



Empowering young people: evaluating the impact of KnifeSavers—a knife wound first aid and awareness intervention in England

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Abstract

Aim Interpersonal violence involving a knife or sharp weapon is a serious public health concern. KnifeSavers is a 2-hour educational intervention delivered to school and college students in the Liverpool City Region (United Kingdom) in partnership with the Liverpool Football Club Foundation (LFCF). It aims to educate young people about the impacts of knife injury and equip them with the skills and confidence to control bleeding from a knife wound. This study aims to examine the impacts of the intervention on young people's knowledge of knife injury, attitudes towards knife carrying and confidence assisting a victim.

Subject and methods Surveys were administered to young people prior to ($n=110$) and following the intervention ($n=72$) to measure knowledge of knife injury, attitudes towards knife carrying and confidence to assist a victim. Nonparametric tests (Mann–Whitney U) were used to measure any significant changes. Thematic analysis of young people's qualitative responses captured the impact of the programme.

Results There was a statistically significant increase in knowledge of knife injury risks (pre-mean = 5.9, post-mean = 7.7, $p < .001$) and confidence in assisting a victim (pre-mean = 2.8, post-mean = 3.7, $p < .001$) post-intervention. Attitude towards knife carrying showed no significant change (pre-mean = 19.7, post-mean = 20.3, $p < .227$).

Conclusion The KnifeSavers programme had a positive impact on young people's knowledge of knife injury and confidence to support victims. Our study shows that collaborative interventions between medical professionals and prominent sporting organisations like LFCF can successfully engage young people in knife injury education.

Keywords Knife crime · Interpersonal violence · Violence prevention · Youth · Community intervention

Background

Interpersonal violence is defined as violence between individuals including intimate partner and family violence, and community violence (Krug et al. 2002) and presents a serious public health concern within the United Kingdom (UK) (Home Office 2023; Quigg et al. 2017). Sharp

instruments were used in 41% of all homicide cases in the UK in 2022/2023 (Grahame and Wong 2025). There were 50,510 offences involving a knife or sharp object reported in 2023, and in 2024 3888 admissions to hospitals in England and Wales were made due to assault with a sharp object (ONS 2024a). Whilst national data on ambulance callouts is not routinely available, a study examining ambulance callouts for violence in Northwest England found that 23% were recorded as due to a stabbing, gunshot or penetrating trauma (Quigg et al. 2017). Evidence suggests young men are among the highest groups impacted by knife-related injury in the UK (Ajayi et al. 2021; Vulliamy et al. 2018; Pallett et al. 2014). For example, men accounted for 85.6% of admissions for knife injuries to London major trauma centres (MTC) between January 2014 and December 2018, with 44% of admissions aged 16–25 years (Ajayi et al. 2021). Involvement in knife-related crime (as victim or perpetrator) is also associated with social deprivation, with a systematic

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review of UK studies finding positive associations with both lower socio-economic status and adverse childhood experiences (ACEs) (Haylock et al. 2020).

Evidence suggests that individual motivations for knife carrying are often linked to a desire for self-protection (due to either past victimisation or fear of future victimisation) (Brennan and Moore 2009) and self-presentation, which among men is often linked to using aggressive masculinity to reduce vulnerability (Figueira et al. 2024). Increases in knife crime in the UK have been speculatively attributed to a range of societal factors including austerity, budget cuts and reduced availability of youth services (Phillips et al. 2022). The increased accessibility of knives, through online shops and peer to peer sellers, otherwise known as 'grey market' sellers, has further facilitated the illegal reselling of knives through online social media platforms, which can create opportunities for children and young people to obtain weapons without any form of screening or age verification (Foster 2013a, b; NPCC 2025).

Policing strategies have been introduced in the UK to combat knife crime, such as wide scale stop and search powers under the Police and Criminal Evidence Act (Police and Criminal Evidence Act 1984 c. 60); however, several UK studies suggest this strategy may have resulted in reduced trust in police and other agencies among young people (Murray et al. 2021; Foster 2013a, b; Traynor 2016; Ramshaw and Dawson 2022; Harding 2020). These factors along with the UK government's commitment to a public health approach to serious violence (Home Office 2023), highlight the importance of community based preventative programmes which change youth norms and values towards knife crime, and aim to address the underlying root causes of violence (Caulfield et al. 2023; Quigg et al. 2023a, b).

A range of knife education programmes have been implemented in UK school, community and youth justice settings which aim to raise awareness of the legal, physical, and emotional consequences of knife crime, equip young people with the knowledge needed to make positive choices and foster safer communities (Gaffney et al. 2023; Hargreaves et al. 2023; Carroll et al. 2024; Ben Kinsella Trust 2025; No Knives, Better Lives 2025). There is also growing evidence of interventions which combine approaches to address the social norms of knife carrying with bystander interventions to increase young people's skills in administering lifesaving first aid to victims of knife crime (KnifeSavers 2025; StreetDoctors 2025). A victim of a knife wound can bleed to death in just 5 min (KnifeSavers 2025) with studies demonstrating that having a bystander present at the scene of a traumatic injury can increase survival rates in 20–45% of cases (Oliver et al. 2017; Davies et al. 2014; Berbiglia et al. 2013; Bakke et al. 2015). Despite growing evidence of preventative interventions to reduce knife crime in the UK, the majority of interventions are unevaluated and there

remains a lack of evidence on their effectiveness in changing young people's knowledge, attitudes and skills.

KnifeSavers is a healthcare led bleeding control and knife injury awareness campaign. It was founded by a trauma surgeon from Merseyside and Cheshire's Major Trauma Centre (MTC), based at Aintree University Hospital, Liverpool in conjunction with victims of knife crime and their families. It was developed in response to rises in knife crime, injury and fatalities, with Liverpool reporting the 6th highest rate (90 offences per 100,000 population) of police-recorded knife and sharp instrument offences in 2023/24 (ONS 2025). KnifeSavers comprises three elements: (i) the delivery of a practical educational programme to equip members of the public with the skills and confidence necessary to control bleeding following a knife wound, (ii) rapid access, real-time 'bleeding control' guides (online and through a smartphone app) to support those who are dealing with a knife wound (iii) placing KnifeSavers bleeding control packs and publicly accessible bleeding control cabinets and instructions on their use, in strategic locations around cities and communities (KnifeSavers 2025). To date, KnifeSavers have trained over 6000 individuals, distributed several thousand bleeding control packs and over 200 publicly accessible bleeding control cabinets have been installed. KnifeSavers operates as a charitable social enterprise, and training is delivered through a face to face and virtual education programme by health care professionals with a lived experience of treating patients with knife injuries or life threatening bleeding. In 2023, KnifeSavers partnered with the Liverpool Football Club Foundation (LCFC) to deliver the KnifeSavers educational programme to six cohorts of young people from secondary schools and further education colleges as part of the #kNOWKnifeCrime campaign which aimed to enhance safety in schools across the Liverpool City Region.

This study aims to add to the scant evidence on knife crime education programmes by examining the impact of the KnifeSavers intervention programme on young people aged 11–19 years (KnifeSavers 2025). The specific study objectives are to understand:

- (1) What is the impact of KnifeSavers on young people's knowledge, attitudes and confidence?
- (2) What was participating young people's initial knowledge and attitudes on knife-related crime before participating in the programme?
- (3) What are young people's views on KnifeSavers?

Methods

The intervention

The training programme was developed by KnifeSavers in collaboration with the LFCF as part of the #kNOWknifeCrime

Campaign. It was delivered by the KnifeSavers education team (which consists of trauma nurses, surgeons and doctors from within the NHS), and LFCF team at Anfield stadium where Liverpool Football Club men's first team play. Six cohorts of young people ($n=110$) from eight secondary schools and one further education college across the Liverpool City Region took part in the intervention. Participating schools were selected by the Merseyside Police Schools Coordinator according to regional police data on knife crime and associated risk factors such as attendance data, attainment information, behaviour and if they could be considered vulnerable to childhood exploitation. The 2 hour intervention session was made up of five modules, (a) what is KnifeSavers, (b) the basics of blood and bleeding, (c) how to stop major bleeding using the ABC method (Alert: call emergency services and ensure personal safety, Bleeding: find the source, Compress: control the bleeding by applying pressure) independently of a bleeding control kit, (d) using the ABC method alongside a bleeding control kit and (e) real stories of those affected by knife injuries. The session included small group simulation training in which instructors demonstrated real time bleeding control management on high fidelity mannequins to equip learners with a hands-on approach and practice these skills.

Study design, participant recruitment and sample

An online self-reported questionnaire was used to measure young people's knowledge, confidence and attitudes pre- and post-intervention. Questionnaires were administered via an online link/QR code and participants used their own devices or an LFCF provided iPad (as preferred) to answer the questions. Pre-questionnaires were administered immediately prior to the training session, and post-questionnaires administered immediately following the session. For confidentiality purposes, participant responses were non-identifiable. Both questionnaires included two questions on demographics; three items on knowledge; one item on confidence and four items on attitudes towards knife carrying and use (see Table 1). For each knowledge, confidence and attitudes item, participants scored on a five-point scale (strongly disagree to strongly agree) except for the question "can a single knife wound kill someone?" which was a yes/no response. Three free-text questions sought further qualitative details of young people's knowledge, attitudes and views on the intervention (Supplementary Table 1). Inclusion criteria for the programme included students from secondary schools/sixth forms and a higher education college, all aged between 11 and 19 years from within the Liverpool City Region. Of the young people who took part in the intervention, 110 completed baseline surveys and 72 completed the follow-up survey.

Table 1 Participant demographics

		Pre-intervention		Post-intervention	
		$n=110$		$n=72$	
		n	%	n	%
Gender	Male	91	83	59	81.9
	Female	12	10.9	10	13.8
	Prefer not to say	4	3.6	3	4.2
	Non-binary or gender fluid	3	2.7	0	0
Age (years)	11–12	18	16.3	12	16.7
	13–14	61	55.5	41	56.9
	15–16	25	22.7	11	15.3
	17–18	2	1.8	3	4.2
	19 or over	4	3.6	5	6.9

Analyses

Statistical analysis

Research governance approval for secondary data analysis was obtained from Liverpool John Moores University (UREC reference: 25/PAH/002). The statistical analyses were conducted using IBM SPSS Statistics software version 29.0.1.0 (171). Nonparametric tests were employed to analyse the data, as the pre- and post-survey responses were unmatched and did not meet the assumptions for parametric testing. To compare the central tendencies in knowledge, confidence and attitudes of the pre-survey and post-survey distributions, the Mann–Whitney U test was utilised. Pre- and post-quantitative responses, with the exclusion of Q5, were graded on a score from one– five in which a score of one represented the lowest level of knowledge, confidence or attitude, and five represented the highest. Total scores for each category were calculated by combining individual participant scores (potential range for each category: knowledge 2–10, confidence 1–5, attitudes 5–25). A significance level of 0.05 was adopted for all statistical tests, with results with a p value less than 0.05 considered statistically significant. Descriptive statistics were used to analyse and summarise demographic data on participants.

Thematic analysis

Thematic analysis was employed as a systematic and rigorous approach to explore participants' knowledge and attitudes towards knife crime and their views on the intervention collected through the free-text questions. The six steps outlined by Braun and Clarke (2012) were followed: (1) familiarisation of data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes and (6) producing analysis. This process was used to

inform objectives one and three of the study in which young people's knowledge and attitudes on knife-related crime, and young people's views of the intervention were explored.

Results

Participant characteristics

Of the 110 participants who completed the baseline measures, the majority identified as male (83%) and over half the sample were aged 13–14 years (55.5%) (Table 1). Characteristics of those who completed the follow up measure ($n=72$) replicated baseline responses in which the majority identified as male (81.9%) and over half were aged 13–14 (56.9%).

What is the impact of KnifeSavers on young people's knowledge, attitudes and confidence?

Pre-training, the mean combined score for total knowledge of knife-related injury among young people was 5.85 (Table 2). Compared to pre-training, the post training combined mean score was significantly higher (mean 7.68) with the Mann–Whitney U test reporting statistically significant increases in knowledge following the intervention ($p<0.001$). Similarly, the post mean score for total confidence in helping someone suffering from a knife wound was significantly higher following the intervention (pre-mean 2.8, post-mean 3.67, SD 1.0, $p<0.001$). However, while the post-mean combined score for total attitudes towards knife carrying was higher (19.71) than pre-mean scores (20.29), no statistically significant associations were identified between pre- and post-intervention attitude scores ($p<0.227$).

What are young people's knowledge and attitudes towards knife-related crime

Knowledge and confidence

Overall, pre-training knowledge of the risks associated with a knife wound(s) and confidence to help someone were low (Table 3). While 93.6% of participants recognised a single knife wound could kill someone, 41.9% believed (strongly agree or agree) there were safe places on the body that

someone could be stabbed without killing them or causing permanent harm. Pre-training knowledge and confidence of how to assist with a knife-related injury was also low, with only 30.0% agreeing (strongly agree or agree) that they knew how to help a person bleeding from a wound, and 28.2% agreeing (strongly agree or agree) they felt confident to help. Qualitative responses showed that many participants were able to identify key actions, such as applying pressure to control bleeding, avoiding removal of the knife, and seeking immediate medical assistance. One participant explained, “put pressure on the wound and call an ambulance” while another responded, “don't take the knife out and put a piece of clothing on the wound”. However, participants also identified several worries associated with dealing with a knife wound, including the amount of blood, fear that the victim may die and not knowing the correct course of action.

Attitudes

Overall, participants recognised the negative aspects of carrying and using a knife or weapon. Prior to the training most participants disagreed or strongly disagreed that carrying (86.4%) and using (89.1%) a knife/weapon is normal. However, participants view on people's motivations to carry a knife/weapon were more varied with 55.5% agreeing or strongly agreeing that stabbing someone is an act of violence. Whilst only a small proportion (12.7%) of participants felt (agreed or strongly agreed) that people carry a knife/weapon because they must, 23.6% believed (agreed or strongly agreed) people carry a knife or weapon because they expect to have a weapon used against them.

Thematic analysis of participants free text responses identified four themes associated with knife carrying, *for protection, to cause harm, to appear a specific way (e.g. tough/intimidating), and due to exposure to gangs*. Many participants perceived knife carrying as a protective measure “to keep themselves safe from others” and “because they might be scared so they feel protected”. Some participants associated knife carrying with an intent to cause harm. A participant shared, “usually because they have an intention to cause harm or to kill someone”. Knife carrying was also perceived as a means of projecting a certain image of toughness or belonging within specific peer groups. One participant noted, “because they think they're hard and to intimidate”. Finally, participants highlighted the association

Table 2 Knife-related injury knowledge, attitudes and confidence to intervene, pre- and post-training Mann–Whitney U test results

	Pre-training			Post-training			P
	N	Mean	SD	N	Mean	SD	
Total knowledge score	110	5.9	1.7	72	7.7	1.8	<.001
Total confidence score	110	2.8	1.2	71	3.7	1.0	<.001
Total attitudes score	110	19.7	3.3	72	20.3	3.4	.227

Table 3 Participant knowledge, confidence and attitudes, pre-training

Question/statement	Measure (%)				
	Strongly/ totally agree	Agree/yes	Neither agree or disagree	Disagree/no	Strongly/ totally disagree
	n=110	n=110	n=110	n=110	n=110
Knowledge					
I would know how to help a person who is bleeding from a wound right now	9.1	20.9	31.8	24.5	13.6
There are safe places on the body that someone can be stabbed without killing them or causing permanent harm	16.4	25.5	20	20	18.2
Can a single knife wound kill someone?		93.6		6.4	
Confidence					
I would feel confident to help a person who is bleeding from a wound right now	10	18.2	29.1	27.3	15.5
Attitudes					
Carrying a weapon is normal	0.9	1.8	10.9	37.3	49.1
Using a weapon against someone is normal	0	0.9	10	37.3	51.8
People carry a weapon/knife because they expect to have a weapon used against them	4.5	19.1	19.1	21.8	35.5
People carry a weapon/knife because they have to	0.9	11.8	21.8	34.5	30.9
Stabbing someone is an act of violence	38.2	17.3	18.2	9.1	17.3

between knife carrying and criminal activities, including gang membership. This sub-theme highlights how individuals might view knife carrying as a way to deter potential threats and provide them with a sense of safety.

What are young people's views on KnifeSavers?

Thematic analysis of free-text responses explored young people's perspectives on the intervention. Two key themes were identified: delivery of the KnifeSavers intervention and the impact of the KnifeSavers intervention.

Delivery of the intervention

Two elements of the intervention appealed to participants: *practical and realistic elements of delivery* and *the education team delivering the intervention*.

Participants valued the practical delivery of the intervention and reported that the hands-on approach, including using medical dummies and practicing exercises on each other was engaging and beneficial for understanding and applying responses. However, some suggested reducing the writing tasks and incorporating more interactive elements like additional dummies and activities to enhance the sessions.

The education team played a pivotal role in the intervention's delivery, with participants frequently citing the team's competence and approachability as key factors in their experience. Effective communication, enthusiasm, and

subject knowledge were particularly valued. A participant shared, “[learning] from people on the front line, lots of info[rmation] but easy to digest” and described the education team as being “interactive” and providing “clear instructions and information”.

Impact of the training

The intervention was praised for enhancing knowledge and raising awareness, with participants highlighting significant learning gains and a deeper understanding of the subject matter. Clear, structured content, visual elements and relatable examples were key contributors to learning, while some suggested including more real-life stories and extending the session for greater impact. Increased awareness was seen in reflections on societal issues like knife crime, as participants appreciated real-world examples and acknowledged existing efforts to address these challenges.

The intervention was widely recognised for enhancing participants' knowledge and fostering greater awareness. Participants reported significant learning gains, as one participant noted “we learnt something new, it was important and could save someone”, attributing their improved understanding to the intervention's clear and structured content, with visual elements such as videos and demonstrations playing a crucial role. Some noted the need for more real-life stories and extended sessions to further enhance knowledge retention. Beyond learning, the intervention also heightened awareness of previously overlooked issues,

prompting reflection on personal attitudes and societal responses to knife crime, as one participant commented, “It made me realise about knife crimes”. Participants acknowledged the importance of existing strategies and felt more informed about ongoing efforts to address the problem, with real-world examples making the content more relevant and impactful.

Discussion

This study investigated the effect of KnifeSavers, an educational programme aimed at improving young people’s knowledge and confidence to treat knife-related wounds and influencing positive attitudes towards knife crime. The study found significant post-session improvements in young people’s knowledge of knife-related injuries and confidence to help someone suffering from a knife wound. Thus, the KnifeSavers intervention appears effective as a bystander intervention, increasing young people’s confidence and knowledge to intervene and provide first aid response to victims of knife wounds. However, the study did not find any significant change in young people’s attitudes towards knife carrying post-intervention session.

Our study found significant increases in young people’s knowledge on the impacts of a knife wound, and confidence in how to help someone who had suffered a knife injury. Qualitative findings also showed that participating young people responded positively to the practical first aid demonstrations used during the intervention. All state funded schools in England are required to incorporate first aid training as part of their health education curriculum (Department for Education 2022); however, very few first aid courses aimed at young people cater to the specific skills of treating wounds as a result of sharp objects or weapons (St John Ambulance 2025, First aid for Knife attack 2025, ForJodieTraining 2025). To our knowledge KnifeSavers is one of only three interventions within England and Wales which offer in depth knife wound specific first aid training in addition to educational experiences aimed at increasing young people’s understanding of the consequences of knife crime and improving confidence to treat knife wounds (KnifeSavers 2025; Street Doctors 2025; Your Stance 2025). Existing research suggests several barriers which prevent individuals intervening when they are present as an active bystander to medical emergencies, trauma and acts of violence, including a lack of training and knowledge on how to help (Bakke et al. 2015; Dobbie et al. 2020), confidence in their ability to handle the specific challenges of treating a knife wound (Huang et al. 2021; Dobbie et al. 2020), concerns about personal safety (Uny et al. 2023), shock and fear, and environmental factors such as lack of available first aid kits or other necessary equipment (Dobbie et al. 2020). Our study

suggests that by combining instructional and practical elements, KnifeSavers is effective in increasing young people’s knowledge and confidence to act as an active bystander to provide first aid assistance to someone suffering a knife wound post session. However, our study does not allow us to draw any conclusions about whether this knowledge and confidence is sustained longer term.

While the primary aim of KnifeSavers is to improve community members knowledge and skills to safely respond to victims of knife wounds, as well as other causes of major bleeding, the programme also aims to increase awareness of the physical and emotional impacts of knife crime for the victim and consequences for the perpetrator. This aligns with previous studies which suggest increasing awareness of the consequences of knife crime may deter young people from carrying or using a knife (England and Jackson 2013), change their attitudes about how acceptable it is to carry a knife, and encourage young people to challenge their peers for carrying knives, or their involvement in knife crime (Bridges 2020; St Giles Trusts Community Fund 2019). Furthermore, unlike “scare tactic interventions”, which have been found to fail in deterrence and actually increase offending behaviour in several studies (Palasin-ski et al. 2021; Petrosino et al. 2013), educational initiatives like KnifeSavers may help mitigate the tendency to engage in risky behaviours driven by fear as a means of self-protection (Brennan 2019), by fostering awareness, promoting positive actions, enhancing understanding of the consequences of knife crime, and empowering individuals to make informed decisions (Wilkinson et al. 2024; Phillips et al. 2022; Browne et al. 2022). While our study did find some increases in young people’s attitudes and perceptions of knife crime, this was not found to be statistically significant. This could be attributed to the fact that pre-intervention baseline measurements for these items were high, and may, in part, be credited to the multi-agency and community led efforts to reduce knife crime across the Merseyside community over the past decade (England and Jackson 2013; Gilbert and Sinclair 2019; Quigg et al. 2023a, b), to which KnifeSavers makes a collaborative contribution.

Qualitative responses from young people suggested the educational team, which is made up of trauma doctors, facilitated their learning with young people valuing their extensive knowledge and first-hand experience of knife-related harm. Previous research evidence suggests that using medical professionals, such as trauma surgeons, in preventative interventions with young people can increase young people’s engagement due to their “neutral” status and fascination with their first-hand experience (England and Jackson 2013). Furthermore, KnifeSavers was delivered in partnership with the LFCF, a well-recognised community organisation which has partnered with Merseyside police for the past 5 years to enhance community engagement and promote positive social

messages among young people. Existing research suggests that delivering knife crime-related interventions in familiar community settings can reduce the anxiety associated with unfamiliar and authoritarian environments, potentially leading to higher and quicker engagement with a wider population of young people (Tribe et al. 2018; Skarlatidou et al. 2023). Most significantly the LFCF uses the power of the LFC badge to resonate with local young people and foster a sense of trust, with previous studies highlighting how this trust facilitates engagement in preventative interventions for young people at risk of or experiencing violence and extra-familial harm (Carroll et al. 2024; Hargreaves et al. 2023). This highlights the important role that the charity football sector plays in engaging and promoting positive outcomes for young people at risk of violence, including those with unmet needs. Future police and NHS interventions should consider charity football sector partnerships to increase their engagement.

Limitations

This study has several limitations that may affect the reliability and validity of its findings. It was not possible to match pre- and post-survey data, which limits our ability to control for individual variability. The short-term follow-up (immediately post-intervention) mean it is not possible to capture the full impact or long-term effectiveness of the KnifeSavers programme and this warrants further research.

Conclusion

The KnifeSavers programme demonstrates its effectiveness in equipping young people with essential first aid knowledge and confidence to intervene in knife-related emergencies. While the intervention successfully improves participants' knowledge and confidence to respond to knife injuries, it does not appear to significantly shift attitudes towards knife carrying, perhaps due to young people having relatively positive attitudes pre-training. The findings underscore the importance of specialised first aid training in fostering active bystander intervention and highlight the need for long-term assessments to measure sustained impact. The programme contributes to broader public health efforts, complementing existing educational initiatives aimed at reducing knife crime. Future research should explore strategies to reinforce attitudinal change alongside skill development, ensuring a more comprehensive approach to tackling knife-related violence.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10389-026-02688-1>.

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Data availability Not applicable.

Declarations

Ethics approval Research governance approval for secondary data analysis was received from Liverpool John Moores University Research Ethics Committee ref: 25/PAH/002.

Conflicts of interest The authors declare no conflicts of interest.

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