Mapping an Agenda for the Study of Youth Sexual Aggression in Europe:

Assessment, Principles of Good Practice, and the Multilevel Analysis of Risk Factors*

Barbara Krahé, University of Potsdam, Germany

Ine Vanwesenbeeck, Rutgers and Utrecht University, The Netherlands

Abstract

Sexual aggression is a serious threat to young people's sexual health in Europe, but establishing the exact scale of the problem has been hampered by a variety of conceptual and methodological problems. This article presents a framework for studying youth sexual aggression that addresses both prevalence and risk factors of victimization and perpetration. It proposes a research tool to comprehensively assess the perpetration of, and victimization by, sexual aggression that captures different coercive strategies, sexual acts, victim-perpetrator relations, and gender constellations. The instrument is rooted in a clear conceptual definition of sexual aggression and was pilot-tested in ten countries of the European Union (EU). Furthermore, a list of good practice criteria is proposed to promote the quality and comparability of research on youth sexual aggression in Europe. A multilevel approach combining individual-level and country-level predictors of sexual aggression is outlined and illustrated with data from the pilot study in ten countries.

Key words: sexual aggression, sexual victimization, youth, measurement, risk factors, Europe

^{*}Correspondence concerning this article should be addressed to Barbara Krahé, University of Potsdam, Department of Psychology, Karl-Liebknecht-Str. 24-25, D-14476 Potsdam, Germany, E-mail: krahe@uni-potsdam.de. The research reported in this paper was conducted as part of the project 'Y-SAV' (Youth Sexual Aggression and Victimization) supported by a grant from the European Agency for Health and Consumers (EAHC); http://www.rutgers.international/programmes/y-sav.

Mapping an Agenda for the Study of Youth Sexual Aggression in Europe: Assessment, Principles of Good Practice, and the Multilevel Analysis of Risk Factors

Adolescence and early adulthood are key periods for the development of healthy sexual relations and behavior patterns. Experiences made during these critical years create a basis for attitudes and beliefs about sexuality, sexual self-esteem, and self-efficacy as well as sexual scripts that play a sustained role in guiding sexual behavior (Krahé, 2000). At the same time, there is ample evidence that many young people experience unwanted sexual contacts or pursue their sexual interests against another person's wishes. A review of all studies identified in 27 EU countries since 2000 found that up to 83% of female and 66% of male adolescents and young adults reported having experienced at least one incident of nonconsensual sex since the legal age of consent, and self-reported perpetration rates were as high as 80% for men and 40% for women (Krahé, Tomaszewska, Kuyper, & Vanwesenbeeck, 2014). Sexual victimization critically increases young women's and men's odds of experiencing a variety of adverse outcomes in terms of physiological, psychological, sexual, and reproductive health (Vanwesenbeeck, 2008). Therefore, gaining a clear understanding of the nature of sexually aggressive interactions and the factors that increase the risk of victimization and perpetration is critically important for preventing sexual aggression in this age group.

The review by Krahé et al. (2014) has identified a substantial heterogeneity in the conceptualization, operational definition, and measurement of sexual aggression, both in terms of victimization and perpetration, which makes it impossible to compare the prevalence of perpetration and victimization across studies, let alone across countries. The review identified large differences between individual studies without being able to separate variance due to differences in design and methodology from differences in the extent to which young people experience or commit sexual aggression. In addition, there is a notable shortage of studies examining psychological and sociological variables that might explain differences in

prevalence and inform interventions designed to reduce the risk of sexual aggression perpetration and victimization.

To address these problems, the purpose of this article is to map out a research agenda for the creation of a systematic and co-ordinated knowledge base on the prevalence of youth sexual aggression in Europe, rooted in a clear conceptual understanding of sexual aggression and adopting a standardized methodology committed to principles of good practice as derived from a growing body of methodological analyses. We draw on evidence from the scholarly debate on the methodology of sexual violence research and build on our own recent research to discuss pertinent methodological issues involved in studying the prevalence of (youth) sexual aggression perpetration and victimization. The paper is directed at a wide audience of researchers and practitioners studying the prevalence of sexual aggression from the victim and/or the perpetrator perspective. It is clear from the reviews of the literature discussed below that a large number of studies on the prevalence of youth sexual aggression perpetration and victimization is commissioned and carried out by institutions outside academia. By presenting an outline for a research agenda to inform the understanding of youth sexual aggression, we attempt to contribute both to the scholarly discussion of sexual violence methodology and to the harmonization of research designs and practices in studies conducted by researchers within and outside academic institutions. To achieve this aim, we begin by discussing the methodological heterogeneity of existing studies on the prevalence of sexual aggression perpetration and victimization and identify problems underlying and resulting from this heterogeneity. We then proceed to propose an approach for harmonizing research on youth sexual violence that consists of two parts: (1) the introduction of a survey instrument for studying the prevalence of sexual aggression victimization and perpetration that is informed by a large body of previous research and was tested in a multinational study involving 10 European countries and (2) the presentation of a set of best practice criteria that should be observed in future studies. In the final part, we propose and illustrate a multilevel

approach to understanding risk and vulnerability factors of sexual aggression perpetration and victimization. Although our proposals were prompted by reviewing the state of the evidence on youth sexual aggression, they apply to the study of sexual aggression perpetration and victimization more generally. We believe that the problem of sexual aggression is particularly pressing for young people who are still in the process of developing their sexual identity, sexual self-esteem, and behaviour. However, the need for a harmonized methodology for sexual aggression research based on good practice criteria is not limited to the study of sexual aggression among young people (Krebs, 2014).

If one accepts that a central problem in assessing the scale of sexual aggression perpetration and victimization is the variance introduced by the measurement process itself and the conceptual foundations on which it is based, harmonization of research methods and designs is essential. Our aim here is to promote such harmonization to facilitate comparability across studies and contribute to a clearer understanding of the scale and risk factors of sexual aggression victimization and perpetration in Europe. However, we also acknowledge that there are bound to be aspects of the measurement process that cannot be fully controlled by harmonization. Variance in prevalence rates may, for instance, also be caused by variance in awareness of sexual aggression in a given context. Higher awareness may be the result of public debate or governmental campaigns against sexual violence. As a consequence, higher prevalence figures may, paradoxically, emerge when sexual aggression is condemned more strongly in a society. The present paper elaborates ways of harmonizing the assessment of sexual aggression perpetration and victimization, arguing that it is a precondition for any comparative research, while at the same time acknowledging that it will only go some way towards clarifying the varying extent to which sexual aggression affects the lives of young people in Europe.

Problems in the Knowledge Base on Youth Sexual Aggression in Europe

The systematic review by Krahé et al. (2014) of 113 studies on youth sexual aggression conducted in 27 countries of the European Union since 2000 has shown that a valid picture of the prevalence of sexual aggression and its risk factors is precluded by the diversity of the available evidence on several dimensions:

- (1) Breadth of the knowledge base: There is a wide variability between countries in the number of studies conducted on youth sexual aggression. Whereas a few countries in Europe have an established research tradition that has led to a substantial number of studies, there are many countries for which no or very little systematic evidence is available. The number of studies conducted since 2000 identified by the review ranged from 0 to 17, with a median of no more than three studies per country.
- (b) *Scope*: The majority of studies examined sexual aggression by male perpetrators toward female victims, leaving male sexual victimization, sexual aggression in same-sex victim-perpetrator constellations, or female sexual aggression towards males largely unexplored. This is despite the fact that a growing body of evidence from the international literature points to substantial prevalence rates of male sexual victimization (e.g., Stemple & Meyer, 2014; Turchik, 2012), female sexual aggression perpetration (e.g., Fisher & Pina, 2013; Krahé, Waizenhöfer, & Möller, 2003), and sexual aggression between perpetrators and victims of the same sex (e.g., Menning & Holtzman, 2014; VanderLaan & Vasey, 2009).
- (c) *Methodology*: There was also wide variability with regard to the conceptual and operational definitions of sexual aggression, the age groups considered, the measurement tools, and the selection of variables examined as risk factors of sexual aggression or vulnerability factors of sexual victimization. For example, some studies defined the legal age of consent in the respective country as the lower age limit. Others used a younger age limit that resulted in the inclusion of instances of child sexual abuse in which consent is not an issue. Some studies included verbal sexual harassment as a noncontact form of sexual

aggression; others were restricted to contact forms of victimization and perpetration. Several studies included samples spanning a wide age range, such as victimization rates among women aged between 16 and 59, and did not report specific figures for younger age groups.

(d) *Theoretical foundations*: Although many studies included correlates of sexual aggression and victimization, few derived the selection of these variables from a theoretical framework combining risk factors at several levels, from the individual level of the victim or perpetrator to the macro level of the society in which they live.

Based on the examination of the existing

knowhttp://www.rutgers.international/programmes/y-savledge base, the multinational project on Youth Sexual Aggression and Victimization (Y-SAV;

http://www.rutgers.international/programmes/y-sav) aimed to contribute to the harmonization of research by addressing these problems. Project Y-SAV ran from 2011-2014. It was commissioned by the European Agency of Health and Consumers (EAHC) and spearheaded by Rutgers WPF in the Netherlands. Broadly speaking, it aimed to promote an integrated and collaborative approach to research and advocacy on youth sexual aggression in the European Union by multidisciplinary and multicountry dialogue, cooperation, and mobilization to action. As one result, a survey instrument was developed building on previous research by Krahé and Berger (2013) and tested in a pilot study involving data collection in ten countries (Krahé et al., 2015a). The pilot study also provided first evidence on the feasibility of combining the study of individual-level correlates with country-level variables associated with differences in the prevalence of sexual aggression perpetration and victimization.

The purpose of this paper is to present an agenda for promoting research on youth sexual aggression by developing a harmonized agenda for assessing the scale of youth sexual aggression and to illustrate a possible format for advancing the study of correlates of sexual aggression victimization and perpetration by combining individual- and macro-level variables.

A Harmonized Agenda for Studying the Prevalence of Youth Sexual Aggression

Proposing a standard approach for studying youth sexual aggression that is designed to promote the integration and comparability of research on youth sexual aggression in Europe. can be broken down into three specific tasks:

- (1) Specifying conceptual and operational definitions of sexual aggression;
- (2) Providing an instrument for *measuring the prevalence* of sexual aggression perpetration and victimization;
- (3) Outlining a set of *good practice criteria* that should be observed in the study of youth sexual aggression.

Our proposition is informed by a growing body of conceptual and methodological research that has clarified important issues involved in the measurement of sexual aggression from the victim and the perpetrator perspective (Abbey, Parkhill, & Koss, 2005; Anthony & Cook, 2012; Cook, Gidycz, Koss, & Murphy, 2011; Fisher, 2009). The format can be modified and extended depending on the specific research questions, but referring to agreed methodological quality standards and explanatory constructs will maximize compatibility of new findings with the existing theoretical and empirical literature.

Defining and Measuring Sexual Aggression

The Y-SAV project adopted a conceptual definition of sexual aggression as *behaviour* carried out with the intent or result of making another person engage in sexual activity or sexual communication despite his or her unwillingness to do so (see also Krahé et al., 2014). This definition covers victimization experiences and perpetrator behaviour of both men and women and uses behaviourally-specific descriptions of sexual aggression victimization and perpetration, which is regarded superior to the use of abstract concepts, such as "rape" or "sexual assault" (Cook et al., 2011; Krebs, 2014). It includes both physical and verbal behaviours designed to make another person engage in unwanted sexual contacts, such as holding the other person down or using threats or blackmail to override a person's

nonconsent. Our definition is compatible with the definition of the World Health Organization of sexual violence as "any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting" (World Health Organization, 2011). Adopting a conceptual definition that is not tied to legal definitions of sexual violence is common practice in survey research on sexual aggression (e.g., Basile, Smith, Breiding, Black, & Mahendra, 2014), and it has the advantage of facilitating comparisons across different jurisdictions and changes in the legal definitions over time. For multinational research in particular, imposing a uniform definition that can be applied to research in different legal systems is crucial. The conceptual definition proposed here provided the basis for developing the operational definition of sexual aggression reflected in the items of the survey instrument described below.

Youth sexual aggression as a social problem can be investigated from two complementary perspectives: (1) the perspective of the aggressor, resulting in studies of the *perpetration* of sexual aggression; and (2) the perspective of the target person, resulting in studies of sexual *victimization*. The suggestions for conceptualizing and operationalizing sexual aggression apply to both perspectives. To arrive at a comprehensive coverage of different forms of sexual aggression, a matrix of the specific manifestations of sexual aggression was developed, as shown in Figure 1.

Coercive strategies. This dimension comprises the different tactics by which nonconsensual sexual contacts are obtained. In line with the majority of other measures based on behavioural descriptions (see Cook et al., 2011 for a review), we propose to distinguish between (a) the use or threat of physical force to overcome another person's resistance, (b) the exploitation of the fact that the other person is unable to resist or express nonconsent, for example because s/he is incapacitated through alcohol, (c) the use of verbal pressure, which involves threats to end the relationship, to spread rumours about the target person, or

degrading and humiliating treatment, such as questioning their sexuality, and (d) exploiting a position of power or authority that undermines the other person's freedom to refuse consent, for example as a teacher or boss. The first three coercive strategies were adopted from the revised "Sexual Experiences Survey" (SES; Koss et al., 2007). Exploitation of a position of authority was included as a further coercive strategy because it is considered particularly relevant for youth sexual victimization.

 (1) Coercive strategies Threat or use of force Exploitation of victim inability to resist Verbal pressure Exploitation of authority position 		 (2) Sexual acts Sexual touch Attempted penetration Completed penetration Other sexual acts (e.g., oral sex)
	Sexual Aggression - Perpetration - Victimization	
(3) Relationship constellations - Former or current partners - Friends, acquaintances, dates - Strangers - Authority figures		(4) Gender constellationsMale on femaleMale on maleFemale on maleFemale on female

Figure 1. A matrix for conceptualizing and measuring sexual aggression

Sexual acts. This dimension refers to the nature of the unwanted sexual contact compelled. In addition to attempted and completed acts that involve penetration of the body, such as vaginal, anal, or oral penetration, it also includes nonpenetrative sex, such as sexual touch. The sexual acts are based on the revised "Sexual Experiences Survey" (SES; Koss et al., 2007).

Victim-perpetrator constellation by social relationship. The majority of previous instruments for measuring sexual aggression have not systematically broken down prevalence rates by the type of relationship between victim and perpetrator. For example, the revised SES (Koss et al., 2007) does not include any questions about victim-perpetrator relationship. Some survey tools use follow-up questions concerning the relationship with the perpetrator when incidents of victimization and perpetration are reported in response to nonspecific screening questions (e.g., Macdowall et al., 2013; Sinozich & Langton, 2014). However, as noted by Cook et al. (2011), the questions presented to participants are crucial in triggering recall of the type of incidents the survey seeks to assess. In this vein, we consider the breakdown of questions about sexual aggression victimization and perpetration by relationship to the perpetrator/victim to be critical for obtaining a comprehensive picture of the prevalence of sexual victimization and perpetration in different types of victim-perpetrator relationships. Finding out whether certain forms of sexual aggression are particularly prevalent in certain types of relationships, for instance among intimate partners, is essential for informing prevention efforts. In our proposed format, three categories of victim-perpetrator relationships are distinguished: (a) current or former partners with a history of consensual sex, (b) people who know each other as friends, acquaintances, or casual partners, and (c) strangers with no or only a very brief prior acquaintanceship, for example people who have just met in a club.

Victim-perpetrator constellation by gender. Finally, a full assessment of sexual aggression should consider victimization experiences by women and men as well as perpetration behaviour by men and women. In addition, the measure should be applicable to both same-sex and opposite-sex gender constellations to include sexual aggression in both heterosexual and homosexual encounters. This requires the development of different versions of the assessment tool that are appropriate for the respective gender constellations, for instance in the specification of sexual acts. The revised version of the SES presents the items in gender-neutral language by referring to victims and perpetrators as "a person", and

reporting rates were found to be unaffected by the use of gender-neutral as compared with gender-specific language (Anthony & Cook, 2012). Whether the perpetrators or victims were male or female is assessed only with a summary item at the end referring to all reported incidents (female only, male only, or both females and males). This format precludes the collection of specific information comparing the overall rate and specific form of sexual aggression in same-sex and opposite victim- perpetrator constellations. Again, such information is informative not only for obtaining a clearer picture of the specific manifestations of sexual aggression, but also for tailoring prevention strategies.

The Sexual Aggression and Victimization Scale (SAV-S): A Tool for Assessing Sexual Aggression Victimization and Perpetration

Based on the conceptualization of sexual aggression presented in the previous section, an instrument is proposed for assessing the prevalence of sexual aggression victimization and perpetration with a standard set of items. This instrument, the Sexual Aggression and Victimization Scale (SAV-S), was originally developed for a study with college students in Germany (see Krahé & Berger, 2013, for a detailed description of the scale generation process). It was pilot-tested in a multinational study involving 10 EU countries as part of the Y-SAV project.

Reflecting the matrix presented in Figure 1, the SAV-S addresses four coercive strategies: (1) the use of threat of physical force, (2) the exploitation of the other person's inability to resist the unwanted sexual advances, and (3) the use of verbal pressure. These coercive strategies are crossed with three types of victim-perpetrator relationship: (a) former/current partners, (b) friends/acquaintances, and (c) strangers. For each combination of coercive strategy and victim-perpetrator relationship, participants are asked whether they have experienced any of four types of unwanted sexual acts: (a) sexual touch, (b) attempted sexual intercourse, (c) completed sexual intercourse, and (d) other sexual acts (e.g., oral sex). As noted above, the exploitation of a position of authority was added as a fourth coercive strategy

because of its relevance for youth sexual victimization. Following research by Abbey et al. (2005), the questions were ordered by coercive strategy, and the different sexual acts were listed under each strategy. Abbey et al. argued that the type of strategy used by the perpetrator would be most salient, and therefore leading with the questions about coercive strategy would facilitate recall.

The detailed breakdown of sexual victimization and aggression by victim-perpetrator relationship is one unique aspect of the new measure. The second unique aspect is the presentation of gender-appropriate versions depending on participants' gender and past sexual experience. For instance, men who report exclusively heterosexual experiences are assigned a version that refers to a female victim/perpetrator, whereas men who report exclusively same-sex experiences receive the version that refers to a male victim/perpetrator, with the presented sexual acts adapted accordingly (such as anal rather than vaginal intercourse). In the same way, women with only heterosexual contacts are presented with items referring to male perpetrators/victims, and women with only same-sex experiences complete items referring to a female victim/perpetrator. Participants who report both opposite-sex and same-sex experiences receive the items for each gender constellation (see Krahé & Berger, 2013). This format makes it possible to establish separate prevalence rates for sexual aggression experienced by, or committed toward, persons of the same and the opposite sex.

The SAV-S is particularly suitable for use in online surveys because participants can automatically be assigned to the appropriate version of the questionnaire depending on their gender and sexual experience background on the basis of screening questions at the beginning of the questionnaire. For example, participants who identify themselves as female and as only ever having had sexual contacts with men are assigned to the heterosexual female version, participants who self-identify as male and indicate that they had sex with both men and women receive the items for both male and female victims/perpetrators.

Parallel versions are available to address victimization and perpetration. For each combination of coercive strategy by victim-perpetrator relationship by sexual act, participants are asked to click the appropriate button if they made the respective experience (e.g., were made to engage in unwanted sexual intercourse by a current or former partner who used or threatened to use physical force) or engaged in the respective behavior (made a current or former partner engage in sexual intercourse against his/her will by using or threatening to use physical force) "once" (1) or "more than once" (2). An option to indicate "I did not experience any of these" and "I did not engage in any of these actions" was provided for each coercive strategy.

An example item from the female version addressing victimization is presented in Appendix 1. A full illustration of the different facets of the SAV-S can be found in an online demo version under http://www.w-lab.de/sav-s.html. Depending on responses to the opening questions about gender and sexual experience, users are directed to the appropriate versions of the measure. The different versions can be accessed in the demo version by entering the respective responses to the opening questions about gender and sexual experience.

Pilot-testing. The SAV-S was pilot-tested for use in comparative research across different countries in 10 EU member states (Austria, Belgium, Cyprus, Greece, Lithuania, the Netherlands, Poland, Portugal, Slovakia, and Spain), as reported in Krahé et al. (2015a). A total of 3,480 participants aged between 18 and 27 years took part in the study. Age 18 was chosen as the lower age bracket for the participants to avoid the problem of obtaining parental consent for underage participants that might have introduced a selection bias into the data. Based on the understanding of late adolescence and early adulthood as a distinct developmental period (Coté, 2014), we set the upper age limit for our participants at 27. We used 27 instead of 25 to reflect the age distribution of the student samples recruited in the 10 countries, a substantial number of whom were aged between 25 and 27. Few participants were older than 27, and these were excluded from the sample. Imposing a fixed age bracket for

participants considered youths appears problematic as life circumstances of young people vary substantially depending, on culture, educational level, and social class. For example, the transition from school to university has been shown to be a high-risk period for sexual victimization (Flack et al., 2008), which does not apply to young people who do not enter the university system. Therefore, the age bracket of the samples included in studies of sexual aggression perpetration and victimization should be determined with respect to the specific groups targeted in the survey.

In each country, a careful process of translation and back-translation was employed to ensure the equivalence of the questions. Moreover, in nine of the 10 countries (all except Austria) qualitative interviews were conducted to ascertain that the items were interpreted in similar ways and as intended by the team who developed the items (Krahé et al., 2015b). In addition, in one country (Greece) both online and paper-and-pencil versions of the scale were utilized, yielding very similar prevalence rates in two comparable samples of university students (see Krahé et al., 2015a, for more detail). The SAV-S is currently available in nine languages (English, German, Dutch, Greek, Lithuanian, Polish, Portuguese, Slovakian, and Spanish).

Prevalence rates were obtained from participants retrospectively from the age of consent, which was specified according to the legal situation in each country. This ensured that incidents of child sexual abuse were excluded from the count, which is deemed critical because consent is not an issue in child sexual abuse and the focus of the SAV-S is on assessing nonconsensual sexual experiences. The results showed that across all ten countries, 32.2% of female and 27.1% of male participants reported at least one "yes" response to the victimization items of the SAV-S. Female victimization rates ranged from 19.7% in Lithuania to 52.2% in the Netherlands, with the legal age of consent being 16 years in both countries. Male victimization rates ranged from 10.1% in Belgium (age of consent 16 years) to 55.8% in Greece (age of consent 15 years). In five countries (Cyprus, Greece, Lithuania, Poland, and

Portugal), victimization rates were significantly higher for men than for women. The findings need to be interpreted with caution, as they are based on convenience samples rather than randomly selected or representative samples of young adults in the different countries. However, similar results have been found in other studies. For example, victimization rates for Greece obtained by Chan, Straus, Brownridge, Tiwari, & Leung (2008), using the Sexual Coercion Subscale of the CTS2 were highly similar to the Krahé, Berger, et al. (2015) findings, showing rates of 59.5% for men and 42% for women. Male sexual victimization by women is also being increasingly recognized in research in the United States (e.g., French, Tilghman, & Malebranche, 2015; Stemple & Meyer, 2014). Nevertheless, the possibility that the surprisingly high male victimization rates reflect an artefact must be considered. Male respondents may, for instance, experience female assertiveness or female rejection as aggression or may experience women's sexual advances as 'uncontrollable' and thus coercive. Clearly, male victimization by women requires more extensive analysis in future studies.

Perpetration rates across all ten countries were 16% for male and 5% for female participants. Again there was a considerable variability between countries, with a range from 5.5% in Belgium to 48.7% in Greece for male respondents and from 2.6% in Belgium to 14.8% in Greece for female participants. Perpetration rates were consistently higher for men than for women in all countries, which confirms the common pattern of results from the international research literature (see Krahé, 2013, and Tharp et al., 2013, for reviews). Although the focus of the pilot studies was on studying sexual aggression in youth engaging in heterosexual contacts, the format of the SAV-S also allows the study of same-sex sexual aggression, as explained above.

The data from the pilot study reveal a substantial range in the prevalence of sexual aggression perpetration and victimization among young people in the ten countries included in the study. The advantage of using the same assessment tool, tested for cultural equivalence,

is that the observed variability cannot be attributed to differences in methodology and lends itself more conclusively to a comparative interpretation of the scale of sexual aggression in different countries. At the same time, it should be noted that the pilot study included convenience samples recruited in each country, so the findings are best seen as a preliminary demonstration of the benefits of studying youth sexual aggression with a harmonized methodological approach rather than providing conclusive evidence on national-level prevalence rates and cross-country comparisons.

Modifications. The SAV-S was designed to facilitate a comprehensive analysis of sexual aggression perpetration and victimization. At the same time, it also lends itself to the analysis of more specific research questions for which particular aspects of the instrument may be selected. For example, if the focus of a study is on victimization, only the victimization items can be presented. If the focus is on male perpetration of sexual aggression toward other men, only the perpetration items from the same-sex version for men may be selected. If there are space constraints precluding the administration of the full instrument, the superordinate items about coercive strategies and sexual acts may be presented without the differentiation by victim-perpetrator relationship. Finally, for a comprehensive picture of the circumstances of sexual aggression perpetration and victimization, researchers may want to add items that ask about specific aspects of the respective incident, for example about the number of perpetrators involved or about alcohol consumption by the perpetrator and/or victim. This can be achieved in an economic fashion in the online administration of the SAV-S so that only participants who endorse a particular victimization and perpetration item are prompted to indicate the number of perpetrators involved.

Thus, the SAV-S offers a flexible tool that can be adapted to the purposes and possibilities of a particular study, yet remains comparable to other studies using the instrument by relying on a shared conceptualization and operationalization of sexual aggression. We strongly advise against using a single broad question that does not even

distinguish between coercive strategies because the diversity of experiences that may lie behind a "yes" response remains unclear. Moreover, broad questions lead to systematic underreporting because they fail to cue participants' recall of experiences outside the "real rape" stereotype of a violent stranger attack (Cook et al., 2011). A minimum approach should be to use the superordinate items distinguishing between different coercive strategies, prefaced by an explicit explanation that sexual coercion can happen in different victim-perpetrator relationships.

Good Practice Criteria for Measuring Sexual Aggression and Victimization

Establishing a valid knowledge base on the problem of youth sexual aggression requires high-quality research based on state-of-the-art methods and procedures. In recent years, the number of methodological studies addressing issues of validity and reliability of measuring sexual aggression has increased constantly (e.g., Abbey et al., 2005; Cook et al., 2011; Kolivas & Gross, 2007; Krebs et al., 2011). Research examining ethical issues in the study of sexual aggression has also been growing (e.g., Edwards, Kearns, Calhoun, & Gidycz, 2009). This work has provided important guidance about good practice in the study of sexual aggression, which is reflected in the development of the SAV-S. It has also informed the list of criteria proposed below, which refer not only to the conceptualization and measurement of sexual aggression but also to ethical considerations involved in asking highly sensitive questions about sexual victimization and perpetration.

Conceptual issues. At the level of conceptualizing sexual aggression, the following good practice criteria should be observed to promote the comparability of research findings across studies:

(1) Studies should always present an explicit conceptual definition of sexual aggression/victimization.

- (2) The definitions of sexual aggression adopted for research purposes should be positioned in relation to relevant legal definitions (e.g., whether they are broader/narrower than legal definitions, what other differences/similarities there are).
- (3) The definition of youth sexual aggression should be clearly distinguishable from child sexual abuse as per the relevant legal definition and specification of age of consent.

 We argue that it is conceptually problematic to ignore the legal age of consent in studies where sexual aggression is defined with reference to nonconsent as this would blur the distinction between nonconsensual sex and sexual abuse (where consent is irrelevant). This distinction is critical, for instance, for examining childhood sexual abuse as a potential vulnerability factor for revictimization in adolescence or early adulthood and to link a particular study to criminal justice data on the prevalence of sexual abuse and sexual victimization after the age of consent, respectively. Such comparisons are critical, for example, to gauge the dark figure of sexual aggression by comparing prevalence rates obtained in surveys to rates reported to the police. It must be acknowledged, however, that differences in the legal age of consent in different jurisdictions create problems for crossnational comparisons. If the focus of a study is on comparing prevalence rates across countries, we recommend collecting one-year prevalence rates rather than life-time prevalence rates to ensure equivalent time frames.

Operationalization and measurement. At the level of operational definitions and instruments used to elicit reports of sexual aggression perpetration and victimization, the following good practice criteria should be observed:

(1) Recruitment of participants and sample composition need to be described in detail: To what extent is the sample representative of youth in the age group nationwide or in specific communities; is it a convenience sample, a student vs. community vs. clinical sample, a sample recruited from shelters, etc.?

- (2) As noted above, behaviourally specific descriptions of sexual aggression should be used (e.g., "have you forced another person/been forced by another person to have sexual intercourse through the use or threat of force") rather than categorical labels (e.g., "have you ever been raped?"; see also Cook et al., 2011). Coercive strategies should be explained by examples (e.g., "holding someone down" in the case of physical coercion).
- (3) The language used must be appropriate for the age group under study (for example, whether to use terms like boy/girl or man/woman, or using formal or informal forms of address in languages that make this distinction). Qualitative pilot studies with members of the target age group may be required to meet this criterion.
- (4) Where modifications are made to existing scales, these need to be documented in detail (see Kuyper et al., 2013, for an example).
- (5) When reports of victimization and perpetration are collected in the same study, parallel questions should be used for the victim and the perpetrator perspective, so that victimization and perpetration reports can be compared more conclusively.
- (6) If possible, measures should be designed such that they can be used (by others, if not in the respective study) to elicit reports of sexual aggression/victimization in heterosexual as well as homosexual encounters to reduce the influence of method variance in studies of heterosexual and same-sex aggression.

Reporting results. Again with a view to increasing the comparability and compatibility of research findings from different studies, it is critical that a standard terminology is used to designate findings as *prevalence* or *incidence* rates: A study provides prevalence rates if it counts the number of individuals who experienced/committed sexual aggression at least once in a defined period (e.g., from the age of sexual consent onwards or in the last 12 months). It provides incidence rates if it counts the number of separate incidents, for example the number of sexual assaults reported to a counselling agency, in a specified time window (typically a 12-month period).

Ethical considerations. Finally, given the potentially distressing nature of questions about sexual aggression, a good practice approach requires observation of ethical safeguards:

- (1) Formal approval of the measures and procedure by an ethics committee (institutional review board) should always be obtained.
- (2) Researchers should familiarize themselves with the literature on potential negative effects of participating in sexual victimization research and consider the findings in the design of their measures and procedures (e.g., Edwards, et al., 2009).
- (3) Measures should be put in place to provide support for participants in case the survey elicits the need for professional help. This is a requirement both for data collection in situ and in online surveys. At minimum, a list of counselling agencies should be presented to all participants at the end of the survey, and a contact address should be provided for further support (see, for instance, Macdowall et al., 2013). This approach was chosen in the pilot studies of the SAV-S where addresses of counselling agencies were provided to all participants in each country on the final page of the online survey (Krahé, Berger et al., 2015). If possible, arrangements for crisis intervention should be put in place with local support services to which research participants may be referred. This approach was used in the study by Krahé and Berger (2013). As participants completed the SAV-S, they could press a "Help" button presented on each page. The button was programmed to trigger an email to the research team who could then refer the participant to a local counselling agency with which arrangements for immediate intervention had been made prior to the start of the data collection.

Multilevel Analysis of Risk Factors of Sexual Aggression Victimization and Perpetration

In addition to exploring the extent to which youth sexual aggression is a problem across Europe, understanding the factors associated with variations in the rates of sexual aggression and victimization is critical, not least to provide a basis for designing evidence-based prevention measures (Walton, 2014). The country reports compiled as part of the Y-

SAV project revealed a dramatic lack of interventions rooted in theory and evaluated using state-of-the-art designs (see: http://www.rutgers.international/our-products/resources/y-sav-publications). Therefore, in the final part of our proposal for a research agenda, we illustrate an approach for combining both individual-level and country-level variables associated with differential probabilities of experiencing or committing sexual aggression, which has been made possible by advances in the development of complex multilevel modelling techniques (Hox, 2010).

There is a broad consensus among researchers that sexual aggression results from the interplay of variables located at different levels, from the macro level of society to the individual level of perpetrators. At the *macro* level of societies, variables include, for instance, a general tolerance of violent behaviour, a power differential between men and women, or the drinking culture among young people. At the *meso level* of community functioning, failure to impose sanctions on perpetrators of sexual violence and promotion of a sense of men's entitlement to women are seen as promoting men's sexual violence towards women. At the *micro level* of interpersonal interactions, the odds of sexual violence vary as a function of opportunity structures, and peer approval of men's violence towards intimate partners. Finally, at the *individual* level, attitudes condoning violence, individual drinking behaviour, or childhood experiences of abuse may play a role as vulnerability factors for sexual aggression perpetration and victimization (European Commission, 2010; Tharp et al., 2013).

The levels interact and mutually influence one another in complex ways, which is clear from the fact that not all individuals exposed to the same macro-level and meso-level variables will show sexual aggression, just as not all sexual aggressors share the same conditions at the micro, meso, or macro levels. Identifying specific constellations of risk indicators across the multilevel structure is a key objective for theoretical development as well as for designing theory-based interventions.

The feasibility of analyzing variations in the likelihood of sexual aggression victimization and perpetration in a multilevel framework was demonstrated in the pilot study in ten EU countries (Krahé et al., 2015). At the individual level, the following potential covariates of perpetration and victimization were selected on the basis of past research: (a) low sexual assertiveness, particularly the ability to reject unwanted sexual advances (Walker, Messman-Moore, & Ward, 2011), (b) attitudes condoning the use of physical violence in dating relationships (Price & Byers, 1999), and (c) alcohol use, both in terms of general drinking habits and in terms of drinking in the context of sexual interactions (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004). At the country level, based on research that emphasizes patriarchal power structures and corresponding low status of women as a cause of female victimization by men (Hines, 2007), national indicators of gender equality in three domains were included, taken from the European Gender Equality Index (EGEI; http://eige.europa.eu/content/gender-equality-index): (a) political power (defined, e.g., by women's share of members of government and members of parliament); (b) economic power (defined, e.g., by women's share of board memberships and directorships in large companies), and (c) work-related equality (defined, e.g., by the extent to which women and men have equal access to employment and appropriate working conditions). Scores could range from 1 (total inequality) to 100 (total equality). For the 10 countries included, scores ranged from 31.8 (Spain) to 75.4 (Slovakia) on political power, from 4.7 (Cyprus) to 39.4 (Netherlands) on economic power, and from 59.7 (Greece) to 73.9 (Austria) on work equality.

At the individual level, victimization rates were negatively related to sexual assertiveness and positively related to alcohol use in sexual encounters. Perpetration rates were positively related to attitudes condoning physical dating violence among men and women and with alcohol use in men and negatively related to sexual assertiveness in women. At the country level, lower gender equality in economic power and in the work domain were related to higher male perpetration rates. Lower gender equality in political power was linked

to higher male victimization rates. None of the three country-level variables predicted women's sexual victimization or perpetration, which may be due to insufficient power.

Studies including a larger number of countries are required for a more conclusive assessment of the role of socio-structural variables in explaining variability in youth sexual aggression.

The variables included at the individual and the country levels were selected on the basis of their theoretical relevance to understanding sexual aggression, as explained in detail in Krahé et al. (2015a). In the present context, they were meant to illustrate the feasibility of a multilevel analysis in which variables assessed at different levels can be included in the same statistical model. A wide variety of further theory-based indicators of risk at the country level, such as drinking patterns, dating habits, or sexuality education in schools, is available that can be included in multilevel designs and contribute to a better understanding of the variability in the extent to which sexual aggression is a problem among young people in different countries.

Concluding Comments

The proposals outlined in this paper seek to promote the study of sexual aggression by offering a coherent, yet flexible methodology for future studies on the prevalence and risk factors of sexual aggression, based on a shared understanding of good practice criteria and a multilevel framework of risk factors. Harmonization of research methodologies and procedures is an important step towards adequately assessing variance in incidence and prevalence. This does not exempt researchers from the obligation to keep the many complex mechanisms involved in the reporting of sexual aggression and victimization in mind.

Nevertheless, we hope the agenda we proposed here will improve research practice in substantial ways and, ultimately, will serve to create a basis for concerted action at the policy level to effectively address youth sexual aggression and promote the sexual health and wellbeing of young people in Europe.

References

- Abbey, A., Parkhill, M. R., & Koss, M. P. (2005). The effects of frame of reference on responses to questions about sexual assault victimization and perpetration. *Psychology of Women Quarterly*, 29, 364-373. doi: 10.1111/j.1471-6402.2005.00236.x
- Abbey, A., Zawacki, T., Buck, P. O., Clinton, A. M., & McAuslan, P. (2004). Sexual assault and alcohol consumption: What do we know about their relationship and what types of research are still needed? *Aggression and Violent Behavior*, *9*, 271-303. doi: 10.1016/S1359-1789(03)00011-9.
- Anthony, E. R., & Cook, S. L. (2012). Assessing the impact of gender-neutral language on disclosure of sexual violence. *Psychology of Violence*, 2, 297-307. doi: 10.1037/a0028562
- Basile, K. C., Smith, S. G., Breiding, M. J., Black, M. C., & Mahendra, R. (2014). *Sexual violence surveillance: Uniform definitions and recommended data elements. Version*2.0. Centers for Disease Control and Prevention. National Center for Injury Prevention and Control, Atlanta, Georgia. Retrieved online Feb 17, 2015, from:

 http://www.cdc.gov/violenceprevention/pdf/sv_surveillance_definitionsl-2009-a.pdf
- Chan, K. L., Straus, M.A., Brownridge, D. A., Tiwari, A. & Leung, W. C. (2008). Prevalence of dating partner violence and suicidal ideation among male and female university students worldwide. *Journal of Midwifery & Women's Health*, *53*, 529-537. doi:
- Cook, S. L., Gidycz, C. A., Koss, M. P., & Murphy, M. (2011). Emerging issues in the measurement of rape victimization. *Violence against Women, 17*, 201-218. doi: 10.1177/1077801210397741
- Côté, J. E. (2014). The dangerous myth of emerging adulthood: An evidence-based critique of a flawed developmental theory. *Applied Developmental Science*, *18*, 177-188. doi: 10.1080/10888691.2014.954451

- Edwards, K. M., Kearns, M. C., Calhoun, K. S., & Gidycz, C. A. (2009). College women's reactions to sexual assault research participation: Is it distressing? *Psychology of Women Quarterly*, *33*, 225-234. doi: 10.1111/j.1471-6402.2009.01492.x
- European Commission (2010). Feasibility study to assess the possibilities, opportunities and needs to standardise national legislation on violence against women, violence against children and sexual orientation violence. Brussels: European Union.

 http://www.europarl.europa.eu/eplive/expert/multimedia/20110405MLT17038/media-20110405MLT17038.pdf
- Fisher, B. S. (2009). The effects of survey question wording on rape estimates: Evidence from a quasi-experimental design. *Violence against Women, 15*, 133-147. doi: 10.1177/1077801208329391
- Fisher, N. L., & Pina, A. (2013). An overview of the literature on female-perpetrated adult male sexual victimization. *Aggression and Violent Behavior*, 18, 54-61. doi: 10.1016/j.avb.2012.10.001
- Flack, W. F., Caron, M. L., Leinen, S. J., Breitenbach, K. G., Barber, A. M., Brown, E. N. et al. (2008). "The red zone": Temporal risk factors for unwanted sex among college students. *Journal of Interpersonal Violence*, *32*, 1177-1196. doi: 10.1177/0886260508314308
- French, B. H., Tilghman, J. D., & Malebranche, D. A. (2015). Sexual coercion context and psychosocial correlates among diverse males. *Psychology of Men & Masculinity*. *16*, 42-53. Doi: 10.1037/a0035915
- Hines, D. A. (2007). Predictors of sexual coercion against women and men: A multilevel, multinational study of university students. *Archives of Sexual Behavior*, *36*, 403–422. doi: 10.1007/s10508-006-9141-4.
- Hox, J. (2010). *Multilevel analysis: Techniques and applications* (2nd ed.). New York: Routledge.

- Kolivas, E. D., & Gross, A. M. (2007). Assessing sexual aggression: Addressing the gap between rape victimization and perpetration prevalence rates. *Aggression and Violent Behavior*, 12, 315-328. doi:10.1016/j.avb.2006.10.002
- Koss, M. P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M., Ullman, S., West, C., & White, J. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly, 31*, 357-370. doi:10.1111/j.1471-6402.2007.00385.x
- Krahé, B. (2000). Sexual scripts and heterosexual aggression. In T. Eckes & H. M. Trautner (Eds.), *The developmental social psychology of gender* (pp. 273-292). Mahwah, NJ: L. Erlbaum.
- Krahé, B. (2013). *The social psychology of aggression* (2nd ed.). Hove: Psychology Press.
- Krahé, B., & Berger, A. (2013). Men and women as perpetrators and victims of sexual aggression in heterosexual and same-sex encounters: A study of first-year college students in Germany. *Aggressive Behavior*, *39*, 391-404. doi: 10.1002/ab.21482
- Krahé, B., Berger, A., Vanwesenbeeck, I., Bianchi, G., Chliaoutakis, J. Fernández-Fuertes, A.
 A. [...] Zygadło, A. (2015). Prevalence and correlates of young people's sexual aggression perpetration and victimization in 10 European countries: A multilevel analysis. *Culture, Health & Sexuality*. doi: 10.1080/13691058.2014.989265
- Krahé, B., De Haas, S., Vanwesenbeeck, I., et al. (2015). Understanding survey questions about sexual aggression in cross-cultural research: A qualitative study with young adults from nine European countries. Manuscript under review.
- Krahé, B., Tomaszewska, P., Kuyper, L., & Vanwesenbeeck, I. (2014). Sexual aggression as a threat to young people's sexual well-being in Europe: A review of the evidence from 27 EU countries. *Aggression and Violent Behavior*, 19, 545-558. doi: 10.1037/t02126-000

- Krahé, B, Waizenhöfer, E., & Möller, I. (2003). Women's sexual aggression against men: Prevalence and predictors. *Sex Roles*, 49, 219-232. doi: 10.1023/A:1024648106477
- Krebs, C. (2014). Measuring sexual victimization: On what fronts is the jury still out and do we need it to come in? *Trauma, Violence, & Abuse, 15*, 170-180. doi: 10.1177/1524838014521028
- Krebs, C. P., Lindquist, C. H., Warner T. D., Fisher, B. S., Martin. S. L., & Childers, J. M. (2011). Comparing sexual assault prevalence estimates obtained with direct and indirect questioning techniques. *Violence Against Women 17*, 219-235. doi: 10.1177/1077801210397743
- Kuyper, L., de Wit J., Smolenski, D., Adam, P., Woertman, L. & van Berlo, W. (2013).
 Gender differences in patterns of experienced sexual coercion and associated
 vulnerability factors among young people in the Netherlands. *Journal of Interpersonal Violence*, 28, 3149-3170. doi: 10.1177/0886260513488689
- Macdowall, W., Gibson, L. J., Tanton, C., Mercer, C. H., Lewis, R., Clifton, S., ... Wellings,
 K. (2013). Lifetime prevalence, associated factors, and circumstances of non-volitional sex in women and men in Britain: Findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *The Lancet*, 382(9907). doi: 10.1016/S0140-6736(13)62300-4
- Menning, C. L., & Holtzman, M. (2014). Processes and patterns in gay, lesbian, and bisexual sexual assault: A multimethodological assessment. *Journal of Interpersonal Violence*, 29, 1071-1093. doi: 10.1363/3908207
- Price, L. E., & Byers, E. S. (1999). The Attitudes Towards Dating Violence Scales:

 Development and initial validation. *Journal of Family Violence*, *14*, 351-375.doi: 10.1023/A:1022830114772

- Sinozich, S., & Langton, L. (2014). Rape and sexual assault victimization among college-age females, 1995–2013. Special Report, U.S. Department of Justice.Retrieved 17 Feb, 2015, from: www.bjs.gov/content/pub/pdf/rsavcaf9513.pdf
- Stemple, L., & Meyer, I. H. (2014). The sexual victimization of men in America: New data challenge old assumptions. *American Journal of Public Health*, *104*, e19-e26. doi: 10.2105/AJPH.2014.301946
- Tharp, A. T., DeGue, S., Valle, L. A., Brookmeyer, K. A., Massetti, G. M., & Matjasko, J. L. (2013). A systematic qualitative review of risk and protective factors for sexual violence perpetration. *Trauma*, *Violence*, & *Abuse*, *14*, 133-167. doi: 10.1177/1524838012470031
- Turchik, J. A. (2012). Sexual victimization among male college students: Assault severity, sexual functioning, and health risk behaviors. *Psychology of Men & Masculinity*, *13*, 243-255. doi: 10.1037/a0024605
- VanderLaan, D. P., & Vasey, P. L. (2009). Patterns of sexual coercion in heterosexual and non-heterosexual men and women. *Archives of Sexual Behavior*, *38*, 987-999. doi: 10.1007/s10508-009-9480-z
- Vanwesenbeeck, I. (2008). Sexual violence and the MDGs. *International Journal of Sexual Health*, 20, 25-50. doi: 10.1080/19317610802157028
- Walker, D. P., Messman-Moore, T. L., & Ward, R. M. (2011). Number of sexual partners and sexual assertiveness predict sexual victimization: Do more partners equal more risk?

 Violence and Victims, 26, 774-787. doi:10.1891/0886-6708.26.6.774
- Walton, G. M. (2014). The new science of wise psychological interventions. *Current Directions in Psychological Science*, 23, 73-82. doi: 10.1177/0963721413512856
- World Health Organization (2011). *Violence against women*. Fact sheet No. 239. Retrieved September 17, 2013, from: http://www.who.int/mediacentre/factsheets/fs239/en/

Appendix 1

Example items and example page from the SAV-S. The full text of the survey can be accessed online: http://www.w-lab.de/sav-s.html.

Victimization items:	Perpetration items:		
Heterosexual version for women:	Heterosexual version for women:		
Has a man ever made (or tried to make) you have sexual contact with him <u>against your</u> will by threatening to use force or by	Have you ever made (or tried to make) a man have sexual contact with you against his will by threatening to use force or by harming		
harming you?	him?		
- My current or former partner in a steady relationship to engage in	sexual touch Once - More than once		
- A friend or acquaintance to engage in	attempted intercourse		
- A stranger (e.g., someone I met at a	Once - More than once		
disco) to engage in	completed intercourse		
7 8 8	Once - More than once		
	other sexual acts (e.g., oral sex)		
	Once - More than once		
[I did not experience any of these]	[I did not engage in any of these actions]		
Has a man ever made (or tried to make) you	Have you ever made (or tried to make) a man		
have sexual contact with him <u>against your</u>	have sexual contact with you <u>against his will</u>		
will by exploiting the fact that you were	by exploiting the fact that he was unable to		
unable to resist (e.g., after you had had too	resist (e.g., after he had had too much		
much alcohol or drugs)?	alcohol or drugs)?		
Has a man ever made (or tried to make) you	Have you ever made (or tried to make) a man		
have sexual contact with him <u>against your</u>	have sexual contact with you <u>against his will</u>		
will by putting verbal pressure on you (e.g., by threatening to end the relationship,	by putting verbal pressure on him (e.g., by threatening to end the relationship,		
humiliating or blackmailing you)?	humiliating or blackmailing you)?		
Has a man ever made (or tried to make) you	Have you ever made (or tried to make) a man		
have sexual contact with him against your	have sexual contact with you <u>against his will</u>		
will by using his position of authority or	by using your position of authority or		
power over you (e.g., as a teacher, sports	power over him (e.g., as a teacher, sports		
coach, boss etc.)?	coach, boss etc.)?		
Same-sex version for women:	Same-sex version for women:		
Has a woman ever made (or tried to make)	Have you ever made (or tried to make)		
you have sexual contact with her against	another woman have sexual contact with you		
your will by threatening to use force or by	against her will by threatening to use force		
harming you?	or by harming her?		

Note. The same-sex version refers to victims and perpetrators of the same sex as the participant; participants who indicate sexual contacts with both opposite-sex and same-sex partners receive the items twice, once for a same-sex and once for an opposite-sex partner.

Screen shot from the SAV-S: Victimization version for women with only heterosexual contact, coercive strategy: use or threat of physical force.

Has a man ever made (or tried to make) you have sexual contact with him <u>against your will</u> by threatening to use force or by harming you?				
My current or former partner in a steady relationship to engage in				
sexual touch attempted intercourse completed intercourse other sexual acts (e.g., oral sex)	once	more than once		
sexual touch attempted intercourse completed intercourse other sexual acts (e.g., oral sex)	once	more than once		
A stranger (e.g., someone I met at a disco) to engage in				
sexual touch attempted intercourse completed intercourse other sexual acts (e.g., oral sex) I did not experience any of these.	onoe	more than once		