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Abstract | The importation of child sex dolls into Australia has created increasing concerns. However, the implications of these products, and especially their link with child contact sexual offending, remain unclear.

From a review of the literature, a number of possible negative impacts are suggested. Although currently unproven, it is possible that use of child sex dolls may lead to escalation in child sex offences, from viewing online child exploitation material to contact sexual offending. It may also desensitise the user from the potential harm that child sexual assault causes, given that such dolls give no emotional feedback.

The sale of child sex dolls potentially results in the risk of children being objectified as sexual beings and of child sex becoming a commodity. Finally, there is a risk that child-like dolls could be used to groom children for sex, in the same way that adult sex dolls have already been used.

There is no evidence that child sex dolls have a therapeutic benefit in preventing child sexual abuse.

Exploring the implications of child sex dolls

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Introduction

Child sex dolls are anatomically correct, life-size dolls made to look like pubescent and prepubescent children. Currently manufactured in overseas markets, including China, Hong Kong and Japan, they are designed to be as lifelike as possible. Manufacturers offer the opportunity to tailor skin, hair and eye colour, facial features, body shape et cetera, and the dolls are of a similar weight to a child (Maras and Shapiro 2017; Shaw 2017; Torjesen 2017). They are also designed with vaginas, anuses and mouths that will fit an adult penis. Robotic versions of adult sex dolls are also available (child versions are thought to be in production) that can have a heartbeat, use artificial intelligence and programming to give positive verbal cues, track eye movement and assume sexual positions (Döring & Pöschl 2018; Maras and Shapiro 2017; Sharkey et al. 2017). Danaher (2017) suggests the drive to develop a sex doll or robot in human form is to create an artificial substitute for, or to augment, human sexual interaction.

In recent years, both in Australia and overseas, offenders have been prosecuted for possessing or importing child sex dolls. In response to the issue, the UK's National Crime Agency, with Border Force, jointly established Operation Shiraz, which seized 123 child dolls, preventing them from being imported, between March 2016 and July 2017. This led to successful prosecutions, under UK customs legislation, for importing obscene material (Shaw 2017).

In the USA, the *Curbing Realistic Exploitative Electronic Pedophilic Robots (CREEPER) Act* passed the House of Representatives in June 2018, although it is yet to pass the Senate. Section 2 of the Act raised a number of concerns about child sex dolls (although none of the assertions appear to be substantiated by empirical evidence), including their relationship with child exploitation material ownership; that they can be customised to represent actual children; that robot versions can have settings to simulate rape, which can help teach an attacker how to overcome resistance; that they can normalise submissiveness and normalise sex between adults and children; that obscene material is often used to groom children for sexual exploitation; and that they can lead to the exploitation, objectification, abuse and rape of minors. As a result, the legislation seeks to prohibit the importation and transportation of child sex dolls in the USA (GovTrack 2018).

In 2016, a petition to ban child sex dolls in Australia was reported to have received more than 18,000 signatures (Scott 2016). A search of change.org (a website on which petitions can be created) in October 2018 using the term 'child sex dolls' found nine open petitions calling for the ban of such items in the UK and USA.

In Australia in 2017, a significant increase was reported in the number of child sex dolls imported and seized, with such dolls classed as objectionable goods under the Customs Act 1901 (Sydney Criminal Lawyers 2017). Figures provided by the Department of Home Affairs indicate that, between July 2013 and June 2018, 133 child-like sex dolls were detected at the point of importation, although the vast majority of these detections occurred in the 2016–17 financial year.

Legislation in New South Wales prohibits the ownership of child sex dolls. In 2016, a man was sentenced to two years and three months imprisonment for possession of a child sex doll, after a Sydney District Court judge ruled that a child sex doll could be classed as child abuse material under section 91FB of the *Crimes Act 1900 (NSW)* (Commonwealth Director of Public Prosecutions 2016). Legislation in other states and territories could also be used to prohibit child sex dolls, although this largely remains untested in the courts.

In February 2019, the Combatting Child Sexual Exploitation Legislation Amendment Bill was introduced to the Australian Parliament. This bill seeks to prohibit the possession of child sex dolls, as well as criminalising the use of a carriage service to advertise or solicit child sex dolls, and the use of a postal service to send such dolls.

Aim

This paper explores the available evidence on child sex dolls, with a particular focus on the implications of their use, for both individuals and society as a whole. The specific questions explored in this paper, developed in consultation with the Department of Home Affairs, are:

- Do child sex dolls promote the sexualisation of children?
- To what extent can the use of child sex dolls be viewed as an escalated form of engaging with child pornography?
- Does using child sex dolls normalise child sexual abuse for offenders, making them more likely to commit a contact offence?
- Is there a risk that child sex dolls can be used as a grooming tool?

Methodology

A literature search for academic articles describing sex dolls was conducted over established commercial databases (CINCH, Criminal Justice Abstracts, Proquest Criminal Justice Database, PsycARTICLES, PubMed, SocINDEX). Further searches were made for grey literature material such as reports and magazine and newspaper articles. Reference lists were also scanned for additional material. Terms used for subject specific articles included:

'Anatomically detailed doll*' OR 'anatomically correct doll*' OR 'sex doll*' OR 'sex toy*' OR 'sex robot*' OR 'sex bot*' OR 'sex AND robot*'

The same databases were used to retrieve related material on aspects of persons with a perceived interest in sex dolls.

It is important to note from the outset that the available evidence in relation to sex dolls in general and child sex dolls in particular is very weak, with almost no studies empirically examining the implications of doll use. Therefore, this paper also draws on the larger literature associated with child exploitation material and sex offending to examine the implications of child sex doll ownership and use, as well as the more narrative, discursive material found in relation to sex dolls.

Relationship with online child exploitation material

From a societal perspective, it is commonly understood that any sexual activity involving children is unacceptable and that, therefore, by extension, child pornography (from here on termed child exploitation material, or CEM) cannot be consensual. Indeed, Roos (2014) noted that such material actively encourages the sexualisation of children by creating a market that validates sexual gratification through its use, erotising the child's defensiveness and encouraging the use of children for sexual satisfaction.

Every Australian state and territory, as well as the Commonwealth, has legislation that prohibits online child exploitation material within the remit of its jurisdiction (Boxall, Tomison & Hulme 2014). Although precise definitions vary, legislation typically outlaws the production, distribution and possession of such material. Definitions have changed over time to account for developments in technology, as CEM moved from analog to digital formats, with computer generated representations of CEM (particularly in the context of computer games; see Warren and Palmer 2010) also being prohibited (Boxall, Tomison & Hulme 2014).

Parallels can be drawn between computer generated CEM and child sex dolls in that neither involves direct harm to a child in its creation. As a child sex doll cannot experience harm, there is neither a legal nor moral victim (Strikwerda 2017). However, the representation of a child being party to sexual acts in computer generated images has been considered to raise the risk of subsequent child victimisation. The explanatory memorandum to the Crimes Legislation Amendment (Telecommunications Offences and Other Measures) Bill 2004 (Cth) noted that depictions of children in child abuse material would be covered by the proposed act, including representations of children in cartoons and animation.

This was justified:

...because although it may not directly involve an abused child in the production, its availability can fuel further demand for similar material. This can lead to greater abuse of children in the production of material to meet this demand. (Parliament of the Commonwealth of Australia 2004: 6)

It is reasonable to assume that child sex dolls, like their female adult counterparts, will evolve into child sex robots that can move and be interactive and could plausibly be used to replicate a sexual experience, as opposed to the less interactive activity of viewing CEM. Sexually explicit behaviour with a child sex robot could be seen as a much closer experience to actual child sexual abuse (Strikwerda 2017).

This line of reasoning also suggests that, just as there could be indirect harm from computer generated and animated CEM, so too could there be indirect harm from the production, distribution and use of child sex dolls. These harms include risks associated with escalation, desensitisation, objectification, commodification and grooming.

Potential harms

Escalation

Escalation in relation to child sex dolls refers to the possibility that such devices may promote a continuum of behaviour that results in contact child sexual offending, by bridging the gap between fantasy and reality. This hypothesises that use of a child sex doll may be causally associated with the onset of contact child sexual offending and/or may speed up the process by which such contact offending is initiated. While there is no empirical evidence to test this hypothesis directly, the argument presented here is that escalation in the nature of material viewed can occur with online sexual images. When combined with a general preference for physical representations over virtual ones, there is a plausible argument that some individuals may migrate from viewing child exploitation material to engaging with a child sex doll.

Escalation in relation to pornographic material has previously been documented (Maras & Shapiro 2017; Schell et al. 2006). Accessing CEM has been considered a progressive addiction, with passive viewing of online content leading to an escalation in problematic internet use which, some have suggested, may subsequently lead to contact sexual offending (Maras and Shapiro 2017; Quayle & Taylor 2003). From reviewing the cases of 136 online child sexual offenders in Australia, Davis, Lennings and Green (2018) concluded that the preference for more extreme material increases as the medium moves from photographic to video. Offenders who viewed only photographic CEM images were less likely to have a preference for more graphic and explicit images (as graded by the Combating Paedophile Information Networks in Europe, or COPINE, Scale) than those who viewed video content. Houtepen, Sijtsema and Bogaerts (2014) noted that heightened online engagement can lead to a need for more extreme material to reach satisfaction.

Given this tendency towards escalation in CEM content, it is possible (although as yet unconfirmed by empirical evidence) that CEM offenders could migrate to child sex dolls as a progression from consuming online content to engaging in sexual contact with a proxy-human object. This may be supported by evidence of our preference for the physical world over the virtual (Darling 2016; Kwak et al. 2013; Li 2015; Suzuki et al. 2015). Further support for the escalation towards dolls can be found in one study that compared men's physical attraction to adult sex robots with their attraction to women (Szczyka & Krämer 2017). The study found no difference in men's underlying (implicit) perception of attractiveness towards sex dolls versus women, although explicit perceptions (that took account of social acceptability) found a preference for women over dolls.

Conceptually, child sex dolls could provide their users with both emotional and physical stimuli; this is borne out by testimonials of adult sex doll owners, who frequently report emotional attachment to their dolls, including romance, closeness and companionship (Ciambrone, Phua & Avery 2017; Döring & Pöschl 2018; Wolak, Finkelhor & Mitchell 2012). A recent study of sex doll owners indicated that companionship and alleviation of loneliness were important aspects of sex doll ownership (although over three-quarters still described sex as the core element of their relationship; Lancaster-James & Bentley 2018). This train of reasoning would suggest that CEM offenders might be attracted to child sex dolls because they potentially provide greater intimacy and sexual satisfaction than might be derived solely from viewing online content. In support of this reasoning, the US Congress found, 'There is a correlation between the possession of the obscene dolls, and robots, and possession of and participation in child pornography' (US Congressional Bill 115 Congress; CREEPER Act of 2017; 14 June 2018), although it should be noted that this finding was based on opinion rather than empirical evidence.

This does not necessarily mean that child sex doll users would progress to contact child sexual offending, or that such dolls act as a bridge between CEM and contact offending, although it has been argued that the step between the use of child sex dolls and child sexual abuse may be smaller than the step between watching CEM and child sexual abuse (Strikiwerda 2017).

It is important to note that the relationship between CEM offences and contact child sexual offending is complex (Eke, Seto & Williams 2010; Prichard & Spiranovic 2014). Contact child sexual offenders are often found to have collections of CEM material (Palermo & Farkas 2013), and early exposure to pornography among sexual offenders has been shown to reduce empathy for children in abusive situations (Simons, Wurtele & Heil 2002). Long, Alison and McManus (2012) found that contact child sexual offenders tended to access more extreme CEM content than non-contact CEM offenders, providing evidence of escalation from CEM to contact sexual offending. However, a meta-analysis by Babchishin, Hanson and Hermann (2011) found that sexual deviancy was higher among CEM offenders than among contact offenders. Yet, depending on the follow-up period examined, typically less than seven percent of CEM offenders go on to commit a contact child sexual offence, based on official sanction data (Brown & Bricknell 2018), although self-report data suggest the undetected level of recidivism could be much higher (Seto, Hanson & Babchishin 2011). Prichard and Spiranovic (2014) concluded that, while there appears to be a relationship between CEM and contact child sexual offending, there is no direct evidence to support a causal link between the two. Therefore, the imputed relationship between CEM offending, child sex dolls and contact sexual offending needs to be treated with care, given the inconclusive results from studies of the relationship between CEM and contact child sexual offending.

A number of questions remain unanswered regarding the role of child sex dolls in the escalation from online CEM to contact child sexual offending. For example, is there a relationship between the prevalence of CEM possession and child sex doll use? Is there a relationship between the extremity of CEM accessed online and the willingness of offenders to use child sex dolls? How does the use of child sex dolls influence the decision to initiate contact child sexual offending? To what extent is the use of child sex dolls associated with the frequency, prevalence and severity of contact child sexual offending?

Desensitisation

Desensitisation in this context refers to the distorted cognitions that may derive from child sex doll use where sexual abuse of a proxy-child becomes normalised, thereby providing justification for the initiation of contact child sexual offending. Howitt and Sheldon (2007) found that CEM offenders were more likely than contact child sexual offenders to view children as sexual beings. This was a function of CEM offenders' views being fuelled by their fantasies, while contact offenders were aware of the realities of sexual contact with children. Child sex dolls could continue to fuel the fantasy perception of children as sexual beings, further supported by the lack of negative feedback received from a doll. Indeed, Maras and Shapiro (2017: 17) noted that such dolls:

...fail to provide pedophiles with accurate emotional feedback from aggressive actions, particularly ones that would result in emotional and physical damage if performed on a real child.

This results from the fact that such dolls will typically be silent and offer no emotional feedback or, in the case of robotic models, only positive responses (Maras & Shapiro 2017).

Objectification

The sexual objectification of women has been shown to be associated with violence against women in various ways (Gervais & Eagan 2017). It has been argued that (adult) sex dolls objectify women by making the sole reason for their existence the sexual pleasure of men (Sharkey et al. 2017). Dolls can be tailored to suit their owners' wishes, thereby fulfilling the fantasy role their owners desire and potentially creating a distorted view of women. These distortions could increase sexual violence towards women resulting from expectations that they will accord with men's sexual fantasies. Cox-George and Bewley (2018: 161) have termed this misogynistic objectification. Gutiu (2016: 196) noted:

Whatever the true motivations may be to own a sexbot, there are gender dynamics at play which should make us question whether sexbots are part of a broader continuation of women's oppression.

Indeed, the instrumental use of sex dolls to relieve sexual urges, as proposed by Levy (2007), fails to account for the importance of empathy and reciprocity in sexual relationships and reduces humans to things (Richardson 2016). By extension, they characterise women as being primarily sexual objects and submissive, and essentially a means to an end (Gutiu 2016). Richardson (2015) argued that the way we attribute meaning to robots reflects what is of value to us. Human constructs of gender, class, race or sexuality can come into question when sex dolls are used in a sexually abusive manner. This usage could serve to reinforce negative societal stereotypes which lead to children being perceived as sexual objects.

Such dolls could also offer another means by which children (and girls in particular) self-objectify as sexual beings, by internalising the sexualising messages of the prevailing culture (APA Task Force on the Sexualisation of Girls 2007; Hatch 2011). This can lead to a range of health problems in later life (Fredrickson & Roberts 1997).

Also of concern are ethical issues associated with consent (Frank & Nyholm 2017). As manufactured objects, sex dolls (or rather the more sophisticated robotic versions) may or may not be designed to give consent to sex. Failure to give consent could mean that users assume consent is always implied. Sparrow (2017) argued that adult sex robots that are designed to always consent to sex would represent a woman who never refused sex, thereby fuelling misconceptions common in rape culture that women are always available for sex. Regardless of whether consent is implied or always given, there are concerns that this will lead to increased sexual assault (Cox-George & Bewley 2018; Heath 2016; Sparrow 2017).

In the case of child sex dolls, consent for sex with a child can never be given, because it is illegal. Therefore, sex with a child doll can be viewed as morally problematic in the same way that Sparrow (2017: 18) has viewed sex robots designed for the purpose of rape as being 'a moral hazard to the character of the user'. Similarly, Danaher (2014) has viewed the use of child sex dolls as problematic because it both involves harm of moral character to the user and shows a lack of sensitivity to the social meaning that sex with a child sex doll signifies. Such dolls also erode respect for others, as a result of the lack of equality and reciprocity in the sexual behaviour involved, which can therefore be considered morally objectionable from a legal moralism perspective (Strikwerda 2017).

Commodification

Objectification of sex raises the concern that sex dolls essentially package and market non-consensual sex as a commercial product. The act of seeking out, selecting, purchasing and receiving a child sex doll is the result of a planned consumer choice that signals a demand to the market, which in turn further promotes the sexualisation and commodification of children. Indeed, as Roos (2014: 152) has noted in relation to child exploitation material (and, by extension, child sex dolls), such material sexualises the asexual, reinforcing 'a boundlessness of want, in disregard of others' needs'. Such want is then supplied through the packaging and selling of child sex – either directly or indirectly with CEM, dolls et cetera. This has the potential to normalise the use of child sex dolls, even in society more widely, which may in turn influence attitudes towards women and children and ultimately encourage violence.

Grooming

The discussion so far has centred on the role of child sex dolls in influencing the behaviour of those who use them, by increasing desire and distorting cognitions regarding sex with children. However, there is evidence that adult sex dolls have been used as tools in the grooming of children for sex. For example, in one case, a minor was encouraged to have sex with a blow-up (adult) sex doll as part of the grooming process (see *R v Gommeson* [2014] NSWCCA 159). There is as yet no evidence that child sex dolls have been used for grooming children, although it could be argued that they would be of even greater benefit to offenders than adult sex dolls in normalising sexual contact with children in the same way that CEM has been shown to be used in the grooming process (Cohen-Almagor 2013).

Therapeutic benefit

The therapeutic benefit of child sex dolls has been hotly debated (Rutkin 2016). Behrendt (2018) has set out the arguments for and against the therapeutic use of child sex dolls. In favour of child sex dolls, they can be viewed as a technological device that could protect society. Regardless of whether they are used for recreational or therapeutic purposes, the end result could be the same – the prevention of harm to children from sexual predators. Indeed, one Japanese manufacturer of such dolls has long argued they have therapeutic benefit by satiating sexual urges that may otherwise have been inflicted on children (Morin 2011). With these assumed benefits in mind, Moen and Sterri (2018) have proposed that child sex dolls could be regulated by providing paedophiles with access to them through psychiatrists.

In opposition to their use is the contention that child sex dolls may increase users' sexual desires for children, by acting as a springboard that incites users to abuse children (Behrendt 2018). Further, Facchin, Barabara and Cigoli (2017) argue that discussion about the function of dolls in relieving sexual urges misses the point, as sexual abuse is more about domination and control than sexual satisfaction.

Currently there is no empirical evidence to support the assertion that sex dolls (whether adult or child) reduce the likelihood of sexual violence.

Conclusions

Despite a lack of robust evidence in relation to child sex dolls, there is reason to suggest they may lead to societal harms through a number of different mechanisms. They may bridge the gap between fantasy and reality by allowing potential offenders to move from the virtual to the physical world, although it is currently unclear whether this intermediary step between viewing online CEM and contact child sexual offending increases the likelihood of subsequent child sexual abuse.

It is reasonable to assume that interaction with child sex dolls could increase the likelihood of child sexual abuse by desensitising the doll user to the physical, emotional and psychological harm caused by child sexual abuse and normalising the behaviour in the mind of the abuser. At the same time, there is no evidence of therapeutic benefit from child sex doll use.

From a societal perspective, questions have been raised over the potential for child sex dolls to lead to the objectification of children as sexual beings and the commodification of products that promise the opportunity for an adult to play out their sexual fantasies with a simulated child.

This remains an under-researched topic. Little is currently known about the actual risk associated with child sex dolls and the extent to which they add to the risk associated with online child exploitation material. However, by drawing on the limited material that is available, both theory and empirical research would appear to point towards possible areas of concern.

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