

Validation of a Baseline Survey
Assessing Causes and Outcomes
of Exposure to Pornography
and Sexualised Media:
Preliminary Findings
—Executive Report



Authors

M. Ballantine-Jones and K. Oates

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Introduction

A survey on adolescent sexuality, wellbeing, and exposure to pornography was conducted in May-June 2018 on Year 10 students from 7 Sydney-based independent schools. This was performed by the first author (Ballantine-Jones) through the Medical School at the University of Sydney. The survey is part of a wider study on reducing the effects of exposure to sexualised media and pornography on adolescents. This survey will serve as a baseline for an upcoming school-based education pilot program.

1. Background

A broad body of international research describes numerous negative outcomes from an adolescent's exposure to pornography. At least 65 empirical articles reviewing the impact of pornography on adolescents have been published (for example, see Owens [1], Peter and Valkenburg [2], Flood [3], Springate [4], and Bloom [5]). Some of these effects include adapting attitudes of sexual objectification towards women [6] and increased sexual aggression [6-10], increased positivity towards uncommitted sexual exploration [11], negative gender attitudes [6, 12, 13], compulsivity [14] and addictive behaviours [15], reduced self-esteem [16, 17], emotional stability, social empathy [9, 18], social conduct [1], corrupted family [1, 10] and peer relationships [19], and increased sexualised behaviours on social media, including 'sexting' [12, 20].

Additionally, past research has offered clues as to the major influences behind an adolescent's pornography engagement, including parental rules and communication [21-27], peer attitudes and behaviours [21, 28], education programs [29], gender [30], age of first time exposure [31], and even religion [32-34].

Despite the well documented negative effects of pornography on adolescents, there are only a handful of school-based education programs that address pornography and sexualised media. These include *In The Picture* [35]; *Porn - what you should know* [36]; *Sexting: social and legal consequences* [37]; *We Need to Talk About Pornography* [38]; *Catching On Later* [39]; and *Building Respectful Relationships* [40]. None of these programs address the broad suite of negative effects, nor have they been empirically tested for effectiveness. Subsequently a new education program will be piloted and evaluated in conjunction with this survey.

Various factors were nominated for inclusion within this survey, however there were some immediate limitations that restricted the selection:

- a. The survey needed to be completed within 30 minutes, as schools were asked to complete it in normal class times.
- b. The language and concepts needed to be age-appropriate for Year 10 (15 years old).
- c. Every effort to minimise risk of harm needed to be taken, including using previously tested questionnaires, ensuring confidentiality and anonymity, and providing counselling services in the event of distress.

2. Aims and Method

The aims of the survey project were twofold: to validate the internal statistical consistency of the questions compared to past studies; and to compare analysis of the results against past theory. The survey was validated in three stages: factor analysis validation; frequency results validation; and factor correlation validation.

University Ethics approval was granted in April 2018. Schools were recruited from a database of 40 independent schools in New South Wales, Australia. School principals were invited via mail between March and April 2018, and surveys were conducted between May and June 2018. A total of 9 schools volunteered, with 2 later withdrawing due to difficulties completing within the preferred schedule. Of the final 7 schools, 3 were single-sex schools (2 male and 1 female school), whilst the others were co-ed. Participation Information Statements (PIS) were sent to students, class teachers, and parents.

Opt-out consent was required by both parents and the student. The PIS's made clear that the surveys were anonymous, confidential, and that students could withdrawal at any time during the process.

Out of maximum 830 students available from the 7 participating schools, 746 Year 10 students participated (564 boys and 182 girls) meaning a 90% participation rate. Excluded were 59 students for incomplete surveys, and 25 were withdrawn at the request of their parents. After the survey, all schools submitted positive reports with:

- a. No students complaining or expressing concerns about the survey
- b. No administrative difficulties in administrating the surveys
- b. The surveys generally took less than 20minutes to complete – giving room for a potential 15-20 questions in future.

The survey contained 93 questions, including 10 control questions and 16 subscales adapted from previous studies. It was delivered online via RedCap and analysed using Strata IC 15.1.

2.1 Factor Analysis Validation

The methods used to validate the various scales (factors) included Principal Components Analysis, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Cronbach Alpha Analysis. All subscales did meet conditions for being valid factors. Additionally, three new factors emerged from this process, including separating the larger CPUI-9 factor into the Compulsivity and Distress factors, and a Religion factor from two control questions. The final list of factors were:

Viewing Prevalence [11], Attitudes to Uncommitted Sexual Exploration [11], Sexual Objectification of Women [6], Attitudes to Pornography [41], Parent Communication [21], Parental Rules [21], Peer Behaviour [21], Peer Attitudes [42], Distress from Viewing [14], Compulsivity [14], Religion [43], Parent Relationships [44], Self-Esteem [44], Emotional Stability [44], Social Conduct [45, 46], Peer relationships [45, 46], Prosocial Conduct [45, 46], and Sexualised Social Media Behaviour [47].

2.2 Frequency Results Validation

a. Viewing frequency

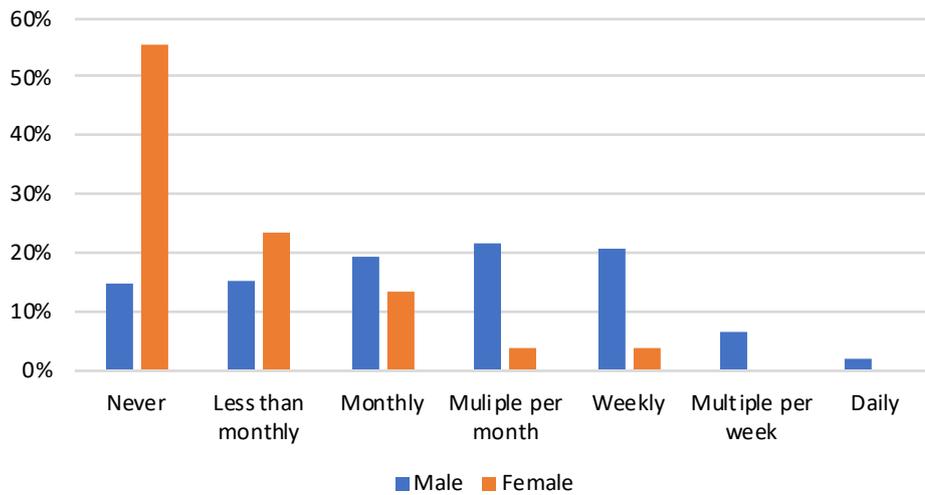
Table 1 and Figure 1 describe the frequency of pornography viewing amongst the students. Females are 3.8 times more likely never to have watched pornography, whilst males are 7.6 times more likely to watch pornography at extreme frequencies (weekly or more). Overall, 70% of male students and 21% of females view pornography monthly or more. These results are consistent with other contemporary adolescent surveys within Australia and internationally, for example Lim [31] and Valkenburg [11], making the degree of exposure amongst this cohort typical and generalisable.

Table 1
Pornography Viewing Frequency

Prevalence Table	Male		Female		Total	
Never	82	(14.5%)	101	(55.5%)	183	(24.5%)
Less than monthly	86	(15.2%)	43	(23.6%)	129	(17.3%)
Monthly	110	(19.5%)	24	(13.2%)	134	(18.0%)
More than once/month but less than once/week	122	(21.6%)	7	(3.8%)	129	(17.3%)
Weekly	117	(20.7%)	7	(3.8%)	124	(16.6%)
More than once/week but less than every day	37	(6.6%)	0	(0.0%)	37	(5.0%)
Daily	10	(1.8%)	0	(0.0%)	10	(1.3%)
Total	564	(100%)	182	(100%)	746	(100%)

Note: Question adapted from Valkenburg's Pornography Exposure Scale [11].

Figure 1
Pornography Viewing by gender



b. Average age of first time exposure

The average age of first time exposure, for students who indicated they had previously encountered pornography, was 12.1 (with 12.1 for males and 12.3 for females).

c. Preferred Viewing Device

Table 2 describes the preferred method of viewing pornography, with most students accessing via a phone, followed by an alternative digital device.

Table 2
Preferred Viewing Device

Preferred Device Table	Male		Female		Total	
Phone	282	(58.0%)	33	(38.4%)	315	(55.1%)
Tablet/iPad	60	(12.3%)	10	(11.6%)	70	(12.2%)
Laptop	92	(18.9%)	21	(24.4%)	113	(19.8%)
Desktop	6	(1.2%)	1	(1.2%)	7	(1.2%)
TV	12	(2.5%)	6	(7.0%)	18	(3.1%)
Other	34	(7.0%)	15	(17.4%)	49	(8.6%)
Total	486	100%	86	100%	572	100%

Note: only one choice was given

d. Sexualised Social Media Behaviour

Males are more likely to initiate sexualised social media behaviours (m30%, f22%), which include the sending of sexualised messages and images via social media accounts and phones. Females, however, are more likely to received sexualised social media content (m43%, f46%).

e. Religion

Table 3 shows the combined response to two questions: ‘Religion is important to me’; and ‘Religion is important to my family’. Females are more likely to regard religion as important than males. The total proportion of students identifying religion as important is consistent with the 2016 Census data for the Australian population (although the questions were not identical). Also, although all schools were independent Christian schools, some students would identify with a non-Christian religion, however this survey did not seek to distinguish what specific religion.

Table 3
Religion

Total Religious Activity	Male		Female		Total	
Never	162	(28.7%)	42	(23.1%)	204	(27.3%)
Rarely	130	(23.0%)	36	(19.8%)	166	(22.3%)
Sometimes	68	(12.1%)	28	(15.4%)	96	(12.9%)
Mostly	112	(19.9%)	34	(18.7%)	146	(19.6%)
Always	92	(16.3%)	42	(23.1%)	134	(18.0%)
Total	564	(100%)	182	(84%)	746	(100%)

Note: Religion is mostly or always important to 36% of males and 42% of females (38% total).

f. Gender differences

It is well established in the wider literature that males are more likely to view pornography than females, which was confirmed in this study. This survey also made these other observations about the genders: females are likely to be more religious; more negative towards pornography; less likely to view woman as sex objects; less likely to desire the exploration of uncommitted sexual behaviours; be less compulsive; have better prosocial behaviours; and embrace less sexualised social media behaviours. Conversely, males are more likely have higher scores in: emotional stability; self-esteem; parental and peer relationships. This is all consistent with past research.

However, when comparing the differences between genders who view pornography monthly or more, there was no statistically significant difference for the factors Attitudes to Pornography, Compulsivity, Attitudes to Uncommitted Sexual Exploration, Sexual Objectification of Women, and Sexualised Social Media Behaviours.

2.3 Factors Effecting Pornography Exposure

The study also examined various reasons for adolescent pornography viewing. The measures that were identified as significant influencers for viewing pornography (including factors from 2.1) were: Age of First Time Exposure, Parent Communication, Parental Rules, Peer Attitudes, Peer Behaviour, Religion, and Motivation. Using a combination of multiple regression and simple linear regression (Ordinary Least Squares), the following observations were made:

- the Age of First Time Exposure **increased** the likelihood of viewing pornography ($p < 0.05$)
- a student's motivation to want to watch pornography **increased** the likelihood of viewing pornography ($p < 0.05$)
- Parental Rules about device access, content access, and general restrictions about media access, were the most significant cause of **decreasing** pornography viewing ($p < 0.05$)
- Parental Communication, or the degree a parent discusses their negative views on pornography and sexualised media behaviours, also **decreased** pornography viewing ($p < 0.05$)
- positive Peer Attitudes towards viewing pornography significantly **increased** the likelihood of a teenager viewing pornography ($p < 0.05$)

- f. the knowledge that close peers approved of or accessed pornography (Peer Behaviours) **increased** the likelihood of a teenager viewing pornography ($p < 0.05$)
- g. the more actively religious the student is, the likelihood of viewing pornography **decreased** ($p < 0.05$)

2.4 Factors Effected by Pornography Exposure

Adolescent pornography exposure has clear negative effects, consistent with past research. The measures that were identified as being significantly influenced by pornography viewing were: Attitudes to Porn, Sexual Objectification of Women, Uncommitted Sexual Exploration, Compulsivity, Distress from Viewing, Emotional Stability, Parent Relationships, Self-Esteem, Social Conduct, Peer Relationships, Social Empathy, and Sexualised Social Media Behaviour. Using simple linear regression analysis, the following effects were identified:

- a. The more students viewed pornography, the more likely they were to ($p < 0.05$):
 - i) have positive attitudes towards pornography
 - ii) adapt views which sexually objectify women
 - iii) increase their desire for uncommitted sexual exploration
 - iv) develop significant compulsivity problems, akin to behavioural addictions
 - v) have reduce distress and guilt from viewing
 - vi) have poorer social conduct
 - vii) have less social empathy
 - viii) have increased sexualised social media behaviours (including 'sexting')
- b. Students viewing behaviours did not have a significant effect on the following ($p > 0.05$):
 - i) quality of parental relationship
 - ii) quality of peer relationships
 - iii) levels of self-esteem
- c. Outcomes that were unexpected include ($p < 0.05$):
 - i) emotional stability increased as more pornography was viewed
 - ii) the more emotionally stable the student was, the more likely they would objectify women

3. Discussion

The survey has demonstrated an internal validity and capacity to produce data consistent with wider research. It is an appropriate tool to measure a broad range of causes of and effects from adolescent pornography exposure. The data demonstrates how ubiquitous pornography and sexualised social media behaviours are amongst adolescents. It is not a remote threat, but a present reality for most males and many females. Pornography's negative influence on attitudes, behaviours, and general wellbeing is unquestionable, and requires urgent attention.

In the context of a society increasingly sensitive to objectifying women, sexual harassment, domestic violence, and unlawful sexual conduct via social media, addressing these threats through focussed education, parental engagement, peer-group involvement, and responsible digital device management, are a minimum response by all responsible for the welfare and shaping of young people.

Clearly parents and schools need to be alert to the risk these devices pose for accessing pornography. As noted in 2.3.c, parental rules about device and internet access play the largest part in mitigating the risk from digital devices. Additionally, the influence of peer attitudes and behaviours for pornography-related behaviours, in the context of high social media usage, present additional challenges for parents and education providers in addressing holistic responses to the topic.

Of significant concern, this study shows that there are no differences between the genders for students who view pornography frequently (monthly or more) in their attitudes toward uncommitted sexual exploration, sexual objectification of women, compulsivity behaviours, sexualised social media behaviours, and attitudes toward pornography. This is a compelling argument for the damage

pornography does to a teenager, regardless of their gender, since it is the frequency of exposure that correlates with these other negative outcomes, not gender. Thus reducing the risk of exposure for all adolescents, male and female, is a clear imperative.

Another challenge is that specifically of compulsivity. The reality for many users of pornography is that they can't stop. This is a neurological problem. Much research has emerged demonstrating that the brains of compulsive pornography users mirror the brains of drug addicts (for example see Voon [48], Love [49], Kühn [50], Hilton [51], Brand [52], and Schmidt [53].) Alterations to the Limbic system, grey and white brain matter, and prefrontal cortex functionality, prompt serious, clinical attention. Students could benefit from psychotherapies, for example Cognitive Behavioural Therapies [52], or other similar interventions [54]. At any rate, some strategy involving school counselling services should be made available for individuals who display compulsive behaviours.

The results listed in point 2.4.a. were consistent with past theory and highlight the serious imminent threat of pornography exposure to young people. Points 2.4.b. and c. at first appear contrary to past theory, however two alternative theories offer creditable explanations:

Firstly, the prevalence of pornography in the media, culture, and amongst peer-groups, is now normalised in the adolescent's life. Hence parent and peer relationships, self-esteem and distress, are no longer negatively impacted, and the teenager's conscience, or sense of guilt, is simply unaffected.

Secondly, a reason that pornography appears to positively affect some wellbeing aspects, like emotional stability, is narcissism, particularly enhance by excessive social media use. A teenager's identity is increasingly bound by their image, including sexual identity, such that pornography use empowers their sense of worth. More research is required to understand this phenomenon, but since pornography use increases sexualised social media behaviour, and peer influences greatly affect pornography use, the relationship between pornography, social media, identity, narcissism, and well-being seem interconnected.

4. Recommendations

- 4.1 Prioritise educating students about the nature, effects, and methods of mitigating pornography access. Preferably the school should allocate teaching units that have an empirical basis for addressing the causes and effects identified in this study.
- 4.2 Facilitate peer engagement about the nature and effects of pornography access and sexualised media behaviour, promoting them to be responsible for their attitudes and behaviours, so that they can mutually alter peer group culture for the better.
- 4.3 Educate parents about the negative effects from pornography viewing, along with how peers and parenting influences directly moderate negative behaviours.
- 4.4 Support parents to better manage access to digital devices and internet access.
- 4.5 Moderate the degree students require unsupervised or unrestricted access to devices and the internet for school work.
- 4.6 Provide additional access to clinical therapies and counselling support that can address compulsive behaviours. School counsellors could be trained in areas related to compulsivity.

Contact

For further information regarding this report, please contact Marshall Ballantine-Jones
mbal4694@uni.sydney.edu.au

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