

METHOD

The technique of vignettes

A technique of vignettes was used to generate the data for answering the study questions. Vignettes are short stories about hypothetical characters in specific circumstances, to whose situation the study participant is invited to respond (Alexander & Becker, 1978). They are used in research to allow actions in context to be explored, to clarify people's judgements and to provide a less personal and therefore less threatening way of exploring sensitive topics (Barter & Renold, 1999). Vignettes provide real-life, specific information which describe a situation or a course of events that refer to factors potentially important in decision-making or judgement-making processes. Vignettes allow for great flexibility in constructing and manipulating case features. For example, in a vignette depicting a child abuse case, the child's age and/or family's socio-economic status (Mandel et al., 1995) or the degree of parent's cooperativeness with social services (Gold et al., 2001) can be manipulated to investigate the effect on professionals' judgements and reasoning. The so called vertical vignettes are designed in such a way that one or several aspects of the case are elaborated or complicated in a stepwise manner. Horizontal vignettes contain no or only minimum variation (e.g. one variable).

This technique can be used in quantitative and qualitative studies. A brief case description of the vignette can be followed by a structured questionnaire (Gold et al., 2001), a semi-structured questionnaire (Brunnberg et al., 1994; Drury-Hudson, 1999) and/or a focus-group discussion (Khoo, Hyvonen, & Nygren, 2003). The advantage of using vignettes in research is that they present the same context of the questions to be investigated to all participants thus increasing internal validity and reliability. The main weakness of this technique relates to it's external validity which is limited by the fact that participants may not respond to hypothetical situations in the same manner as they would react to identical situations when encountered in real life (Mandel et al., 1995).

Child welfare research has increasingly used vignettes to study professional's judgements and responses to controlled descriptions of people, situations or events. Employing vignettes to elicit participants' reactions to child abuse is a common research strategy for studying judgements about appropriate interventions (Mandel et al., 1995). Vignettes are also used in cross-cultural studies in child protection field allowing professionals to respond to identical case information (Gold et al., 2001; Jegerby & Soydan, 2002).

Instruments and procedure

The vignette used in this study was designed by synthesizing aspects that recurred in several real cases dealt with at the social welfare offices in Sweden and in the UK. The case descriptions were processed by researchers in the two countries and validated by a small group of social workers from both countries before being used in the first study (Brunnberg et al., 1994). This vignette has subsequently been used in several studies (Brunnberg, 2002; Forslund, Jegeby, Soydan, & Williams, 2002; Jegerby & Soydan, 2002). Prior to its use in this study, the vignette was checked by social workers in Croatia and found to have authenticity. The vignette can be termed as a vertical vignette since it has various factors, which gradually change over time during the three stages. Three short stories provided social workers with increasing amounts of information and information of escalating seriousness/severity of the fictional case. The vignette concerns a 4-year old child who is reported as being exposed to risk in his or her family. Half of the respondents in each country received a vignette in which the 4-year old child was a boy and the other half a vignette in which the child was a girl. The social workers were randomly assigned to one of the two versions.

After each stage of the vignette, the participants answered a series of open-ended questions and rating scales concerning their assessment of the case and after Stages 2 and 3 also judged appropriateness of subsequent interventions. The following variables were employed in this study:

Risk assessment. Participants were asked to indicate what they think is necessary to do in response to a situation presented at each stage of the vignette by selecting one of the options: (1) No action, there is no problem, (2) It is possible that there are problems but the reliability of the information must be checked, (3) There is a problem and parents must be given support so they can take better care of their child, (4) There is a problem and something has to be done to protect the child.

Perception of the main problem/s. After Stages 2 and 3 of the vignette, participants answered the open-ended question 'What do you think is/are the main problem(s) in this case?' On the basis of content analyses of 50% of the responses in each country, categories were defined and agreed upon between researchers. The answers were coded by one researcher from each country. Additionally, the researchers met twice to discuss all dubious Croatian and Swedish an-

Stage 1

The district nurse calls the social services agency to talk about Marko Novak.

The district nurse has been told by a patient that there is a small boy in the district, about four years old, whose parents do not seem to be looking after him properly. Marko is allowed to stay out late in the evenings. Sometimes the parents seem to leave him alone at home when they go shopping.

The parents are a young couple, just over 20.

Stage 2

Some months later the agency gets a call about the same family.

A neighbor of Mr. and Mrs. Novak has called the manager of the agency saying that she often hears a small boy screaming in one of the houses. The other day she saw the father hit the boy hard. The boy had broken a window when he was playing football with some older boys. The father got very upset, shouted and hit the boy. It was not the first time she witnessed the father getting rough with the boy.

Stage 3

Six months later.

The doctor found several bruises on the boy's back and some burn marks on his cheek and arm during his last visit. The parents said that Marko often falls over and bruises himself because he is a very active boy. He got the burn marks from running into a cigarette.

During the visit to the doctor, it turned out Marko had lost weight in the last six months. Marko's mother said that recently the boy has had a poor appetite and has often been ill.

Figure 1. Vignette

Note. In respective countries, the boy and the girl were given typical Croatian or Swedish names.

swers and to conduct double checks on randomly chosen responses. The seven empirical response categories, formed according to meaning of the responses as well as the actual expressions (words) that were used, were: *inadequate parental care, inadequate father's behaviour, inadequate mother's behaviour, child's wellbeing is endangered, probably child abuse, child abuse* and *lack of information*. The categories are described in Brunnberg and Pećnik (in press).

Tolerance of corporal punishment. After Stage 2, participants answered the following open-ended question: 'The

father hit the boy/girl hard. In your opinion, is he as a parent allowed to do that if the boy/girl is naughty?'. The answers 'Absolutely not' and 'No' were coded as indicating zero tolerance to corporal punishment (score 1) as opposed to all other answers (score 0) (e.g. "No, if hard and/or frequent.", "It is hard to say", "Yes, if...").

Interventions. After Stages 2 and 3 of the vignette, participants were asked how appropriate, at this stage, they consider (a) a police investigation, (b) allowing the child to remain at home with parents being offered support from the social services, (c) supervision order over parental care, (d) encouraging parents to voluntarily place the child in care, and (e) removing the child from parents compulsorily. The degree of perceived appropriateness for all except the last intervention was measured on a 4-point scale with response options ranging from (1) definitely not, (2) probably not, (3) probably yes to (4) definitely yes. For removing the child from home compulsorily the response options were: (1) never, (2) one should wait and see, (3) now is the right time, and (4) it should have been done much earlier.

Besides variables referring to the case described through vignettes, this study included variables indicating characteristics of the social workers. They were assessed in the last part of the questionnaire, after participants responded to the questions related to the vignettes. Demographic variables included age, gender and parenthood status. Childhood history of violence was tapped by two items. One was enquiring about frequency of receiving physical punishment in childhood and the other about frequency of being bruised by violence from an adult in childhood. The response scale on both items ranged from (1) never, (2) rarely, (3) often to (4) very often. The length of professional experience in social work was measured in years. The social workers' country of residence was used as an indicator of wider social influence of the social welfare system and culture.

The data were collected in Sweden and Croatia in 2003 and at the beginning of 2004. The authors invited social workers attending professional meetings or training sessions to complete the questionnaire. Social workers were informed that their participation was voluntary and anonymous and were asked not to discuss the answers among themselves before returning the questionnaires in sealed envelopes. Twelve percent of the Croatian social workers who received questionnaires did not return them. Among the Swedish social workers, only one participant who received the questionnaire declined.

Participants

The study is based on convenience samples in the two countries. In Croatia, the sample consists of 87 social workers employed in 19 different social welfare centers throughout the country. Social workers were engaged in general social work, including child protection (n = 58; 67%) and as

members of specialized teams for marriage and the family and/or teams for the protection of children and minors (n = 18; 21%). A minority of the participants (10 social workers, 12%) were responsible for social work with persons with disabilities. In Sweden, the sample consists of 72 social workers employed at 15 different social welfare centres in 11 cities and villages. All the social workers were engaged in general social work (including child protection), but could have different positions or areas of work. The child protection work was organized in different ways in different social welfare centres. Some social workers only worked with investigations while others worked with both investigations and support or mainly with support. Most of the participants had positions as social workers (92%) while 6 (8%) worked as supervisors/team leaders.

Majority of the participants in the total sample were female (90.6%), which resembles gender characteristics of the population of social workers in both countries. The Croatian sample consisted of 93% women and 7% men and the Swedish sample of 87% women and 13% men. No significant difference in gender rate was found in the samples. A huge disproportion in the social workers' gender, found in the samples from both countries, did not allow examining the influence of gender on professional responses and this variable was omitted from the analysis. In future studies, on samples with more men, it would be interesting to check the relationship between professionals' gender and case assessments. The mean age of Croatian social workers (M = 41.8, SD = 8.12, range 27-62) did not significantly differ from the Swedish (M = 42, SD = 10.33, range 24-64). The samples did not differ with regard to parenthood since 76% Croatian and 75% Swedish participants had children. The average number of years in social work practice for Croatian social workers was 16.7 (SD = 9.33; range 1-34) and for Swedish 11.1 (SD = 8.5; range 1 - 40). The Croatian participants were more professionally experienced than the Swedish participants (F(1, 155) = 15.6, p < .001).

RESULTS

Relationships of professionals' characteristics and a case characteristic with professional's responses to the case vignette

In order to address the study's first objective, we correlated variables indicating professional's individual characteristics, country of residence and gender of the child in a case with variables indicating professionals' assessments of the vignette across the three stages. Significant correlation coefficients and descriptive statistics of the responses to the vignette are presented in Table 1.

Correlation analysis indicated that socio-demographic characteristics had some relations to social workers' re-

sponses to the vignette. Age was related to formulating of the main problem/s. Younger social workers, as well as those with shorter professional experience, were more likely to define main problem/s at Stage 2 in terms of child's endangered well-being and at Stage 3 in terms of suspected child abuse. Younger social workers were less likely to consider police investigation to be appropriate to the situation described at the Stage 2 of the vignette. Like younger age, not having children was correlated with defining the problem in terms of child's endangered well-being, and with expressing less support for police intervention at Stage 2. At Stage 3, parenthood was related to risk assessment. Social workers who had children were less likely to select helping the parents take better care of the child as a necessary reaction to the situation. More experienced social workers were also less likely to do so. Length of professional experience was further related to problem definition at Stage 3. More experienced social workers were also less likely to mention lack of information as a main problem at that stage.

History of violence in childhood was measured by frequency of receiving corporal punishment and violence that left bruises from an adult. Majority of Croatian social workers reported receiving corporal punishment (51% 'rarely' and 6% 'often') as opposed to Swedish who were physically punished less often (18% 'rarely' and 1% 'often'). The difference in the average frequency of corporal punishment in childhood experienced by Croatian (M = 1.63, SD = 0.60) and Swedish social workers (M = 1.21, SD = 0.45) was significant (F(1,155) = 23.17, p < .001). Less Swedish social workers (3%) experienced in childhood bruises as a result of violence from an adult person than Croatian who were bruised rarely (12%), often (1%), and very often (1%). Again, the difference in frequency of received stronger violence between Croatian (M = 1.17, SD = 0.49) and Swedish social workers (M = 1.03, SD = 0.17) was significant (F(1,155) = 5.66, p < .05).

Childhood history of corporal punishment and physical abuse were related to professionals' risk assessment at the initial stage of the vignette. Social workers who were more frequently bruised by violence were less likely to select checking reliability of the information as a necessary response to the situation of the child at the initial stage of the vignette. Social workers who were more frequently corporally punished and bruised by violence were more likely to perceive the highest risk to the child and consider protecting the child as the necessary professional reaction to the situation described at Stage 1.

At Stage 2 of the vignette, which describes an incident of corporal punishment, participants expressed their acceptance of father's violence towards the child. Social workers who reported less frequent corporal punishment in child-hood were more likely to express a zero tolerance of corporal punishment. Being physically punished more frequently was associated with answers indicating less categorical disapproval of corporal punishment in Stage 2 of the vignette.

Table 1

Means (M), standard deviations (SD), and significant Pearson product-moment correlations of professionals' characteristics and a case characteristic with responses to the vignette (N = 159)

Responses to the vignette		Age	Parent- hood	Years in practice	Corporal punishment	Physical abuse	Country ^a	Variant ^b	M	SD
STAGE 1										
	Check info					180*			0.75	0.435
Risk assessment	Help parents								0.15	0.359
	Protect the child				.158*	.340**			0.04	0.206
STAGE 2										
	Check info								0.16	0.365
Risk assessment	Help parents								0.27	0.446
	Protect the child						.167*		0.52	0.501
Zero tolerance of co	rporal punishment c				234**		274**		0.89	0.310
	Inadequate parents								0.20	0.397
	Inadequate father								0.33	0.471
	Inadequate mother								0.06	0.232
Problem definition	Child's well-being	221**	180*	317**			303**		0.13	0.333
	Possible abuse								0.06	0.232
	Child abuse								0.20	0.397
	Lack of info								0.08	0.275
	Home with support								3.14	0.517
	Supervision order						.263**		3.15	0.582
Appropriate intervention	Voluntary remove				.213**	.206**	.163*		2.38	0.794
mervention	Compulsory remove							.172*	2.06	0.400
	Police	.174*	.158*					.167*	2.96	0.722
STAGE 3										
	Check info								0.05	0.209
Risk assessment	Help parents		168*	191*			170*		0.08	0.269
	Protect the child								0.83	0.376
	Inadequate parents								0.20	0.402
	Inadequate father								0.04	0.191
	Inadequate mother								0.02	0.136
Problem definition	Child's well-being						363**		0.17	0.377
	Possible abuse	314**		272**					0.09	0.293
	Child abuse				.238**		.232**		0.36	0.481
	Lack of info			169*	203*		285**		0.06	0.244
Appropriate intervention	Home with support						223**		2.03	0.795
	Supervision order								1.99	0.816
	Voluntary remove								3.20	0.764
	Compulsory remove						.193*	.234**	2.85	0.539
	Police								3.63	0.561

Note. ^aCountry: 1-Sweden, 2-Croatia. ^bVariant: 1- boy victim, 2-girl victim. ^cZero tolerance of corporal punishment: 0 - no, 1-yes. *p < .05. **p < .01.

Childhood history of violence was also related to judgement of appropriateness of voluntary removal of a child from parents at this stage. Social workers who were corporally punished and bruised by violence more often were more in favour of recommending parents to place the child voluntarily in care in a situation depicted at Stage 2 of the vignette. At Stage 3 of the vignette, higher frequency of corporal pun-

ishment in childhood was associated with higher frequency of defining the main problem as *child abuse* and lower frequency of defining it as *lack of information*.

Country of social workers' residence was related with their responses to the vignette at Stages 2 and 3. At Stage 2, Croatian social workers were more likely to assess the situation as requiring child protection and were more in favour of supervision order over parental care and voluntary removal of the child from the family. Croatian social workers also reported less categorical disapproval of father-to-child violence and defined the main problem in terms of *child's endangered well-being* less often than the Swedish.

At Stage 3, Croatian social workers were less likely to select *helping the parents take better care of their child* as a needed response to the situation. They were less in favour of maintaining the child at home with support of social services and more in favour of removing the child from home by care order than the Swedish. Croatian social workers were more likely to formulate the main problem as child abuse, and less likely to formulate it as *child's endangered well-being* and *lack of information*.

Gender of a child victim was found to be associated with professionals' judgements about appropriate interventions. Social workers who were responding to the vignette about the girl were more in favour of compulsory removal of a child from parents, both at Stages 2 and 3 of the vignette. At Stage 2, they also considered police investigation more appropriate if the vignette was about a girl.

Predicting professionals' judgements of appropriateness of interventions in a physical child abuse case

Results show that, although given in response to identical case situation depicted at the Stage 3 of the vignette, social workers' professionals judgements about appropriateness of intervention differed. With respect to appropriateness of maintaining a child at home with support of social services offered, 29.6% of the social workers responded 'definitely not', 39% 'maybe not', 30.8% 'maybe yes' and 0.6% 'definitely yes'. With respect to removing a child from home compulsorily, 25.8% of the social worker were not in favour and considered it appropriate to 'wait and see', while 63.5% responded 'now is the right time' and 10.7% 'it should have been already done earlier'.

Multiple linear regression analysis was used to describe relationships between sets of explanatory variables and perceived appropriateness of the two interventions. In order to find parsimonious models, the models incorporated variables that had been identified through previous correlational analyses as influencing particular professional judgement. Significant correlations of criterion variables with predictor variables from the domain of assessments of the vignette are shown in Table 2.

The data in Table 2 shows that judgements about appropriateness of the two focal interventions at the final stage of the vignette are related to particular degrees of risk assessment from the initial stage of the vignette onwards, in expected ways. Social workers who were more in favour of child removal were more likely to consider protecting the child to be a necessary response, even in the situation described at the first stage of the vignette. They were less

likely to select checking the reliability of information as a needed response at Stages 2 and 3. Social workers who were more in favour of maintaining the child at home, were also more likely to consider checking of the reliability of information and helping parents to take better care of the child to be the needed reactions. With respect to problem definition, judgement about child removal was related to defining the main problem as inadequate father's behaviour at Stage 2 which depicts the act of father's violence towards the child, and as child abuse rather than inadequate parental care at the final stage of the vignette. Judgement about maintaining the child at home was inversely related to defining the main problem in terms of inadequate father's behaviour at Stage 2 and child abuse at Stage 3. This judgement was positively related to defining the main problem at Stage 2 as endangered child's well-being. Regarding relationships with preferred interventions at previous as well as concurrent stage of the vignette, judgement about appropriateness of compulsory child removal at the final stage was positively related to judgements about appropriateness of voluntary and compulsory removal and police investigation at Stage 2 and those on voluntary removal and police investigation at Stage 3. It was also inversely related to judgement about appropriateness of maintaining the child at home with the offer of support from social services and of applying a supervision order over parental care at Stages 2 and 3. On the other hand, judgement about appropriateness of maintaining the child at home at the final stage was positively related to judgement about appropriateness of maintaining the child at home at Stage 2 as well as to judgements about appropriateness of applying a supervision order over parental care at Stage 3. It was also inversely related to judgements about appropriateness of voluntary and compulsory removal and police investigation at both stages.

Since no significant correlations were found between social workers' individual characteristics and the judgements about the two interventions (Table 1), predictors from the domains of social welfare system/culture, characteristic of the vignette and characteristics of assessments of the vignette were included in analyses. A total of 16 predictor variables were entered in a hierarchical regression analysis as potential considerations in determining the degree of appropriateness of removing a child from home compulsorily as judged by social workers at the final stage of the vignette. Social workers' country of residence and variant of the vignette (boy or girl) were separately entered first into hierarchical regression in order to examine how much of the judgment about child removal from home can be attributed to those more 'distal/general' factors. In step 3 predictors from stage 1 of the vignette were entered, followed by predictors indicating assessments of the situation at Stage 2 (step 4) and predictors indicating judgment about interventions at Stage 2 (step 5) in order to test if there is additional variance explained in variability of the judgment about removal. above the already explained by the included predictors. Fi-

Table 2 Significant correlations of judgements about appropriateness of interventions at the final stage of the vignette with other responses to the vignette (N = 159)

Responses to the vignette		Compulsory removal of a child from home at stage 3	Maintaining a child at home with support offered at stage 3
STAGE 1			
	Check info		.165*
Risk assessment	Help parents		
	Protect the child	.160*	162*
STAGE 2			
	Check info	184**	
Risk assessment	Help parents		.177*
	Protect the child	.291**	256**
Tolerance of corporal punis	hment		
	Inadequate parents		
	Inadequate father	.180*	276**
	Inadequate mother		
Problem definition	Child's well-being		.179*
	Possible abuse		
	Child abuse		
	Lack of info		
	Home with support	297**	.192*
	Supervision order	157*	
Appropriate intervention	Voluntary remove	.288**	196*
11 1	Compulsory remove	.318**	236**
	Police	.188**	226**
STAGE 3			
	Check info	269**	.229**
Risk assessment	Help parents	184*	.266*
reion abbeddinein	Protect the child	.227**	251**
	Inadequate parents	210**	
	Inadequate father	.210	
	Inadequate mother		
Problem definition	Child's well-being		
Problem delinition	Possible abuse		
	Child abuse	.193*	272**
	Lack of info	.175	.272
		525**	
	Home with support	535**	X
	Supervision order	489**	.784**
Appropriate intervention	Voluntary remove	.191*	221**
	Compulsory remove	X	535**
	Police	.409**	428**

^{*}*p* < .05. ***p* < .01.

nally, assessments of the situation at Stage 3 were entered. Results are summarized in Table 3.

As presented in Table 3, each step contributed significantly to explanation of the variance with the final model explaining the total of 38.5% of the variance of judgement about compulsory removal of the child from home. Social workers' country of residence accounted for 3.9% of the

variance in the judgement about compulsory removal of a child. The addition of the child's gender contributed an additional 4.9% to the variance. Assessment of the situation at the initial stage of the vignette contributed the least, whereas assessment of the situation at Stage 2 was more predictive (7.3%). Judgements about interventions at Stage 2 contributed an additional 9.8% to the variance, equal to the assessment of situation at the final stage.

Table 3
Summary of hierarchical regression analysis for variables predicting professional judgement about compulsorily removing a child from home at stage 3 (N = 159)

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Predictors	β	β	β	β	β	β
Country	.197*	.183*	.181*	.142	.110	.121
Variant		.222**	.230**	.196**	.145*	.174*
Stage 1 risk: Protect the child			.169*	.149*	.091	.084
Stage 2 risk: Check information				040	040	.060
Stage 2 risk: Protect the child				.193*	.173*	.141
Stage 2 problem: Inadequate father				.155*	.181*	.141*
Stage 2 interventions:						
Home with support					176*	221*
Supervision order					.026	.070
Voluntarily remove					.085	.097
Compulsory remove					.164*	.158*
Police investigation					.020	002
Stage 3 risk: Check information						336**
Stage 3 risk: Help the parents						285*
Stage 3 risk: Protect the child						.214
Stage 3 main problem: Inadequate parents						163*
Stage 3 main problem: Child abuse						.073
\mathbb{R}^2	.039*	.088**	.116***	.189***	.288***	.385**
ΔR^2		.049**	.028*	.073**	.098***	.098**

^{*}p < .05. **p < .01. ***p < .001.

Female gender of the abused child, defining the main problem at Stage 2 in terms of inadequate father's behaviour, considering maintaining the child at home to be less appropriate and removing the child compulsorily to be more appropriate already at Stage 2, and finally, assessing the situation at Stage 3 as not requiring checking reliability of information nor parent support and not defining it in terms of inadequate parental care independently predicted judging compulsory child removal as more appropriate.

Hierarchical regression analysis predicting professionals' judgement about maintaining a child at home with support of social services being offered included 15 predictor variables which were entered in 5 steps. Summary of results is presented in Table 4.

Table 4 shows that social workers' country of residence accounted for 5.1% of the variance in the judgement of appropriateness of maintaining a child at home with support of social services being offered. Risk assessments at the initial stage of the vignette contributed 3.8% of the variance. As-

sessments of the situation at Stage 2 explained additional 12.2% of the variance. Judgements about interventions at Stage 2 were less predictive (6.7%). Assessment of situation at the final stage contributed an additional 12.7% to the variance. The final model explained 40.5% of the variance of judgement about appropriateness of maintaining a child at home with support of social services being offered. Independent significant predictors of judging maintaining the child at home as more appropriate were assessing the situation at Stage 2 as requiring support for parents and not defining father's violent behaviour as a major problem nor considering compulsory child removal to be appropriate response to the situation. Assessing the situation at the final stage as requiring checking reliability of information and providing support to parents to take better care of their child and, at the same time, not defining the main problem as child abuse also had independent contribution to prediction of the judgement about maintaining the child at home at the final stage.

Table 4
Summary of hierarchical regression analysis for variables predicting professional judgement about maintaining a child at home with support offered (N = 159)

	Step 1	Step 2	Step 3	Step 4	Step 5
Predictors	β	β	β	β	β
Country	226**	225**	145	135	062
Stage 1 risk: Check information		.122	.067	.041	.075
Stage 1 risk: Protect the child		114	137	098	077
Stage 2 risk: Help the parents			.094	.110	.256**
Stage 2 risk: Protect the child			119	068	.140
Stage 2 problem: Inadequate father			277***	305***	247***
Stage 2 problem: Child's well-being			.127	.118	.115
Stage 2 interventions:					
Home with support				.113	.107
Voluntarily remove				002	.012
Compulsory remove				122	151*
Police investigation				143	133
Stage 3 risk: Check information					.290**
Stage 3 risk: Help the parents					.341**
Stage 3 risk: Protect the child					.135
Stage 3 main problem: Child abuse					223**
R^2	.051**	.089**	.212***	.278***	.405***
ΔR^2		.038*	.122***	.067*	.127***

p < .05. **p < .01. ***p < .001.

DISCUSSION

The first part of the study investigated relationships of social workers' characteristics with their professional responses to a child abuse case presented in a short vignette. Based on the brief information given, and presumably relying on own schemata from previous professional and private experience, social workers assessed the degree of risk to the child, defined the nature of the problem in terms of its source and degree and evaluated appropriate interventions. Although many variables from the domain of case assessments were unrelated to characteristics of the professional and the variant of the vignette, correlational analyses identified several important associations. With respect to sociodemographic variables, age and parenthood were related to risk assessments and definitions of the main problem/s in the situations depicted in the vignette. These findings are consistent with earlier studies in that age (Roscoe, 1990) and parenthood (Portwood, 1998) influence perception of child maltreatment. However, finding no associations between socio-demographic variables and judgements about interventions corresponds to other studies in which no association between likelihood of reporting child abuse and either age or parenthood were found (Ashwood, 2004). These inconsistencies suggest that the influence of socio-demographic variables may be specific to some aspects of case assessment and judgement about interventions, or that the relationship is low and difficult to detect in studies with samples of this size.

We further examined whether a childhood history of victimization by violence is associated with social workers' assessments of and judgements about appropriate interventions in a child abuse case. Only a few significant correlations were found. This result can be a consequence of lack of association between the variables, but can also be due to the variance magnitude since relatively small number of social workers experienced bruises as result of adult's violence as children. Social workers who were more frequently bruised

perceived less need to check reliability of information at the initial stage of the vignette which provided second-hand information about a child at risk. Higher frequency of experiencing bruises from adults' violence in childhood and higher frequency of corporal punishment were associated with perceiving the highest risk to the child and considering protecting the child as the necessary professional reaction to the initial situation. Frequency of corporal punishment and bruises were the only variables related to the professionals' responses to the initial stage of the vignette. One possible explanation is that, in dealing with ambiguity of the situation at the initial stage, social workers relied on schemas. Schemas enable people to reduce ambiguity when they are encountered with new information which can be interpreted in a number of ways. The more ambiguous the encountered information is, the more schemes are used to fill in the blanks (Aronson et al., 2002). Schemas more likely to be used are the ones more accessible due to past experience. e.g. childhood history of abuse. The experience of being physically abused may have lead social workers to interpret the situation at the initial stage as more risky and requiring protection. Childhood history of violence was further related to judgement about appropriateness of voluntary removal of a child from parents at the stage depicting father's violence towards the child. Experiencing more violence was associated with considering voluntarily placement of the child in care outside the family as more appropriate. At the final stage, higher frequency of corporal punishment in childhood was associated with higher frequency of defining the main problem as child abuse and lower frequency of defining it as lack of information. It supports the expectation that evaluation of an act as abusive depends not only on the characteristics of the act itself but also on the experiences of those individuals making such an assessment. The presented results show that childhood history of violence is associated with a more 'protection-oriented responses' to the case in the vignette. Experiencing parental violence may have increased awareness of the abusiveness of the behaviour and empathy towards the child. The increased empathy in turn may have influenced social workers' responses in a direction of increasing the perceived need to protect the child and perceived appropriateness of proposing voluntary removal from home. However, we have also found that higher frequency of corporal punishment in childhood correlates with less categorical disapproval of father's hitting the child as depicted in the middle stage of the vignette. Social workers who reported less frequent corporal punishment in childhood were more likely to express a zero tolerance of corporal punishment. This suggests that being corporally punished in childhood may desensitize social workers towards corporal punishment. The underlying mechanisms can be development of normative beliefs regarding appropriate parenting behaviours, and a need to preserve a positive image of own parent. For example, on a general population it was found that adults who reported experiencing a particular behaviour

from a parent in childhood were less likely to assess the behaviour as abusive for 11 of 33 behaviours and more likely to assess the behaviour as abusive for two of the behaviours (Bensley et al., 2004). Our results show that the relationship between childhood history of violence and responding to violence against a child as an adult is not a simple one. It is probable that the relationship between childhood history of abuse and professional assessments and interventions is moderated by factors not included in this study. Research demonstrated that children exposed to violence against their mother reacted in very different ways (Almqvist & Broberg, 2005). The different reactions by the children could lead to different reactions among adults preventing detecting relationships between childhood history of abuse and professional judgements with regard to a child abuse case.

Professionals' assessments of the situation and judgements about appropriate interventions were also expected to be influenced by beliefs, norms, resources etc., inherent in their organizational and national cultures. Results showed that social workers' country of residence was related to their responses to the middle and the final stage of the vignette. Although not fully expressing zero tolerance of corporal punishment, Croatian social workers were more likely than Swedish to consider child protection necessary and supervision order over parental care and voluntary removal of a child to be more appropriate in the middle stage. In the final stage, Croatian social workers were more likely to define the problem in terms of child abuse and consider compulsory removal of a child to be more appropriate. Swedish social workers were more likely to define the problem in terms of endangered child's well-being, equal to the previous stage, and lack of information, and were more likely to consider maintaining the child at home with support of social services being offered as a more appropriate intervention in the situation described at the final stage. These results suggest that Croatian social workers may be more 'child protection focused' and Swedish social workers more 'child welfare focused' in their dealings with the case vignette (Corby, 2003). The differences in development of child welfare systems in Croatia and Sweden may, at least partly, explain this result (Brunnberg & Pećnik, in press). Cultural/social welfare system differences in recommended intervention for identical case vignettes were also found between Canadian and Izraeli social workers (Gold et al., 2001) and among social workers from Sweden, Denmark, Germany, the UK and Texas (Jergeby & Soydan, 2002).

Beside characteristics of professionals, the influence of one characteristic of the case vignette – a child's gender – was examined. It was found that female gender of the child was associated with judging compulsory removal from family and police investigation to be more appropriate. This result may reflect the existence of higher social acceptance of parental violence towards boys than girls. The participants' tendency to be more protective when the victim was a girl, might also be a consequence of identification with her as

the majority of respondents were women. Another possible explanation is that professionals suspect sexual abuse to accompany the physical abuse, and it is girls who are under higher risk of sexual abuse in the family (Barnett, Miller-Perrin, & Perrin, 1997).

Results showed that, in identical situation, social workers differed in their judgement about appropriateness of interventions. Leaving a child in dangerous home or removing a child from home unnecessarily both have serious consequences. We investigated determinants of the differences in the two focal criterion variables. The two variables reflect two dominant orientations in response to inadequate parental care - responding to need and disturbed well-being (child welfare) and ensuring safety (child protection). Regression analyses revealed models which help social workers arrive at judgements about removing a child from home compulsorily and about maintaining a child at home with support of social services being offered.

Country of residence was found to be a significant predictor of judgement about interventions at the final stage of the vignette and it accounted for 3.9% and 5.1% variance of judgements about child removal and maintaining at home, respectively. In this study we were interested in the effects of case perceptions and judgements above and beyond effects of social welfare system and culture. After variance dependent on the country in which the judgements are made was controlled for, analysis revealed what was common to the ways most social workers in both countries reason about a case vignette. These patterns therefore do not reflect specificities of socio-cultural context, but commonalities in social work practice with children at risk in two different parts of Europe. It was found that included predictors explained a total of 38.5% of the variance of judgement about compulsory child removal and 40.5% of the variance of judgement about maintaining a child at home. As expected, the best predictors for interventions at the final stage are assessments of the case at that stage and judgements about interventions made at the previous stage, that is, the more 'proximal' factors, rather than the more 'distal' factors like social welfare system/culture. The step that contributed the most explained variance was assessment of the situation at the final stage. The new information about bodily injuries and visible signs of abuse seems very important for judgements about interventions. Based on interviews with Croatian professionals, Sladović Franz (2004) found the consequences of endangered psychophysical development, visible in the child's behaviour or the child's body, to be the dominant criteria for removal of a child from home.

Female gender of the abused child, perceiving father's violence towards the child as the main problem, considering maintaining the child at home to be less appropriate and removing the child compulsorily to be more appropriate already at the middle stage, and finally, assessing the situation at the final stage as not requiring checking reliability of information nor parent support and not perceiving the main

problem as inadequate parental care were identified as independent predictors of social workers' judgements about removing a child from home. Variables affecting judgement about maintaining the child at home with an offer of support were assessing the situation at the middle stage as requiring support for parents and not defining father's violent behaviour as a major problem nor considering compulsory child removal to be appropriate response to the situation. Assessing the situation at the final stage as requiring checking reliability of information and providing support to parents to take better care of their child and, at the same time, not defining the main problem as child abuse also made independent contribution to prediction. Definition of the problem as child abuse, endangered well-being of the child or lack of information influences how social workers focus their interventions. Mandel et al. (1995) report that the more the professionals generated hypotheses and requested more information and the less they made unwarranted assumptions (e.g. overconfidence in an assertion), the more they disagreed with a premature decision to remove a child from home in a child abuse case vignette. Correlations between assessments made in previous and current stage may, to some extent, be attributed to the confirmation bias (Nickerson, 1998, according to Gambrill, 2005). It is manifested in searching only for information in support of a preferred view which may be the view formed at previous stage of the

Gambrill (2005) argues that social workers' decisions may reflect organizational behaviour, individual bias and other idiosyncratic factors more than the likelihood that a child is abused. Our results lend only limited support to this assertion. This study examined the relationship of individuals' characteristics and experiences with formulating their professional views toward child maltreatment. Results showed that these factors often had less impact than expected and that it is not individual factors, but the social welfare system and culture that influence decision-making about interventions such as removing a child from home or maintaining him/her at home with support. From 4-5% of variance were attributed to factors which are probably reflecting available resources, services and cultural norms. The rest was explained by variations in perception of the case and judgements about appropriate interventions at previous stage of the case. Factors that have a larger influence on decision-making are related to perception of risk, definition of the problem, and judgements about appropriate interventions previously made.

The findings of this study should be considered only tentative since their generalizability is limited by the study's sample and methodology. Although the response rate was adequate, the degree of impact of self-selection remains unknown. Voluntary participation made possible that those who completed and returned the questionnaire differed from those who chose not to participate in the study and/or did not return the questionnaires. The sample may have rep-

resented more motivated professionals. Small number of male participants and physically abused participants makes results less reliable. Reliance on self-report and the use of singe-item variables also lowers reliability and validity of findings. Employing vignettes to elicit professionals' reactions to child abuse raises issues of external validity. It can be argued that a situation of responding to questions about appropriateness of interventions is not identical to real decision-making or assessment situation and that our data do not reflect the actual behaviour, but rather what social workers think they should do, or would like to do in the described situations. Finally, there are certainly other individual characteristics that may have influenced judgements about appropriate interventions that were not measured in this study. Stone (1993, according to Goddard, Saunders, Stanley, & Tucci, 1999) suggested that personality factors of professionals may influence decision-making in child protection with risk-aversive personalities being inclined to 'see most situations as high risk and want immediate action' whereas risk-takers being more likely to define situations as low risk and adopt a monitoring, wait and see approach.

Although tentative, results have practical implications. Differences in judgement about appropriate intervention in an identical situation calls for a more standardized procedures of assessment and clear guidelines based on empirical findings about child abuse risk factors and effectiveness of interventions on which professionals could rely in defining problems and choosing interventions. Gender of the abused child has been identified as an important case-specific factor in judgement about removal of a child from the family. If replicated by future studies, this finding should be used in the training and supervision of professionals in order to ensure gender equality in child protection.

In conclusion, results of this study contribute to our understanding about factors involved in social workers' decision-making in child protection field. Similar future studies need to include other professionals who take part in that process (e.g. psychologists, lawyers) as they may apply different schemas.

REFERENCES

- Alexander, C. S., & Becker, H. J. (1978). The use of vignettes in survey research. *Public opinion quarterly*, 42, 93-104.
- Almqvist, K., & Broberg, A. (2005). *Barn som bevittnat vald mot mamma* [Children that been witnessing violence against their mother]. Goteborg: Goteborg city council.
- Aronson, E., Wilson, T. D., & Akert, R. M. (2002). *Social psychology*. New Yersey: Prentice Hall.
- Ashton, V. (1999). Worker judgments of seriousness about and reporting of suspected child maltreatment in *Child Abuse & Neglect*, 23, 539–548.

- Ashton, V. (2004). The effect of personal characteristics on reporting child maltreatment. *Child Abuse & Neglect*, 28, 985–997.
- Ashton, V. (2001). The relationship between attitudes toward corporal punishment and the perception and reporting of child maltreatment. *Child Abuse & Neglect*, 25, 389–399.
- Barnett, O. W., Miller-Perrin, L. C., & Perrin, R. (1997). Family violence across life-span. London: Sage.
- Barter, C., & Renold, E. (1999). The use of vignettes in qualitative research. University of Surrey, *Social research update*, 25-25.
- Benbenishty, R., Osmo, R., & Gold, N. (2003). Rationales provided for risk assessments and for recommended interventions in child protection: A comparison between Canadian and Israeli professionals. *British Journal of Social Work, 33*, 137-155.
- Bensley, L., Ruggles, D., Wynkoop Simmons, K., Harris, C., Williams, K., Putvin, T., & Allen, M. (2004). General population norms about child abuse and neglect and associations with childhood experiences. *Child Abuse and Neglect*, 28, 1321-1337.
- Britner, P. A., & Mossler, D. G. (2002). Professionals' decision-making about out-of-home placements following instances of child abuse. *Child Abuse and Neglect*, 26, 317-332.
- Brunnberg, E., & Pećnik, N. (in press). Assessment processes in social work with children at risk in Sweden and Croatia. *International Journal of Social Welfare*.
- Brunnberg, E. (2002). Are boys and girls treated in the same way by the social services? In Gruber, C. & Fröschl, E. (Eds.), *Gender in Social Work: Promoting equality* (119-131). London: Russell House Publishing.
- Brunnberg E., Soydan H., & Stål, R. (1994). Socialtjänst i Sverige och England några jämförelser [Social services in Sweden and England: some comparisons]. Högskolan i Örebro: Forskargruppen i socialt arbete, *Report* 26.
- Corby, B. (2003). Supporting families and protecting children: Assisting child care professional in initial decision-making and review of cases. *Journal of Social Work*, *3*, 195-210.
- Council of Europe (2005). Eliminating corporal punishment: Human rights imperative for Europe's children. Forum for children and families Directorate General III Social Cohesion Social Policy Department.
- Drury-Hudson, J. (1999). Decision-making in child protection: The use of theoretical, empirical and procedural knowledge by novices and experts and implications for fieldwork placement. *British Journal of Social Work*, 29, 147-169.
- Forslund, M., Jegeby, U., Soydan, H., & Williams, C. (2002). Responding to ethnicity: a cross-national evaluation of

- social work responses in child protection cases. *Social Work in Europe*, *9*, 39-51.
- Gambrill, E. (2005). Decision making in child welfare: Errors and their context. *Children and Youth Services Review*, 27, 347-352.
- Goddard, C. R., Saunders, B. J., Stanley, J. R., & Tucci, J. (1999) Structured risk assessment procedures: Instruments of abuse? *Child Abuse Review*, *8*, 251-263.
- Gold, N., Benbenishty, R., & Osmo, R. (2001). A comparative study of risk assessments and recommended interventions in Canada and Israel. *Child Abuse & Neglect*, 25, 607–622.
- Howitt, D. (1992). *Child abuse errors: When good intentions go wrong*. New York: Harvester.
- Jergerby, U., & Soydan, H. (2002). Assessment processes in social work practice when children ere at risk: A comparative cross-national vignette study. *Journal of Social Work Research and Evaluation*, *3*, 127-144.
- Khoo, E. G., Hyvonen, U., & Nygren, L. (2003). Gatekeeping in child welfare: A comparative study of intake decision making by social workers in Canada and Sweden. *Child Welfare*, 82, 507-525.

- Mandel, D. R., Lehman, D. R., & Yuille, J. C. (1995). Reasoning about removal of a child from home: A comparison of police officers and social workers. *Journal of Applied Social Psychology*, 25, 906-921.
- Munro, E. (1999). Common errors of reasoning in child protection work. *Child Abuse and Neglect*, 23, 745-758.
- Portwood, S. G. (1998). The impact of individuals' characteristics and experiences on their definitions of child maltreatment. *Child Abuse & Neglect* 22, 437–452.
- Roscoe, B. (1990). Defining child maltreatment: Ratings of parental behaviours. *Adolescence*, 25, 517-528.
- Rossi, P., Schuerman, J., & Budde, S. (1999). Understanding decisions about child maltreatment. *Evaluation Review*, 23, 579-598.
- Sladovic Franz, B. (2004). The opinion of professionals on removing children from the family: Interview results. *Annals of Department of Social Work, 2,* 229-241.
- Yoshihama, M., & Mills, L. G. (2003). When is the personal professional in public child welfare practice? The influence of intimate partner and child abuse histories on workers in domestic violence cases. Child Abuse & Neglect, 27, 319-336.