Knife crime imagery and messaging: Effective intervention tools or ineffective sensitisers? Experimental and eye-tracking findings

Overview

Knife images and messaging about knives are abundant in everyday media and are commonly used in anti-knife crime interventions. However, little is known about their impacts on young people's perceptions and attitudes around knife crime. This three-part study, carried out by Sheffield Hallam University, in collaboration with the University of Sheffield, South Yorkshire Violence Reduction Unit and Thames Valley Violence Reduction Unit, used an experiment to test the impacts of knife imagery and messaging on 458 Year 10 pupils in South Yorkshire and Thames Valley using ratings of perceptions and attitudes to capture conscious responses. Part 2 used an Implicit Association Test on a subset of 156 pupils to assess implicit responses. Part 3 used the initial experiment and added an eye-tracking assessment of 13 young people.

Key Findings

- No differences were found between the different knife messaging or image types on perceptions of knife crime or worries about knife crime.
- Young people are more likely to feel scared than feel excited in response to seeing images of real knives, but not for stylised knives.
- The type of anti-knife messaging used affects how young people view knife crime policing, with messaging about police anti-knife activity generating more positive perceptions.
- Girls are more worried about knife crime than boys and see it as a more serious issue, affecting where they go in their local areas.
- The perceived normality of knife carrying differs by ethnicity, with young black people rating knife carrying as more normal than young people of other ethnicities.
- Eye-tracking showed reduced reading time of policing messages than other types of messaging.

INTRODUCTION

Knife crime is receiving considerable attention in local and national news media, incentivising police forces to prove that they are tackling knife crime through prevention and enforcement. Prevention activity is often carried out through informational interventions and media releases showing confiscated knives to demonstrate the successes of anti-knife operations. However, some forces such as South Yorkshire and Thames Valley are avoiding using knife images in case these make the public more, not less, concerned about knife crime. Knife images could increase young people's risk of carrying knives either through fear driving an increase to self- protect (Melde et al., 2009), or through excitement, seeing knife images as 'aspirational' and able to impress others (Cogan et al., 2021). However, whilst not using images removes the potential for increasing fear, it may also be reducing the impact of anti-knife activity. The messaging accompanying knife imagery is also important as the impact of anti-knife messaging is currently unknown. However, Moon et al. (2015) have shown that positive messaging is more persuasive in changing attitudes than negative messaging, suggesting that differences are likely between messaging content types. Therefore, the key research questions being addressed were: 1. Do real knife images impact young people's perceptions of knife crime more than stylised images or neutral images? 2. Does knife imagery engender greater fear or excitement responses? 3. What is the effect of different informational anti-knife messaging (normalising, factual, and police) on young people's perceptions of knife crime?

METHODS

*N.b. M = Mean, * = only significant when below .017 using Bonferroni correction, p-values over this should be treated cautiously.*

The data collection for Parts 1 and 2 took place within a 'knife crime awareness' session for Year 10 pupils at secondary schools in South Yorkshire and Thames Valley. Part 1 used an online survey of knife crime perceptions after which participants could opt into Part 2, an online Implicit Association Test (IAT) exploring associations between responding to emotion provoking words and knife imagery.

All participants were initially randomly allocated to one of nine experimental conditions where they were presented with either a Real knife image, a Stylised knife image

Participants	Males	Females	Other	Total
Part 1 Survey only	215	200	43	458
Part 2 with IAT	66	77	13	156

or a Neutral image, along with either an Informational message, a Police information message, or a Normalising message, followed by knife crime perception questions exploring how image and message exposure may impact upon fear of knife crime. Participants opting to complete part 2 were then additionally shown knife images along with words relating to fear and excitement to explore unconscious emotional knife image associations.

In part 3, 13 young people (two females, eleven males; mean age 16.2 years) were recruited through youth organisations (of whom 3 were at risk of knife crime involvement), to carry out the part 1 activities on an eye-tracker laptop that recorded their eye movements.

FINDINGS

Part 1. Responses to perception questions Few differences were seen; however, responses on how Police deal with crime differed by message type. Those seeing the Police message rated the police more highly (M = 2.47) than those seeing the Factual (M = 2.08) messages suggesting that using police activity messaging improves perceptions of police efficacy in tackling knife crime.
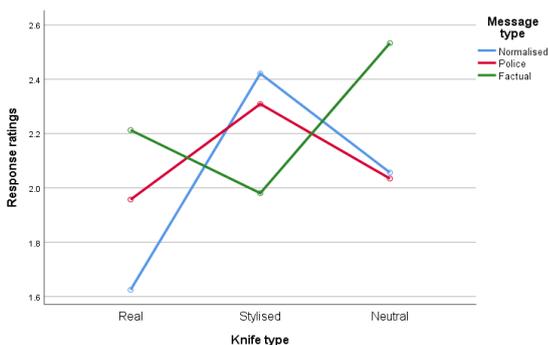

Figure 1 Local knife crime problem by Image & Message

A crossover interaction (p = .05) between knife image and message type was found for knife crime being a problem in the area with responses to Information messaging varying by which knife type was seen, with knife crime rated as less problematic for the Neutral image (see Fig 1). However, the size of the effect was low suggesting the differences may be small.

No differences were found between knife and message conditions when: estimating the seriousness of knife crime; worry about being a victim of knife crime; knife crime affecting where they go; how much they were afraid of others having a knife when out; or hearing about knife crime increasing worry.

Part 1. Gender differences in responses Gender differences in responses were seen with girls rating knife crime as a more serious issue than boys both generally and in their local area and that hearing news about knife crime increased girls' worry more than boys suggesting girls may be disproportionately more negatively affected than boys when exposed to anti-knife crime information. Similarly, girls were more worried about being victims of knife crime than boys and they also felt it

impacted more on where they chose to go in their local areas suggesting they were actively using avoidance measures to reduce their risk.
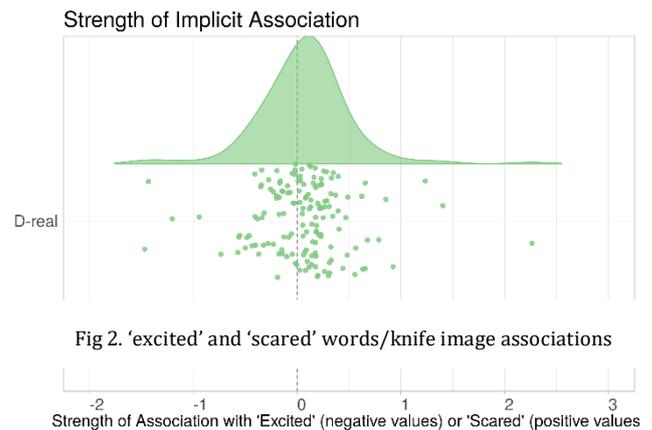
Perception	Knife crime (general)	Knife crime (local)	News worry	Victim worry	Movement restriction
Girls	4.28	2.34	2.06	2.08	1.62
Boys	4.05	1.18	1.49	1.64	1.24
p-value	= .03	< .01	< .01	< .01	< .01

Table 1 – Gender perception differences

No gender differences were seen in perceptions of: how police deal with knife crime; fear of other people while out; or boys' and girls' perceptions of the normality of knife carrying - both groups agreed it was not normal. However, there were differences (p = .04*) between ethnic groups in perceptions of the normality of knife carrying normality, with those of white (M = 1.16) and Asian (M = 1.14) ethnicity feeling it was less normal than those of black ethnicity (M = 1.89; p = .04*).

Part 1. IAT results Data from 154 participants (77 females, 66 males, 13 other) were analysed to generate the IAT score (the time taken for correct responses to identify correct word and image pairs). No correlations were seen between real or stylised knife imagery, suggesting each image type generated different emotional responses.

There was no effect of image or message on implicit association. However, participants associated Real knife images more with "scared" words, rather than "excited" words, suggesting they were generating a stronger emotional response than other images. Further, some participants more strongly associated 'excited' words with knife images than 'scared' words suggesting that emotional responses differ between people (see Fig 2 showing dispersal outliers of those more 'scared' and more 'excited').

Strength of Implicit Association

D-real

Fig 2. 'excited' and 'scared' words/knife image associations

Strength of Association with 'Excited' (negative values) or 'Scared' (positive values)

Part 2. Eye-tracker findings

No differences were seen in how many seconds it took to notice the images or the messages, or how many seconds that participants fixated on the images. However, differences (p < .05) were seen in how long the messages were looked at (factual = 31.4 seconds, policed = 14.3, and normalised = 24.1ms), suggesting young people spent less time reading the policed message.

CONCLUSIONS

Our results do not confirm that exposure to knife imagery impacts upon perceptions of knife crime, or on conscious awareness of fear of victimisation. However, unconsciously young people appear to be impacted emotionally, either scared or excited, by knife imagery. Therefore, although most people do not respond adversely to knife images, sub-sets of young people may be impacted in such a way that knife carrying may be promoted rather than reduced.

Further consideration is needed about the messaging used in interventions, how a gendered approach could allow girls concerns to be alleviated. The Fear of Victimisation hypothesis suggests that knives may be used for protection where risk is perceived as high (Goodall et al., 2019), therefore girls may be at greater risk of protective carrying than previously thought.

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Young people's perceptions of police efficacy were affected by factual messaging, suggesting that it is important to consider how factual messaging can generate positive perceptions of policing efficacy in young people and gain their attention. However, we need to understand more about how crime information messages engage young people and affect their views on the police.

Ethnic differences seen in relation to the normality of knife carrying may highlight cultural differences developed through exposure to the behaviours modelled in areas of ethnic diversity. Carrus et al. (2009) suggest 'local norms' prime and activate voluntary choices, suggesting that holding 'knives are normal' views may make these young people more vulnerable to carrying knives.

Limitations and Implications for further research

Potential limitations of this study relate to the use of the stimuli, with participants having limited exposure to 'light touch' stimuli (participants saw only one brief image). Given the potentially stressful outcomes of viewing the stimuli, this research deliberately used less threatening images. It is possible that this minimisation has reduced discrimination of potential effects and that our findings are underestimates of the impact of knife imagery in the real world.

There is still a need for further understanding of emotional responding to images and messaging used in anti-knife interventions, particularly around who is more likely to display scared or excited emotional responses, and whether those who are more vulnerable to knife involvement are more affected. It is also important to understand further how knife crime messaging in girls' environments restricts their movement and fear of knife crime and the role that factual messaging can play in improving perceptions of policing. Further exploration of cultural norms in relation to knife carrying is urgently needed if appropriate interventions to change attitude and behaviour are to be developed.

RECOMMENDATIONS

Knife images are not affecting all young people, but they are impacting specific groups of young people, namely girls and those more prone to being excited or scared by knife imagery. Therefore, it is recommended that knife images are used sparingly, and that consideration is given to the audience who will receive them.

Focus should be given to including factual crime information that is relevant to young people in police messaging to promote engagement and positive perceptions.

The 'Knives are normal' views held by young people should be challenged through education and interventions that highlight alternate perspectives on societal norms around knife crime, particularly for young people in minority groups.

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