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Toverljani, A., McClelland, A., & Furnham, A. (2017). The Effect of Sexual Programme Content on the Recall of Foreign Sexual and Non-sexual Advertisements. *Applied Cognitive Psychology*, 31(2), 199-206. doi: <http://dx.doi.org/10.1002/acp.3317>

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The effect of sexual programme content on the recall of foreign sexual and non-sexual advertisements.

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Abstract:

This study explored the effect of programme content (sexual and non-sexual) on the recall of sexual and non-sexual advertisements. 78 participants were allocated randomly to four different groups which viewed either a sexual or non-sexual programme with either sexual or non-sexual advertisements placed within. Free and cued recall of the advertisements was assessed. The sexual content of programmes impaired advertisement recall, for both free recall and cued recall. Furthermore, advertisements that were of a sexual nature were remembered more than advertisements of a neutral nature. There was an interaction between advertisement type and gender, where females remembered more advertisements that were sexual than males. There was also an interaction between programme type and gender, with males recalling less advertisements after viewing the sexual programme.

Key words: sexual content; advertising; gender.

The ultimate goal of advertisements, is to heighten the likelihood that the audience will buy the goods or services that are being advertised (Bushman, 2007). In order to achieve this goal, advertising agencies sometimes utilise sex, violence and humour to attract the attention of the recipient. Research in this area has asked two questions: Are sexual advertisements more memorable and are advertisements embedded within programmes with sexual material better remembered?

Some research points in the direction that individuals give more attention to content that is of a sexual nature than to content of a neutral nature (Reichert, Heckler & Jackson, 2001). However, research on televised sexual advertisements and their effectiveness is unclear (Bushman & Bonacci, 2002).

Holgerson, Belch and Koppman (1981) found that advertisements of a sexual nature lead to states of increased arousal and attention, as measured by galvanic skin responses. Research has further shown that individuals tend to recall sexual content better than non-sexual content, even in reading activities. For example Geer and McGlone (1990) found that participants had greater recall for romantic and erotic sentences than for sentences of a neutral nature. In one study, individuals had longer reading times when they were reading stories that were sexual compared to reading non-sexual stories (Geer, Judice & Jackson, 1994). It has been argued that when an individual processes sexual material, they need greater cognitive resources compared to processing non-sexual material (Geer & Melton, 1997). As a result, people have reduced cognitive resources to handle different stimuli when they are viewing something of a sexual nature. This helps to explain why people may remember sexual sentences more than non-sexual.

Memory for sexual advertisements

Bushman (2007) argued that in order to assess advertisement effectiveness, it is important to test memory for these advertisements. Studies on the effect of sexual advertisements have made use of matching advertisements of a sexual and non-sexual nature on a number of extraneous factors that have no relation to their sexual nature. These include the product, the duration of the advertisements, the brand that is being shown and the audience that it is targeted towards. Some studies have shown and concluded, that advertisements that have sexual content are better remembered than advertisements that are not sexual (Furnham & Mainaud, 2011; Leka, McClelland & Furnham, 2013; King, McClelland & Furnham, 2015).

Although the majority of research highlights that advertisements that are sexual are better remembered than their non-sexual counterparts, some research is contradictory. Some studies have suggested that content which is sexual can serve as a distraction, which then interferes with processing of the information on the product (Fried & Johanson, 2008).

An important recent meta-analysis by Lull and Bushman (2015) found that as the sexual content in advertisements became more intense, attitudes, memory and intentions to buy the brand all decreased. It was further found that brands that were advertised using sexual advertising were evaluated less positively compared to brands in advertisements that were of a neutral nature. They argue that this is due to the evolution and emotional arousal theory, whereby people have an evolutionary predisposition to pay attention to cues that are emotionally arousing, such as violence and sex. As a result, cues that are sexual require more cognitive resources than cues that are not. Brands that are in sexual advertisements become

peripheral when there is sexual content in the advertisements. The sexual content becomes the centre of focus. As a result, people fail to recall brands from advertisements that are sexual. This is in line with the findings of Fried and Johanson (2008), that sex can be a distraction in advertisements. Additionally, Parker and Furnham (2007) did not find that advertisements of a sexual nature were remembered more than non-sexual ones. However, this study made use of advertisements that may have already been seen by the participants. This could have been a possible confounding variable.

Programme context effects

In addition to looking at the effect of advertisements on attention and retrieval, an increasing body of literature has looked at the effects of programmes on the recall of advertisements. Bushman and Bonacci (2002) found participants who viewed the content that was sexual or violent recalled advertisements worse than those who watched the neutral content video. They suggested that programmes that are of a sexual or violent nature may make viewers think about sex or violence (such as reminiscing on their own encounters), which may cause disruption to the encoding of the advertisements presented. This is known as Berkowitz's (1984) Cognitive Neoassociation Theory. They also proposed that this hindrance could be due to the fact that processing material of a sexual nature creates a reduced cognitive capacity for other types of stimuli to be processed. Processing sexual material needs a larger amount of cognitive resources than content which is non-sexual. Indeed it was found that this effect of programme type on advertisement recall impacted the behavioural intentions of a consumer when buying the advertised product (Bushman, 2005). Those who viewed the advertisements embedded within the sexual and violent programmes were less likely to purchase products with coupons. These findings shed light on the idea that watching programmes that show content which is

sexual or violent do not encourage memory for advertisements.

However Fried and Johanson (2008) argue that the studies by Bushman and Bonacci (2002) and Bushman (2005) did not provide adequate control over extraneous variables of the programmes used. They argue that the programmes varied in other ways than solely their violent or sexual content. For example, the sexual programmes used were more likely to be comedies, the violent programmes were more likely to be adventure themed or dark dramas, and the neutral programmes tended to be family shows. In addition to this, some of the sexual programmes used had more sexual jokes than explicit sexual scenes. In their study, they found that when these extraneous factors were controlled for, sex and violence did not impact recall of the advertisements. They also found that other factors (such as humour) in a programmes content did have an influence on memory of advertisements, in that these factors led to greater advertisement retention.

A study by Leka, McClelland and Furnham (2013) found that sexual programme content did not have any effect on recall of advertisements that were embedded within them. Further support comes from a large meta-analysis conducted by Lull and Bushman (2015), who also found no significant effects of media that is of a sexual nature on memory. However, Parker and Furnham (2007) found that those who viewed the sexual programme had worse recall of advertisements than those who viewed the non-sexual programme. These findings have been supported by other studies (Furnham & Hiranandani, 2009; Furnham and Mainaud, 2011). Therefore, on balance, the evidence suggests that sexual programme content does prevent memory for advertisements.

Recent research by King, McClelland and Furnham (2015) used advertisements that participants in the UK had not seen before. There were two conditions used. In their study,

there was no effect of programme content on recall of advertisements. They argued that this result was due to the control over extraneous variables and making sure the experiment was high in ecological validity. For example, the study made use of two advertisement breaks within one programme and a mixture of non-sexual and sexual advertisements together in one advertisement break. This ensured that the viewing experience of the participant felt more real. However, the experiment did contain some problems, such as the use of one advertisement which was the most prominent out from all the others due to its full-frontal nudity.

Gender differences in viewers

Various researchers have been interested to see the role of gender when it comes to memory for advertisements. However, the findings of gender differences in relation to sexual content are mixed. According to Kingston, Malamuth, Fedoroff and Marshall (2009), men have an increased interest in pornography and images of a sexual nature on TV. Studies have also found gender differences in ways of thinking about sex appeals (e.g. Sengupta & Dahl, 2008). According to Alden and Crowey (1995), women, in general, tend to be uncomfortable with sex. They were also found to have worse memory for sexual advertisements than men. Additionally, Parker and Furnham (2007) found that males had better memory for advertisements of a sexual nature compared to females.

However, in a study by Furnham and Hiranandani (2009), there were gender distinctions in free recall of sexual advertisements but not for cued recall. Furthermore, although there was a gender difference, it was women who recalled more advertisements than men. However, they did find that males and females both recalled more sexual than non-sexual advertisements in general. Further Furnham and Mainaud (2011), also found that advertisements that had sexual content were better remembered than non-sexual ones, however there were no differences in

gender found for cued or free recall. These mixed findings could arise from the stimuli that were used and the methods of measuring memory for the advertisements. According to Geer and McGlone (1990), males and females have an interest in different types of sexual content. Men tend to like more erotic sexual material, whereas women tend to like more romantic sexual material. Depending on which type of material that is used, perhaps this can cause gender differences in recall.

The current study

The present study aimed to investigate whether programme content had an effect on recall of advertisements that were “foreign”. The foreign advertisements were ones that were not aired on British television, but were in English, so as to be understood by the participants.

The first hypothesis was that there would be a main effect of programme type, so that there would be poorer recall of advertisements when viewing a sexual programme than a non-sexual programme. Additionally, it was hypothesised that there would be a main effect of advertisement type, with better recall of sexual advertisements than advertisements that were non-sexual. This was due to the findings of Ivinski (2000) and King, McClelland and Furnham (2015). This was also based on the idea that the novelty of the foreign advertisements would make participants remember sexual advertisements more than non-sexual, as they were not exposed to the advertisements prior to the study. It was further hypothesised that males would remember more sexual advertisements than non-sexual advertisements compared to females, and that they would be more impacted by the programme effect, so that sexual programme content would hinder recall in males more than females. This was based on the findings by Parker and Furnham (2007).

METHOD

Participants

Volunteer sampling was used to recruit participants at sixth form schools in London. All participants were aged 18. There was a random assignment of participants to four distinct conditions: group 1 viewed sexual foreign advertisements placed within a sexual programme ($n = 20$, Males = 10, Females = 10), group 2 viewed non-sexual foreign advertisements placed within a sexual programme ($n = 19$, Males = 9, Females = 10), group 3 watched sexual foreign advertisements placed within a non-sexual programme ($n = 20$, Males = 10, Females = 10) and group 4 watched non-sexual foreign advertisements placed within a non-sexual programme ($n = 19$, Males = 10, Females = 9).

Materials

Programmes

The current study used two programmes, one was of a sexual nature and the other was of a non-sexual nature. These programmes were chosen by an independent panel of eight people. This panel was made up of an equal number of males and females, aged 18 and above. In order to qualify to be used as a sexual programme, the programme needed to contain scenes of nudity, be suitable for an age rating of 18 and above and contain a strong sexual reference. The sexual programme that was used was an episode from 'Sex and the City'. The particular episode was called 'Was it good for you?' This sexual programme was also used in previous studies (Parker & Furnham, 2007; Furnham & Mainaud, 2011; King, McClelland & Furnham, 2015). The programme used was selected due to the explicit sexual and romantic content.

For the non-sexual programme, it was important for it to have no sexual reference, scenes of nudity or scenes of a sexual nature. It also had to be U-rated (suitable for all audiences). The

non-sexual programme that was used was an episode from 'Friends' called 'The One with the Cooking Class'. This was also used in previous studies (Furnham & Mainaud, 2011; King, McClelland & Furnham, 2015). The chosen programmes were similar in length (around 30 minutes), were both American and were both comedies. The programmes have also been screened in the UK. There were no other themes in the programmes which may have had an influence on the involvement of the participants, such as violence.

Advertisements

There were six foreign advertisements of a sexual nature and six foreign advertisements of a non-sexual nature used in the study. The same independent panel that had selected the programmes took part in the advertisement selection process. A sample of 30 advertisements were presented to the panel, which were all alike in length and were appropriate for use in the experiment. There was no violence present in any of the advertisements. The panel had to view the advertisements in subgroups of like products. In each subgroup, the advertisements that had the highest ranking and the lowest ranking were selected as the sexual and non-sexual advertisements that were used in the study. The advertisements were chosen on the basis that they had a product category that can be bought in shops (such as beer), as opposed to a service (such as a bank). The product categories that were chosen needed to be relevant to the age of the participants. These products were: beer, deodorant, shampoo, shoes, ice-cream and sun lotion. Actions were undertaken in order to make sure that the foreign advertisements used were gender-neutral, however, this was a difficult task and may have introduced the presence of a likely confound

There was one break in each of the videos with advertisements at a roughly identical part within the programmes. There was no repetition of advertisements within one video tape. The order of the sexual and non-sexual advertisements was created randomly and this same order was

kept and shown in both the sexual programme and the non-sexual programme.

Questionnaires

The first questionnaire was used to test free recall of advertisements. Participants had to write anything that they could recall about the advertisements shown, in any order that they remembered them. The maximum score on this questionnaire was 12, two points were given for correct descriptions of each of the six advertisements and one mark was given for answers that were only partially correct. In order to get the full marks, participants had to recall brand name and product type. The second questionnaire provided cues to aid recall of the advertised products in order to test cued recall. This questionnaire was a multiple-choice questionnaire, where participants had to answer questions related to the advertisements they had seen. There were four questions per advertisement, which meant that there was a total of 24 points available. Participants were then asked questions on their general viewing habits and whether they enjoyed the programme and advertisements.

Procedure

There was a random assignment of participants to one of the four groups. Each group had to sit in a classroom and watch the video tape on an interactive whiteboard screen. The volume was kept constant and the room was kept constant. Prior to watching the video, participants had to complete a sheet of informed consent, in order to comply with ethical requirements. Participants were then given verbal instructions. Once the video tape was over, the participants were given the free recall questionnaire, which they had 5 minutes to answer. It was made clear to the participants that the order that they recalled the advertisements in did not need to be the same order as they had appeared in. The free recall questionnaire was collected so that participants would be unable to change the answers to their questionnaire once the cues from

the cued recall questionnaire had been seen. The second questionnaire was then given out to the participants. They were allowed a further 5 minutes to answer. When the experiment was over, participants were debriefed. Once the data was collected, an appropriate marking scheme was devised, specifying what details were needed for full marks and partial marks in the questionnaires. This was done to ensure a high level of reliability.

RESULTS

Main effect of programme type and advertisement type on recall

A 2x2x2 analysis of variance was carried out testing programme type, which had two levels (sexual and non-sexual), advertisement type, which had two levels (sexual and non-sexual) and gender on memory of advertisements (cued and free recall). Analysis demonstrated that there was a significant main effect of programme type for free recall ($F(1,70) = 14.724, p < .001$) and for cued recall ($F(1,70) = 27.647, p < .001$). This showed that programme content that was of a sexual nature hindered recall of advertisements. Additionally, there was a significant main effect of advertisement type for free recall ($F(1,70) = 5.073, p = .027$) and for cued recall ($F(1,70) = 8.544, p = .005$). Participants remembered more sexual advertisements than non-sexual.

Insert Tables 1, 2 and 3 here

Effect of gender on recall

It was further found that there was no effect of gender on advertisement recall, for free recall ($F(1,70) = 1.287, p > .05$) and for cued recall ($F(1,70) = 0.104, p > .05$). However, there was a significant interaction between advertisement type and gender for cued recall ($F(1,70) = 8.186, p = .006$). This interaction was only marginally significant for free recall ($F(1,70) = 3.492, p = .066$). The interaction between advertisement type and gender for cued recall showed that

females remembered more sexual advertisements than males. Additionally, there was an interaction between programme type and gender for cued recall ($F(1,70)=4.525, p=.037$) but not for free recall ($F(1,70)=1.105, p>.05$). The interaction showed that males recalled less advertisements when viewing the sexual programme compared to females.

DISCUSSION

The hypothesis that participants who viewed the sexual programme would have worse recall of advertisements was supported. It was found that sexual programme content impaired recall of advertisements, for both free recall and cued recall. This corresponds to the findings in previous studies (Bushman & Bonacci, 2002; Parker & Furnham, 2007; Furnham & Hiranandani, 2009). The results suggest that sexual content in programmes is highly involving and so there is a reduction of attention on advertisements, which impairs recall. These findings can be explained by the explanations proposed by Bushman and Bonacci (2002). It seems that attention is directed to sexual programmes and so it limits the attention directed to the advertisements. When an individual views sexual content, it leaves a reduced cognitive capacity for processing other stimuli. In addition to this, the finding could be explained by the idea that sexual content may prompt sexual thoughts and because participants may be thinking about these thoughts, this reduces attention placed on the advertisements.

It was also hypothesised that advertisements of a sexual nature would be remembered more than advertisements of a non-sexual nature. This was supported by the findings from the present study. It was found that for both free recall and cued recall, participants remembered more sexual advertisements than non-sexual. This implies that the sexual material in advertisements increases how effective they are, which agrees with an expanding body of research (Furnham

& Hiranandani, 2009; Leka et al., 2013; King et al., 2015). These findings can be explained by the physiological effects of viewing sexual content. According to Belch et al. (1981), when people view sexual content, they experience states of increased arousal and attention, when measured by galvanic skin responses. In addition to this, Geer and Melton (1971) point out that when individuals process sexual content, they need greater cognitive resources and so this leaves less resources for processing other materials. This may explain why sexual advertisements are remembered more than non-sexual ones. Furthermore, the current study made use of foreign advertisements which were never viewed before. This demonstrates that even when there are novel advertisements, people still tend to remember sexual advertisements more than non-sexual, which provides support for the idea that “sex really does sell”.

It was hypothesised that males would remember more sexual advertisements than females and that males would remember less advertisements, in general, when viewing the sexual programme. It was found that gender had no effect on advertisement recall for free recall and for cued recall. However, analysis revealed that there was a significant interaction between advertisement type and gender for cued recall, where females remembered more sexual advertisements than males. This is not in line with the original hypothesis but is inconsistent with a number of other studies (Alden & Crowey, 1995; Parker & Furnham, 2007). However, the finding that females remembered more sexual advertisements than males has been found previously (e.g. Furnham & Hiranandani, 2009).

A further finding was that there was an interaction between programme type and gender for cued recall, with males remembering less advertisements after viewing the sexual programme. This suggests that males may have more sex related thoughts, which may reduce the attention that is given to advertisements. This is in line with the third hypothesis of the experiment and is consistent with previous research that males have an increased interest in pornography and

sexual content on TV (Kingston et al., 2009). Perhaps because males have this increased interest in sexual content, they gave their full attention to the sexual programme, so when the advertisements came on, they had reduced cognitive capacity and attention for the advertisements.

There are a number of methodological problems and proposals for further research that arise from the current study and studies similar to it. The first problem is that the participants viewed the programmes in groups. This may have given the experiment a more natural setting, as people often watch programmes in groups of friends and people they know. However, some participants may have been subject to embarrassment from watching explicitly sexual content in the presence of others. According to Leka et al. (2013), when this happens, it can overload the cognitive resources of an individual.

Secondly, a constant problem with research in this area is finding real-life materials that are sufficient to be used for experimental purposes. The current study made use of sexual advertisements and non-sexual advertisements shown separately. This may have meant that the participants were surprised when they saw a set of advertisements that only showed sexual content. The fact that the advertisements were all sexual, it may have led to an increase in attention due to this unfamiliar situation. This may provide an alternative explanation as to why there was an increase in the recall of sexual advertisements compared to non-sexual. As a result, in order to increase the realism of the study, and to make sure that the finding that advertisements of a sexual nature are more effective is robust, it may be a good idea to combine sexual and non-sexual advertisements shown in a programme, so that it reduces the surprise that the participants may feel.

The current study has provided support for the finding that sexual programme content hinders the recall of advertisements. The suggestions as to why this may be come from the suggestions proposed by Bushman and Bonacci (2002), on the role of attention and sexual thoughts. However, in this field of research there needs to be a study that directly measures these factors. As a point of further research, perhaps it would be a good idea to carry out research which measures the role of attention. For example, once the participants viewed the sexual programme with the advertisements, it would be a good idea to make them do a response task, to measure the time it takes for the participant to react to a stimulus. This would provide insight into whether people do direct attention to sexual content, and as a result have limited attention left over for other stimuli. This would allow great support for the explanations that are used for the results obtained from research in this field.

It was found that sexual programme content impaired recall of advertisements. This has implications for advertising agencies and broadcasters, as it seems that sponsoring TV programmes that have sexual content may not be the most profitable choice for advertisers. Perhaps it would be more profitable for advertising agencies and broadcasters to place important advertisements when they are not preceded and followed by a sexual programme. In addition to this, the current study found that sexual foreign advertisements were remembered more than non-sexual ones. This has implications for advertising agencies, as it demonstrates that even when novel advertisements are used, sexual advertisements are remembered more. This provides support for the idea that sex really does sell. Furthermore, there was an interaction between programme type and gender, with males remembering less advertisements

in the sexual programme conditions. There was also an interaction between advertisement type and gender, with females remembering more sexual advertisements than males. These findings have implications for advertising agencies, as it sheds light on the fact that advertising agencies should be more aware about advertisement placement and target audience. It seems that sex sells even for women, and so advertising agencies should consider using sexual advertising for women too. It also seems that men are impacted more by the programme effect, so that placing advertisements that appeal to men within sexual programmes may not be the most profitable option.

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Table 1. Mean free recall scores for sexual and non-sexual advertisements.

Free recall

Sexual programme				Non-sexual programme			
Sexual advertisement		Non-sexual advertisement		Sexual advertisement		Non-sexual advertisement	
Mean	SD	Mean	SD	Mean	SD	Mean	SD
2.25	1.25	1.42	1.46	3.45	1.57	2.79	1.65

Table 2. Mean cued recall scores for sexual and non-sexual advertisements.

Cued recall

Sexual programme				Non-sexual programme			
Sexual advertisement		Non-sexual advertisement		Sexual advertisement		Non-sexual advertisement	
Mean	SD	Mean	SD	Mean	SD	Mean	SD
10.15	3.08	8.89	3.16	14.05	2.52	11.68	2.96

Table 3. Mean recall scores for advertisement type.

	Advertisement type			
	Sexual advertisements		Non-sexual advertisements	
	Mean	SD	Mean	SD
Free recall	2.85	1.53	2.11	1.69
Cued recall	12.10	3.41	10.29	3.34