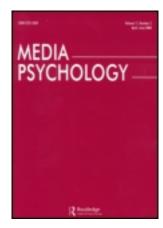
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### Self-Perceived Effects of Pornography Consumption in a Sample of Indonesian **University Students**

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### Self-Perceived Effects of Pornography Consumption in a Sample of Indonesian University Students

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Self-perceived effects of pornography consumption were studied in a sample of university students in Indonesia—a conservative, Muslim majority country with strict anti-pornography laws. Using a cross-sectional design and a modified version of the Pornography Consumption Effect Scale (PCES), we assessed participants' reports of how pornography affected their sexual knowledge, attitude toward sex, sex life, perception of and attitude toward the opposite gender, and life in general. The area of attitude toward sex excepted, the study found that both men and women reported significantly larger positive than negative effects. Further, as compared to women, men reported significantly larger negative effects of their pornography consumption. For both genders, pornography-related variables were found to add significantly to the prediction of both positive and negative self-perceived effects of pornography consumption over and above a number of included control variables.

Relative to adverse effects, potential positive effects of pornography consumption remain greatly understudied (Diamond, 2009; Doring, 2009; Mc-Kee, 2007a, 2007b). Further, effects of pornography consumption have been studied almost exclusively using Western background samples and without direct reference to the consumers' own self-perceived experiences of such

The findings and conclusions in this article are those of the authors and do not necessarily represent the views of the University of Surabaya.

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effects (e.g., Hald, Smolenski, & Rosser, 2013; Weinberg, Williams, Kleiner, & Irizarry, 2010).

While such studies remain crucial to the study of effects of pornography at large, more direct approaches to the study of effect and culturally diverse study samples would allow for cross-cultural comparison and additional insights into effects of pornography consumption.

In the following, we use a culturally unique university sample of young adults from Indonesia, a religious, sexually conservative Muslim-majority nation with strict anti-pornography laws. Using this sample and relying on self-reports, we study consumers' beliefs about how their experiences with pornography may have affected them in areas related to sexual knowledge, the sex life and behaviors, attitudes toward sex, attitudes toward and perception of the opposite gender, and quality of life in general. Accordingly, we first provide a short oversight of sexuality in Indonesia. We then explicate the theoretical framework of our study. Last, we review relevant empirical literature on pornography and conclude with our study hypotheses.

Indonesia is the world's most populous Muslim-majority nation with roughly 240 million inhabitants (Bureau of Statistics, 2010). From a Western point of view, sexuality in Indonesia may be considered highly conservative and sex is socially acceptable only within monogamous, heterosexual, religiously recognized marriages (Blackwood, 2007; Nilan, 2008; Utomo, 1997). Production, distribution, and consumption of pornography are prohibited by law and violation of the pornography laws carries sentences between 6 months and 12 years of imprisonment (The President of the Republic of Indonesia, 2008). However, the enforcement of the anti-pornography laws remains weak and consequently they are not (yet) rigorously enforced (see also Assegaf, 2002).

Recent changes in socioeconomic conditions, modernization, and access to global media among Indonesian youth have encouraged greater freedom and autonomy during the past two decades, contributing to the more liberal expression of sexual identity and sexual attitudes and behaviors (Harding, 2008; Utomo, 1997; Utomo & McDonald, 2009). Accordingly, recent research utilizing Indonesian samples indicates that both attitudinal and behavioral sexual permissiveness, including premarital sexual activities, is rising (Bennett, 2007; Ichwanny, 2010; Simon & Paxton, 2004) and that pornography is widely consumed (e.g., Hald & Wijaya Mulya, 2013; Supriati & Fikawati, 2009). While the high rates of pornography consumption in Indonesia have been discussed elsewhere (Hald & Wijaya Mulya, 2013), no prior research has targeted the self-perceived and self-reported effects of such consumption. We position investigations into this as important as they may enrich the scientific and public debate on pornography consumption in Indonesia and elsewhere by bringing a consumer perspective to the debate (Blackwood, 2007; Hald, Seaman, & Linz, 2013). Further, such research using diverse samples allow for cross-cultural comparison with existing comparable research (e.g., Boies, 2002; Weinberg et al., 2010).

Theoretically, our research is rooted in sexual script theory (Gagnon & Simon, 1973). Broadly, sexual script theory proposes that sexual interactions and behaviors are guided by sexual scripts, which themselves are continuously shaped and reshaped by a variety of cultural, historical, social, interpersonal, individual, and intrapsychic processes and experiences (Gagnon & Simon, 1973; Simon & Gagnon, 1986). Sexual scripts may be understood as "culturally available messages that define what 'counts' as sex, how to recognize sexual situations, and what to do in a sexual encounter" (Frith & Kitzinger, 2001, p. 210). Simon and Gagnon (1986) compare sexual scripts to those used by actors. Accordingly, sexual scripts may serve as a guide and a manual for behaviors in sexual interactions (Hald, Seaman, et al., 2013). Repeated exposure to pornography may influence the scripting process, the sexual scripts, or the evaluation of sexual relations (Hald, Malamuth, & Lange, 2013). The explicit imagery, underlying messages, symbolic normative nature, and order of sexual behaviors as portrayed in pornography may influence the perceptive, affective, cognitive, and behavioral aspects of sexuality (Štulhofer, Buško, & Landripet, 2010). Accordingly, pornography through culturally mediated messages and social learning processes may write itself into the sexual scripts influencing perceptions of sexuality (e.g., what sex is), sexual situations (e.g., when is a situation sexual), sexual behaviors (e.g., what to do when having sex), and evaluations of sexual relations (e.g., what constitutes good sex; Escoffier, 2007; Hald, Malamuth, et al., 2013). Thus, for the current study, sexual script theory was used as a theoretical basis for hypothesizing first-person self-report effects of pornography consumption (study hypotheses explicated below). Further hypothesizing regarding the valence attributed to these effects as well as gender differences in the reporting of these effects was determined by the relevant available empirical literature in the area of pornography research as reviewed below.

Traditionally, opponents of pornography have claimed that it may have damaging effects on attitudes and behaviors and hold pornography responsible for a variety of adverse effects including interference with romantic relationships (Albright, 2008; Manning, 2006), sexually aggressive behaviors (Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2011) disrupting marriages, negatively changing men's perceptions of women and women's perceptions of themselves, and sexual addiction (e.g., Manning, 2010; Paul, 2005). To the contrary, proponents of pornography have claimed that little or no such effects of pornography consumption are evident. Rather, they argue that pornography may benefit the individual by increasing sexual satisfaction (Štulhofer et al., 2010) and empowerment (Weinberg et al., 2010), enhancing the sex life, contributing to knowledge about sex, providing a recreational sexual outlet, a buffer against sexual assaults, or helping to treat common sexological dysfunctions (e.g., Britton, Maguire, & Nathanson,

1993; Diamond, 2009; Diamond, Jozifkova, & Weiss, 2011; Kontula, 2008; Wylie & Pacey, 2011). More recent research on pornography has highlighted that pornography may not influence everyone in the same way (Malamuth, Hald, & Koss, 2012) but that effects of pornography on sexual outcomes are moderated and mediated by various individual and contextual differences (Hald, Kuyper, Adam, & De Wit, 2013; Hald, Malamuth, et al., 2013).

Most available research on pornography does not include a first-person perspective (Hald, Smolenski, et al., 2013). Accordingly, only a few quantitative studies have been conducted on self-perceived and self-reported effects of customers' pornography consumption experiences (e.g., Boies, 2002; Hald & Malamuth, 2008; Hald, Smolenski, et al., 2013; Sørensen & Kjørholt, 2007).

These few studies have all used Western background samples and found that consumers, especially male consumers, self-perceive more positive than negative effects from such consumption in areas related to sexual arousal, curiosity, and the learning of new sexual techniques (Boies, 2002; Hald, Smolenski, et al., 2013), sexual knowledge, the sex life, attitudes toward sex, attitudes toward and perception of the opposite gender, and quality of life in general (Hald & Malamuth, 2008), the appeal and practice of a variety of sexual acts and sexual empowerment (Weinberg et al., 2010), and the mimicking of sexual behaviors from pornography to the sex life (Sørensen & Kjørholt, 2007). Also, generally, these and comparable studies demonstrate that men generally report significantly larger self-perceived effects of their pornography consumption than women, such as in relation to sexual arousal (Chivers, Seto, Lalumiere, Laan, & Grimbos, 2010; Sørensen & Kjorholt, 2007; Træen, Spitznogle, & Beverfjord, 2004).

Relatively unexplored in previous studies on self-reported and self-perceived effects of pornography consumption are investigations of which variables may best predict such effects. Thus, previous studies in the area have either not investigated predictors of self-perceived effects or have included only a limited number of potentially relevant predictors (e.g., Weinberg et al., 2010). Accordingly, an important goal of the current study was to more comprehensively assess and explore predictors of self-perceived effects of pornography consumption.

Various previous research on pornography has consistently demonstrated that pornography-related variables predict levels of pornography consumption (see also Hald, 2006; Sinković, Štulhofer, & Božić, 2013). Therefore, we find it plausible that pornography-related variables such as age of first exposure, acceptance of pornography, perceived realism of pornography, and pornography consumption will significantly predict self-reported and self-perceived effects of pornography consumption in this study. Nonetheless, more recent research in the area of pornography and sexual behaviors also suggests that when controlling for a number of individual, cultural, and contextual covariates, the contribution of pornography-related variables to the outcome variable studied may be substantially reduced (Hald, Kuyper,

et al., 2013; Peter & Valkenburg, 2011; Sinković et al., 2013; Wright, 2013; Wright & Randall, 2012). Consequently, as this reduced contribution may also apply to self-reported and self-perceived effects of pornography consumption, we find it important to assess the contribution of pornography-related variables to self-perceived effects of pornography consumption only after the inclusion of other relevant non-pornography-related study variables.

In this study, these variables were selected on the basis of their frequency by which they have been included in previous research on pornography or because previously they have been shown to be significantly associated with self-reported and self-perceived effects of pornography consumption. On this basis we included sociodemographic predictors (i.e., gender, age, relationship status, religiosity; Morgan, 2011; Peter & Valkenburg, 2011; Træen, Nilsen, & Stigum, 2006), personality characteristics (i.e., sensation seeking; Hald, Kuyper, et al., 2013; Luder et al., 2011; Peter & Valkenburg, 2011; Sinković et al., 2013), sexual background predictors (i.e., sexual attitudes and sexual behaviors; Hald, Kuyper, et al., 2013; Luder et al., 2011), parental involvement (Sinković et al., 2013), and Internet use (Morgan, 2011).

Based on the above, we hypothesized that:

- H1: Men and women will report significantly larger positive than negative effects of their pornography consumption.
- H2: Men will report significantly more positive and negative effects of their pornography consumption than women.
- H3: Pornography-related variables (i.e., age of first exposure, acceptance of pornography, pornography perceived realism, and pornography consumption) will significantly predict self-reported and self-perceived effects of pornography consumption over and above included non-pornography-related variables.

#### **METHOD**

### **Participants**

The main study sample included 556 Indonesian university students. However, for this part of the study, specifically aimed at self-perceived effects of pornography consumption, only participants reporting to have used pornography within the past 12 months were included.

Accordingly, for this study participants included 249 Indonesian university students aged 18–23 years from a private university in Surabaya, the second-largest city of Indonesia. Students at the university come from Surabaya, surrounding towns, and other islands in Indonesia. Ethnically, students at the university are diverse, including Javanese, Balinese, Madurese, Chinese, and Banjarese participants. Major religions of the students included

Islam, Christianity, and Buddhism. The majority of students came from middle-class backgrounds. Among participants, 112 (44.8%) were male and 137 (54.8%) female. The mean age was 20.4 years (SD = 1.28) for male and 20.1 years (SD = 1.28) for female participants. For details of participants' social-demographic characteristics, see Table 1.

#### Procedure

The study was approved by the relevant authorities at the university in which the research took place. Data was collected throughout June 2011. Four research assistants, three females and one male, randomly approached potential participants on the campus area. Following a short oral and written explanation of the study, consenting participants were first asked to complete a formal form of consent before filling out the study questionnaires. The response rate was 96.2%. To ensure participants' anonymity, consent forms were removed from the unmarked study questionnaires, which upon completion, were dropped in a separate closed box. Participants were also instructed to leave items blank if they felt uncomfortable answering instead of responding dishonestly.

### Measures

#### BACKGROUND VARIABLES

Sociodemographic variables. Sociodemographic characteristics included gender, age (in years), relationship status ( $0 = not \ in \ a \ relationship$ ;  $1 = in \ a \ relationship$ ), and religious attendance (i.e., hours per week spent at religious activities both individual and communal; see also Rohrbaugh & Jessor, 1975).

Sensation seeking. Sensation seeking was measured using the 8-item Brief Sensation Seeking Scale developed by Stephenson, Velez, Chalela, Ramirez, and Hoyle (2007). Responses were given on a 4-point scale (1 =  $strongly\ disagree$ ; 2 = disagree; 3 = agree; 4 =  $strongly\ agree$ ). A sensation seeking score was computed by summing scores on each item. Higher scores indicate higher sensation seeking. Internal consistency of the scale was satisfactory ( $\alpha$  = .74).

Sexual attitude toward nonmarital sexual activities (sexual attitude). Sexual attitude was assessed using five items measuring participants' attitude toward certain nonmarital sexual activities. Responses ranged from 1 (highly unacceptable) to 4 (highly acceptable). The five items included dry kissing (mouth-to-mouth kisses without involving saliva), deep kissing (mouth-to-mouth kiss involving saliva), petting (manual stimulation of erogenous zones), oral sex (oral-genital stimulation), and coitus (sex involving penetration with the penis; Herbenick et al., 2010). Higher scores indicate a more

**TABLE 1** Background Measures Stratified by Gender ( $N_{\text{total}} = 249$ )

Variable	Men %	Women %	Tests	df	Cohen's (d)
Gender	44.8 (112)	54.8 (137)			
Age			$\chi^2 = 1.22$	2	.14
18–19	28.8 (30)	35.6 (47)			
20–21	53.8 (56)	49.2 (65)			
22–23	17.3 (18)	15.2 (20)	_		
Relationship status			$\chi^2 = 3.73$	1	.25
Not in a relationship	58.7 (64)	46.3 (62)			
In a relationship	41.3 (45)	53.7 (72)			
Average hours of religious attendance per week			t = .01	226	.00
M	6.4	6.4			
SD	17.9	15.5			
N	103	125			
Sensation seeking			$\chi^2 = 5.77$	3	.31
Very high	12.6 (14)	11.7 (16)			
High	53.2 (59)	49.6 (68)			
Low	27.9 (31)	37.2 (51)			
Very low	6.3 (7)	1.5 (2)			
Average hours of Internet			$\chi^2 = 13.09^*$	4	.48
use per week					
0–10	57.8 (63)	63.7 (86)			
11–20	14.7 (16)	17.0 (23)			
21-30	9.2 (10)	14.1 (19)			
31–40	4.6 (5)	3.0 (4)			
More than 40	13.8 (15)	2.2 (3)			
Parental involvement			$\chi^2 = .52$	3	.09
Very high	24.3 (27)	26.3 (36)			
High	60.4 (67)	56.2 (77)			
Low	14.4 (16)	16.8 (23)			
Very low	0.9 (1)	0.7 (1)			
Sexual attitude toward nonmarital sexual activities			$\chi^2 = 7.54$	3	.35
Strongly positive	8.1 (9)	5.1 (7)			
Positive	26.1 (29)	13.9 (19)			
Negative	48.6 (54)	59.9 (82)			
Strongly negative	17.1 (19)	21.2 (29)			
Sexual behavior			$\chi^2 = 23.62^{**}$	5	.65
Engaged in 5 activities	11.8 (13)	5.1 (7)			
Engaged in 4 activities	2.7 (3)	8.1 (11)			
Engaged in 3 activities	12.7 (14)	9.6 (13)			
Engaged in 2 activities	17.3 (19)	40.4 (55)			
Engaged in 1 activity	11.8 (13)	11.0 (15)			
Never	43.6 (48)	25.7 (35)			

Note. Missing values excluded. Numbers in parentheses represent n/cell.

<sup>\*</sup>p < .05.

<sup>\*\*</sup>p < .01.

positive attitude toward nonmarital sexual activities. The internal consistency of the scale was good ( $\alpha = .85$ ).

Sexual behaviors in nonmarital relationships. Sexual behaviors were measured using five items indicating whether participants had engaged in certain nonmarital sexual activities. These included dry kissing (mouth-to-mouth kiss without involving saliva), deep kissing (mouth-to-mouth kiss involving saliva), petting (manual stimulation of erogenous zones), oral sex (oral-genital stimulation), and coitus (penetration with the penis; Herbenick et al., 2010). Responses were given in a yes or no manner (0 = no/never engaged in the activity, 1 = yes/have engaged in the activity). A sexual behavior score was computed by summing scores on each item. Higher scores indicate having engaged in more nonmarital sexual behaviors.

*Internet consumption*. Internet consumption was assessed by a self-reported item measuring the average number of hours of Internet use per week during the previous 12 months.

Parental involvement. Parental involvement was measured by six items taken from Lam and Chan (2007). Parental involvement refers to the degree of "participation of parents/guardians in the children's life and their dedication in trying to help solve their children's problems" (Lam & Chan, 2007, p. 592). A sample item was "My parents/guardians find time to talk with me." Responses ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher scores indicate higher parental involvement in the participant's life. The internal consistency of the scale was satisfactory ( $\alpha = .76$ ).

#### PORNOGRAPHY CONSUMPTION AND RELATED VARIABLES

Pornography consumption. Pornography consumption and associated variables were assessed using a modified version of the Pornography Consumption Questionnaire (PCQ) developed by Hald (2006). To standardize the meaning of the term pornography, initially a definition of pornography identical to that used by Hald (2006) and Hald and Malamuth (2008) was provided as follows: Any kind of material aiming at creating or enhancing sexual feelings or thoughts in the recipient and, at the same time (1) containing explicit exposure and/or descriptions of the genitals and (2) clear and explicit sexual acts such as vaginal intercourse, anal intercourse, oral sex, masturbation, bondage, sadomasochism (SM), rape, urine sex, animal sex, and so on. Participants were told to refer to this definition whenever the term was used throughout the questionnaire.

The modified version of the PCQ consisted of 27 items, shortened from the original 139-item instrument. We selected items after considering their relevance and comprehensibility for the Indonesian context. Questions were related to prevalence rates of pornography consumption, age of first exposure, the situational and interpersonal context of pornography consumption, pornography consumption outlets, sexual activity accompanying pornography consumption, perceived realism of pornographic content, acceptance

of pornography, and partner knowledge of and reactions to participant's pornography consumption (Carroll et al., 2008; Hald, 2006; Štulhofer, Buško, & Schmidt, 2012). In addition, as specified below, items assessing a variety of self-perceived effects of pornography consumption were included. For details of participants' pornography-related measures, see Table 2.

To yield a better overall estimate of pornography consumption, several indicators of pornography consumption (time since last consumption, frequency of consumption, duration of consumption, and sexual activity accompanying consumption) were collapsed into a pornography consumption composite measure, using the average standardized score of the indicators. This was done to avoid multicollinearity, as variables were highly correlated, and to decrease the risk of inflating the total explained variance of pornography consumption on self-perceived effects in the regression analyses following below (see also Hald, 2006). Higher scores indicate higher levels of pornography consumption. The internal consistency of the scale was good ( $\alpha = .80$ )

#### OUTCOME VARIABLES

Self-perceived effects of pornography consumption. Self-perceived effects of pornography consumption were measured using a modified version of the 47-item Pornography Consumption Effect Scale (PCES) originally developed by Hald and Malamuth (2008) and later modified by Hald, Smolenski, et al. (2013). In the current study, 14 of the 47 original items were used (i.e., items 1, 4, 5, 10, 12, 26, 29, 30, 31, 33, 36, 40, 41, 45 of the original scale; see also Hald & Malamuth, 2008). The 14 items were putatively organized into two categories, namely a Positive Effect Dimension (PED) (i.e., items 1, 5, 6, 7, 9, 10, 11, 12, 14) and a Negative Effect Dimension (NED) (i.e., items 2, 3, 4, 8, 13; see also Appendix). For each item, participants were asked to indicate the extent to which they believed that their consumption of pornography had affected them in relation to their: sexual knowledge (SK), attitudes toward sex (ATS), sexual behavior or sex life (SL), perception of and attitude toward the opposite gender (PATOG), and life in general (LG). Responses ranged from 1 (not at all) to 4 (to a very large extent). As in Hald and Malamuth (2008), items were subjected to psychometric validation (more below).

#### RESULTS

### Missing Data

Because of the delicate nature of the topic, gender stratified missing value analyses were conducted for all included variables. Except for variables related to hours of religious attendance per week, average duration of pornog-

**TABLE 2** Pornography-Related Measures Stratified by Gender ( $N_{\text{total}} = 249$ )

Variable	Men %	Women %	Tests	df	Cohen's
Age of first exposure			$\chi^2 = 39.35^{**}$	3	0.87
5–8 years	1.8 (2)	2.2 (3)	χ 57.57		0.07
9–12 years	20.0 (22)	9.5 (13)			
13–16 years	52.7 (58)	23.4 (32)			
More than 16 years	25.5 (28)	65.0 (89)			
Acceptance of pornography	25.5 (20)	0).0 (0))	$\chi^2 = 7.62$	3	0.36
Highly acceptable	17.1 (19)	12.5 (17)	λ — 7.02	3	0.50
Acceptable	63.1 (70)	77.9 (106)			
Unacceptable	13.5 (15)	7.4 (10)			
Highly unacceptable					
	6.3 (7)	2.2 (3)	t — 1 40	2/5	0.10
Perceived realism of pornography	4.5	4.0	t = -1.40	245	-0.18
M	4.5	4.9			
SD	2.1	2.0			
N	112	135	2 (4 =0**	_	
Time since last consumption	<b>-</b> 4 (0)	20 (/)	$\chi^2 = 61.70^{**}$	5	1.15
In the last 24 hours	7.1 (8)	2.9 (4)			
In the last 48 hours	8.9 (10)	2.2 (3)			
In the last week	38.4 (43)	7.4 (10)			
In the last month	24.1 (27)	22.1 (30)			
In the last 6 months	11.6 (13)	30.9 (42)			
In the last year	9.8 (11)	34.6 (47)	2		
Frequency of consumption in the last 6 months			$\chi^2 = 72.80^{**}$	5	1.30
More than 5 times per week	7.2 (8)	0.7 (1)			
3–5 times per week	8.1 (9)	1.5 (2)			
1–2 times per week	34.2 (38)	4.4 (6)			
1–2 times per month	20.7 (23)	13.3 (18)			
Less than once per month	19.8 (22)	45.2 (61)			
Never in the last 6 months	9.9 (11)	34.8 (47)			
Duration of consumption (hours per			$\chi^2 = 38.08**$	5	0.85
week in the last 6 months)					
Never in the last 6 months	10.4 (11)	40.2 (47)			
Less than 1 hour	29.2 (31)	29.8 (35)			
1–3 hours	53.8 (57)	28.2 (33)			
4–6 hours	3.8 (4)	0.9 (1)			
7–10 hours	0.9 (1)	0.9 (1)			
More than 10 hours	1.9 (2)	0.0 (0)			
Composite measure of pornography consumption			$t = 9.30^{**}$	201.2	1.31
M	0.9	0.01			
SD	0.8	0.6			
N	112	137			
Type of pornography consumed			$\chi^2 = 4.31$	5	0.29
Vaginal sex	65.0 (65)	60.3 (70)	λ		v,
Oral sex	10.0 (10)	19.0 (22)			
Group sex	8.0 (8)	7.8 (9)			
Containing violence	5.0 (5)	4.3 (5)			
Children/teenager	2.0 (2)	2.6 (3)			
Others (e.g., cartoon, blonde, etc.)	10.0 (10)	6.0 (7)			
Sexual activity accompanying	10.0 (10)	0.0 (/)	$\chi^2 = 88.65^{**}$	3	1.50
pornography consumption	0 = (0)	2.2 (2)			
Always	2.7 (3)	2.2 (3)			
Often	18.8 (21)	1.5 (2)			
Sometimes	58.0 (65)	17.0 (23)			
Never	20.5 (23)	79.3 (107)			

Note. Missing values excluded. Numbers in parentheses represent n/cell.

<sup>\*</sup>p < .05.

raphy consumption, and type of pornography consumed, missing values ranged from 0 to 5% with the vast majority of missing values being below 2%. For the three items noted above, missing values ranged from 8 to 13%. No systematic differences between respondents and nonrespondents across missing values were found (see also Howell, 2007). Considering this, missing values were excluded pairwise in the subsequent analyses.

### Factor Analyses

Factor analysis was employed to investigate if items in the modified version of the PCES also, statistically, could be meaningfully organized into the two categories specified above. For the final factor solution, a principal axis factoring with varimax rotation was employed to maximize item loadings, and because the factors, using oblimin factor rotation, were found only to be modestly (r = .16), albeit significantly, correlated.

Both the scree plot and the Kaiser-Guttmann rule suggested that two common factors should be extracted. Thus, items a priori organized within the positive and negative effect dimensions were found to have their salient loadings on separate factors, that is, factor 1 and 2, respectively, with factor loadings greater than .40. The total explained variance of the two extracted factors was 45.04%. Accordingly, as in Hald and Malamuth (2008), factor analysis was found to support the theoretical notion of two separate effect dimensions each comprised of the items specified above and each measuring various aspects of self-reported effects of pornography consumption. Further, intercorrelations between items and the overall effects dimension were found to be high, ranging from .52 to .81 for the positive effect dimension, and .57 to .88 for the negative effect dimension.

### Reliability Analyses

The reliability of the two effect dimensions were investigated using Cronbach's alpha. For both effect dimensions, the internal consistency was found to be satisfactory. Cronbach's alpha for the positive effect dimension was .80, while for the negative effect dimension Cronbach's alpha was .73.

### Hypotheses Testing

H1: Men and women will report significantly larger positive than negative effects of their pornography consumption.

As shown in Table 3, with two exceptions noted below, paired sample *t* tests showed that both genders were found to report significantly larger positive than negative effects of pornography consumption in the areas investigated, with the magnitude of these differences being large (Cohen's *d* 

<b>TABLE 3</b> Comparison of Mean	Differences in Positive and Negative Effects of Pornograph	ıy
Consumption by Gender ( $N_{\text{men}}$	$= 112, N_{\text{women}} = 137$	

	$\mathrm{MD}_{\mathrm{P}}$	ositive-Nega	tive	<i>t</i> Test paired sa		Efft -:
Variables	M	SD	N	t	df	Effect size Cohen's <i>d</i>
Men						
Sex life	0.62	0.95	112	6.85**	111	1.30
Attitudes toward sex	-0.48	1.13	112	-4.50**	111	-0.85
Perception and attitudes	0.63	1.27	112	5.30**	111	1.01
Life in general	0.07	1.17	112	0.67	111	0.13
Overall	0.32	0.83	112	4.10**	111	0.78
Women						
Sex life	0.70	0.83	137	9.88**	136	1.69
Attitudes toward sex	-0.34	0.95	137	-4.16**	136	-0.71
Perception and attitudes	0.50	1.01	137	5.81**	136	1.00
Life in general	0.42	0.87	137	5.60**	136	0.96
Overall	0.45	0.61	137	8.69**	136	1.49

<sup>\*</sup>p < .05.

range: .78 to 1.69). The two exceptions concerned the areas of attitudes toward sex and life in general. For attitudes toward sex, both genders reported significantly larger negative effects of their pornography consumption with the magnitude of these differences being large. For life in general, women reported significantly larger positive than negative effects whereas for men no significant differences were found.

H2: Men will report significantly more positive and negative effects of their pornography consumption than women.

For positive effects, with one exception, the independent sample t tests showed that no gender differences were found (p > .05). The exception concerned the area of the perception and attitude toward opposite gender, where men reported significantly larger positive effects of their pornography consumption than women. For negative effects, with one exception, men reported significantly larger negative effects of their pornography consumption than women. The exception concerned the area of the sex life, where no significant gender differences were evident (see also Table 4).

H3: Pornography-related variables (i.e., age of first exposure, acceptance of pornography, pornography perceived realism, and pornography consumption) will significantly predict self-reported and self-perceived effects of pornography consumption over and above included nonpornography-related variables.

<sup>\*\*</sup>p < .01.

**TABLE 4** Gender Differences in Self-Perceived Effects of Pornography Consumption ( $N_{\text{men}} = 112, N_{\text{women}} = 137$ )

	M	en	Wor	men	t Tes indepe sam	endent	Effect size
Variables	M	SD	M	SD	t	df	Cohen's d
Positive effect on							
Sex life	2.57	0.63	2.56	0.61	0.16	247	0.02
Attitudes toward sex	2.03	0.70	1.89	0.64	1.59	247	0.20
Sexual knowledge	2.87	0.52	2.75	0.47	1.86	247	0.24
Perception and attitudes	2.89	0.80	2.56	0.72	3.48**	247	0.44
Life in general	2.30	0.83	2.34	0.72	-0.49	247	-0.06
Overall positive effect	2.56	0.47	2.45	0.41	1.88	247	0.24
Negative effect on							
Sex life	1.96	0.66	1.85	0.56	1.31	247	0.17
Attitudes toward sex	2.51	0.75	2.23	0.67	3.07**	226.28	0.41
Perception and attitudes	2.26	0.88	2.06	0.64	2.01*	197.76	0.29
Life in general	2.22	0.68	1.93	0.55	3.72**	213.55	0.51
Overall negative effect	2.23	0.54	2.00	0.46	3.68**	218.15	0.50

Note. Missing data excluded pairwise.

For our investigation of predictors of self-reported and self-perceived effects of pornography consumption, both correlational analyses and hierarchical multiple regression analyses were employed. Analyses were conducted separately for self-perceived positive and negative effects of pornography consumption.

First, correlational analyses were employed to check for multicollinearity among variables and to assess which variables correlated significantly with self-perceived positive and negative effects of pornography consumption respectively. The variables that correlated significantly with self-perceived positive and negative effects of pornography consumption, respectively, were entered into two regression analyses for each of the self-reported effects of pornography using the procedures recommended by Cohen, Cohen, West, and Aiken (2003) and by Aiken and West (1991).

In the first step of the two regression analyses, non-pornography-related study predictors were entered. Subsequently, in the second step of the regression analyses, pornography-related variables significantly correlated with the dependent variable were entered. In both steps of the regression analyses, variables were force entered into the regression model using an *F* probability criteria of .05 for inclusion and .10 for removal.

As evident in Tables 5 and 6 for self-perceived positive effects of pornography consumption, the first step included relationship status, sensation seeking, sexual attitude, sexual behavior, and parental involvement. For the

<sup>\*</sup>p < .05.

<sup>\*\*</sup>p < .01.

**TABLE 5** Zero-Order Correlations Among Background Factors and Reported Positive and Negative Effects of Pornography Consumption (N<sub>total</sub> = 249)

	1	2	3	4	5	9	7	8	6	10	11	12	13	14	15
<ol> <li>Positive reported effects</li> <li>Gender</li> <li>Gender</li> <li>Age</li> <li>Relationship status</li> <li>Religious attendance</li> <li>Sensation seeking</li> <li>Sexual attitude</li> <li>Sexual attitude</li> <li>Sexual henavior</li> <li>Internet use</li> <li>Parental involvement</li> <li>Age of first exposure</li> <li>Acceptance of pomography</li> <li>Pomography perceived realism</li> <li>Pomography consumption</li> </ol>	y ulism	-0.16*	0.12	0.02	0.15* 0.05* 0.06	-0.03 -0.08 0.00 -0.02 -0.02	0.28*** 0.00 0.00 0.00 0.03 0.03	0.48** -0.13* 0.09 0.01 0.19** -0.10	0.30*** -0.05 -0.09 0.01 0.24*** 0.52***	0.09 -0.04 0.19** -0.09 0.45** 0.02 0.03	-0.14* 0.01 -0.02 -0.06* 0.16** 0.02 -0.14*	-0.12 -0.14* -0.30** 0.08 -0.17 -0.17 -0.05 -0.03	0.33*** -0.22*** -0.07 -0.04 0.18** 0.15* 0.05 -0.05	0.37*** -0.23*** 0.05 0.00 0.00 0.12 0.18** -0.03 0.02 -0.04 -0.06	0.32*** 0.14* 0.52*** 0.05 0.10 0.11 0.27** 0.26** 0.02 0.03

Note. Missing data excluded pairwise.  $\label{eq:note} \begin{tabular}{l} *p < .05. \\ *'p < .01. \\ \end{tabular}$ 

**TABLE 6** Hierarchical Regression Analyses Predicting Positive and Negative Effects of Pornography Consumption ( $N_{\text{total}} = 249$ )

	$\Delta R^2$	В	t
Positive effects of consumption			
Step 1	0.27**		
Relationship status		0.058	1.121
Sensation seeking		0.152	2.973**
Sexual attitude toward nonmarital sexual activities		0.258	4.171**
Sexual behavior		0.053	0.875
Parental involvement		-0.090	-1.803
Step 2	0.13**		
Acceptance of pornography		0.169	3.211**
Perceived realism of pornography		0.267	5.207**
Pornography consumption		0.185	3.542**
Total R <sup>2</sup> adjusted	0.40**		
Negative effects of consumption			
Step 1	0.07**		
Gender		0.136	1.900
Sexual attitude toward nonmarital sexual activities		-0.093	-1.445
Step 2	0.06**		
Age of first exposure		-0.101	-1.579
Acceptance of pornography		-0.167	-2.686**
Perceived realism of pornography		-0.193	-3.157**
Pornography consumption		0.082	1.111
Total $R^2$ adjusted	0.13**		

Note. Missing data excluded pairwise.

second step, it included acceptance of pornography, perceived realism of pornography, and pornography consumption.

For self-perceived negative effects of pornography consumption the first step included gender and sexual attitude. The second step included age of first exposure, acceptance of pornography, perceived realism of pornography, and pornography consumption.

As shown in Table 6, the final model for the prediction of both self-perceived positive and negative effect of pornography consumption was highly significant; positive effect: F(8, 241) = 21.42, p < .001,  $R_{\rm adj}^2 = .40$ ; negative effect: F(6, 243) = 7.08, p < .001,  $R_{\rm adj}^2 = .13$ . For self-perceived positive effects of pornography consumption, the total explained variance of included variables was 40% (R = .65,  $R_{\rm adj}^2 = .40$ , p < .001). Here pornography consumption related variables added significantly to the prediction of self-perceived positive effects over and above non-pornography-related variables accounting for an additional 13% of the total explained variance of self-perceived positive effects of pornography consumption.

For self-perceived negative effect of pornography consumption the total explained variance of included variables was 13% ( $R=.39;\ R_{\rm adj}^2=.13;$ 

<sup>\*</sup>p < .05.

<sup>\*\*</sup>p < .01.

p < .001). Here pornography-consumption-related variables also added significantly to the prediction of self-perceived effects over and above non-pornography-related variables accounting for an additional 6% of the total explained variance of self-perceived negative effects of pornography consumption.

#### DISCUSSION

In agreement with the first study hypothesis, it was found that both men and women generally reported significantly larger positive than negative effects of pornography consumption. Furthermore, in most areas investigated, and in support of the second study hypothesis, as compared to women, men reported significantly larger negative effects of their pornography consumption. However, contrary to the second study hypothesis, men generally did not report significantly more positive effects from their pornography consumption than women. Finally, in agreement with the third hypothesis, pornography-related variables were found to add significantly to the prediction of both positive and negative self-perceived effects of pornography consumption over and above included non-pornography-related variables.

The study findings may be interpreted as consistent with (sexual) script theory (see also, Introduction) in that consumers generally report that their consumption of pornography has influenced their sexual attitudes and sex life including their sexual behaviors. Thus, pornography as a form of culturally available messages about sexuality is perceived as influential in constructing a guide or a manual in sexual interaction (see also Wilkerson et al., 2012). Accordingly, this may be taken to imply influences on the attitudinal and behavioral aspects of one or more (sexual) scripts (Hald, Seaman, et al., 2013).

The study findings are consistent with the few previous quantitative studies conducted on self-reported and self-perceived effects of pornography consumption using exclusively Western background samples (e.g., Boies, 2002; Sørensen & Kjørholt, 2007; Weinberg et al., 2010). Interestingly, as compared to Indonesia, these samples come from relatively liberal and sex educated backgrounds in which pornography is widely available and relatively accepted, such as the United States and Denmark. This indicates that although the Indonesian legal, political, media, and educational systems condemn the use of pornography and greatly emphasize negative over positive effects, these discourses do not seem to automatically internalize to consumers' self-reported perceptions and experiences with such materials.

We believe that this may be attributed to three things. First, it may be attributed to a continuous rise of sexual permissiveness due to changes in socioeconomic conditions, modernization, and access to global media among

young Indonesians in recent years. This may influence both pornography consumption rates, acceptance of pornography consumption, and the ways in which consumption of pornographic materials is perceived and assessed (Bennett, 2007; Hald & Wijaya Mulya, 2013; Ichwanny, 2010; Simon & Paxton, 2004; Supriati & Fikawati, 2009).

Second, it may be attributed to the concept of biased optimism, whereby people consider themselves less likely to be influenced by negative events than they do others (Weinstein, 1989) or generally consider themselves relatively immune to harmful effects of media (Gunther, 1995).

Third, it may be attributed to a response and attention bias by which participants' arousal to and desire for pornography causes them to emphasize positive effects and minimize negative effects (Hald & Malamuth, 2008).

However, in this regard it is also important to leave open the possibility that individuals accurately perceive and report the impact of their pornography consumption on the areas studied and that the result therefore should be taken at face value.

Interestingly, based on a comparable study using a Danish study sample, Hald and Malamuth (2008) suggest that the cultural background of participants may influence the valance attributed to self-perceived effects of pornography consumption. Accordingly, Hald and Malamuth suggest that participants from a very liberal cultural background such as Denmark, in which pornography consumption is generally widely accepted, might have a reduced awareness of negative effects and an increased awareness of positive effects. This may bias the reporting of effects of pornography consumption in a more positive direction. Although we concur with the general idea of a cultural influence, our study findings seem to refute this basis contention of Hald and Malamuth (2008), as both the study methodology and results of the present study are fully comparable with that of Hald and Malamuth (2008) but the cultural background of this study sample very different (i.e., much more religious, sexually conservative, and anti-pornography). Consequently, following Simon and Gagnon's (1986) sexual script theory, we suggest that it may not primarily be the cultural background per se, which determines the valance attributed to first hand experiences with pornography consumption but more the personal acceptance of and experiences associated with the pornography consumption such as the degree to which this consumption brings about sexual enjoyment and fulfillment.

In contrast to Hald and Malamuth (2008), no significant gender differences were found in the area of self-perceived first person positive effects of pornography consumption. We are unsure of how to exactly interpret this finding but tentatively propose two explanations. First, it may be that gender in an Indonesian cultural context simply is not related to the positive effects outcomes studied here, and that these are more adequately accounted for by other pornography-related and non-pornography-related variables. Certainly, designs better allowing for gender interactional analyses than the current

study could be used to source out this possibility. Second, the pornography adverse cultural climate of Indonesia in which pornography consumption is contextualized may affect women more than men. Thus, it may be that women who receive or experience only minimal or modest positive effects from their pornography consumption may stop using pornography more so than comparable men. This would mean that for our data set we might in effect be comparing the proportion of female users who experience the most positive effects from their pornography consumption with a group of male users who varies more in their positive effect experiences. This could diminish or erode gender differences in first person positive effects of pornography consumption and as such account for the study finding pertaining to this specific area of investigation. We encourage future research to further this possibility.

Pornography-related variables were found to significantly predict both self-perceived positive and negative effects of pornography consumption over and above other included non-pornography-related study variables. However, the additional variance explained by pornography-related variables on self-perceived effects was somewhat modest after controlling for included non-pornography-related variables. These findings are consistent with previous recent studies in this area which have also found that the additional explained variance of pornography-related variables on the outcomes investigated has been modest when other relevant non-pornography variables have been controlled for (Hald, Kuyper, et al., 2013; Peter & Valkenburg, 2011; Sinković et al., 2013; Wright, 2013; Wright & Randall, 2012). This suggests that self-perceived effects of pornography consumption may be as much, or more, associated with factors other than pornographyrelated variables such as gender, sensation seeking, sexual attitude, and sexual behavior. Alternatively, that pornography-related variables are more indirectly related to the self-perceived effects of pornography consumption studied here, for example through mediation by third variables (see also Hald, Malamuth, et al., 2013). We call for further research to employ study designs and methodology that enable further exploration of these possibilities.

### Limitations of the Present Study

At least five important limitations pertain to this study. First, the study utilizes a sample never before studied in this area of research and is one of only a few studies to date to study self-perceived effects of pornography consumption. Consequently, we lack an adequate body of literature and empirical research in which to situate our findings. Second, the study was cross-sectional which precludes causal inferences. Third, the study used a non-probability type sample. Therefore, the study findings cannot be generalized to the Indonesian population at large. Fourth, the study relies exclusively on self-report

measures without the possibility of verifying these reports. Further, as the purpose of the study was relatively transparent to participants such reports may be subject to demand characteristics which may (further) bias these self-reports. Fifth, although the outcome measure of self-perceived effects has been used and validated in previous studies (e.g., Hald & Malamuth, 2008; Hald, Smolenski, et al., 2013), only selected items from this measure were used. This may adversely affect both the reliability and validity of the study findings.

### Conclusions

The current study extends the knowledge of effects of pornography consumption by providing a unique cultural study sample against which existing research on self-perceived effects of pornography consumption may be compared. Moreover, it investigates both positive and negative effects of pornography consumption as it is perceived and reported by the consumers themselves, essentially bringing a consumer perspective to the study of effects of pornography consumption. This adds both to the very limited knowledge of self-reported and self-perceived effects of pornography consumption as well as to the still-understudied area of potential positive effects of pornography consumption. Finally, by including a large array of relevant variables, the study allows for a very thorough assessment of the unique direct contribution of pornography-related variables to the prediction of self-perceived effects of pornography consumption. Both this and the study results in general may help enrich public and scientific debates on pornography and inform public and sexual health personnel and policy makers about effects of pornography consumption as they are perceived and reported by the consumers themselves.

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### **APPENDIX**

### Modified Version of the Pornography Consumption Effect Scale (PCES)

Below is a series of questions. Please indicate your answer to each question using the numbers 1-4, where 1 = not at all and 4 = to a very large extent. Please write your answer in the box [ ] preceding each question. Please answer all questions.

To what extent do you believe that your consumption of pornography:

1	SK (P)	Has taught you new sexual techniques?
2	ATS (N)	Has had a negative influence on your attitudes toward sex?
3	PATOG (N)	Has adversely affected your views of the opposite gender?
4	LG (N)	Overall, has had a harmful effect on your life?
5	SL (P)	Overall, has improved your sex life?
6	SK (P)	Has improved your knowledge of sex?
7	ATS (P)	Has made you more sexually liberal?
8	LG (N)	Has made you less satisfied with your life?
9	SK (P)	Has given you more insight into your sexual fantasies?
10	ATS (P)	Has had a positive influence on your attitudes toward sex?
11	SL (P)	Has added something positive to your sex life?
12	PATOG (P)	Has made you friendlier toward the opposite gender?
13	SL (N)	Has led to problems in your sex life?
14	LG (P)	Has improved your quality of life?

Note. SL = sex life; LG = life in general; ATS = attitudes toward sex; PATOG = perception of and attitudes toward the opposite gender; <math>SK = sexual knowledge. (P) indicates that the item belongs to the positive effect dimension. (N) indicates that the item belongs to the negative effect dimension.

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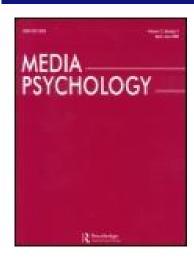


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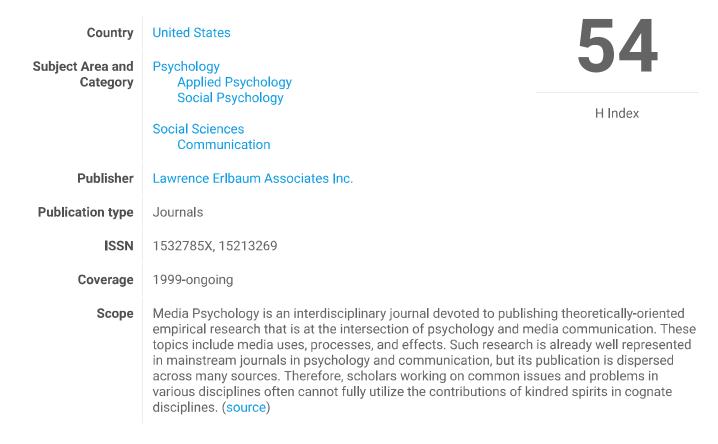
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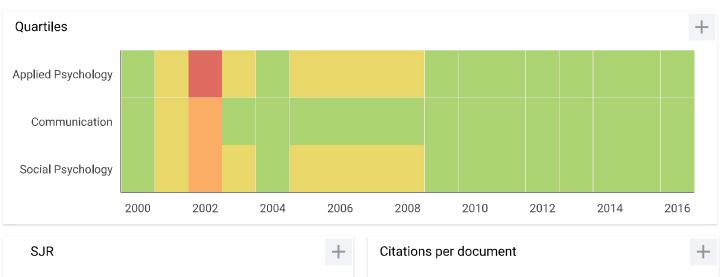
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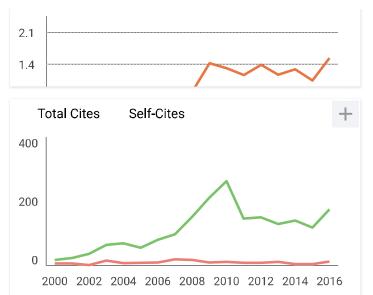
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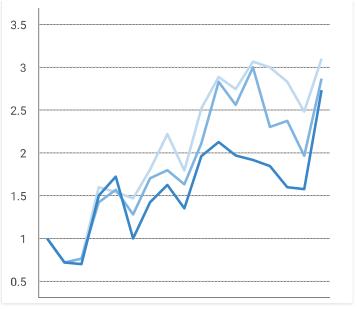
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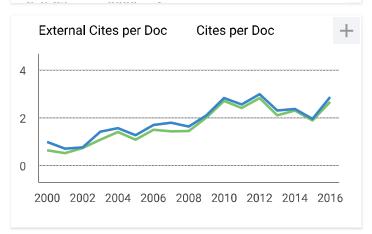


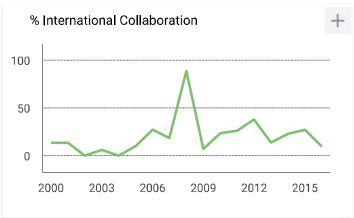


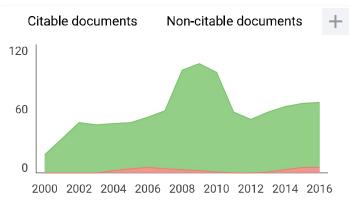
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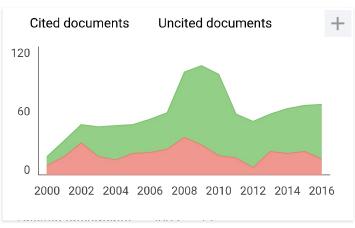


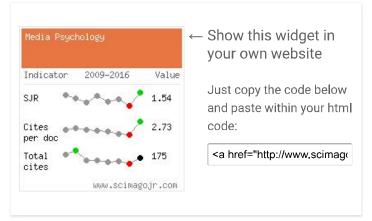












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