

Risk-taking behaviour in adolescents. 'Chance only favors the prepared mind'

A J Macnab,¹ D Triviaux,² T Andrew³

The systematic review by Busse *et al*¹ draws attention to the prevalence and associated harm of engagement in self-asphyxial behaviours (SAB) ('choking game') in young people. SAB have evolved from the largely benign playground 'games' based on inducing fainting familiar a generation ago, to become a form of social or learned behaviour with significant risk of fatality because a subgroup of participants engage in solitary and even competitive practices involving strangulation.² The potential for death or serious injury exists in part because most children and youth do not associate SAB with risk of injury or any long-term harm in spite of widespread awareness of the practice and significant prevalence of engagement, but also because self-asphyxial activities are not 'on the radar' of those in a position to counsel and guide in the context of risk-taking behaviours in general.

Consequently, to some, the research summarised in this review will provide new insight on the frequency of participation, widespread distribution and potential for adverse outcome from participation in this risk-taking behaviour. It is evident that most parents, healthcare professionals and teachers are unaware that 36%–91% of school-age children are reported to know about SAB. The mean lifetime prevalence of engagement is 7.4% and that fatalities from SAB have been documented in 10 countries. Paediatricians in particular have been identified as a group with limited awareness³; and the potential consequences of ignorance among healthcare professionals in general extend from lost opportunities for preventive education to deficiencies in emergency care, incorrect diagnosis and even assignment of the wrong manner of death. To others the facts in this review will represent a timely reminder,

especially those who have cared for young people injured by self-asphyxial activity, had to counsel the families of those who have died as a direct result or been challenged that the correct manner of death assigned was not suicide.

Children and youth learn by experience. In health promotion, 'knowledge is power' and the central belief that those who are well informed are best positioned to make 'healthy' choices is as true for risk-taking behaviour as for other aspects of life. Hence, in the context of SAB, there is the temptation to invoke Pasteur's famous quote 'Chance only favors the prepared mind'. Although originally referring to scientific observation, Pasteur's tenet is also relevant to the chance of favourable outcome when youth are faced with decisions about any behaviour associated with risk. To address the situation, SAB appropriately requires that children at risk have the relevant knowledge where the facts they acquire are correct, the information is presented in context and ideally there is dialogue that promotes understanding and belief; such knowledge is powerful and fosters 'informed choice'. The research available indicates that it is not enough for children just to *know* about SAB, they must also *understand* the social context of engaging in these behaviours, and the decisions they make about them can have significant consequences.

The rationale for effective preventive education is the consistent finding that the dangers of these practices are unknown or underestimated by most young people and that many of those playing these 'games' admit that if they knew the risks of death or irreversible neurological damage they would stop immediately. The review's summary of what factors have been found that motivate participation and what persuades others to abstain are helpful in guiding prevention strategies, as are the data regarding who children of differing ages are most likely to be receptive to so that the requisite knowledge is accepted and alters their mindset.

The evidence of a subgroup who state they will continue self-asphyxial activity in spite of knowing the risk is troubling, particularly as almost all probably do so as a solitary activity involving ligatures around the neck and consequently risk

death from hanging themselves unintentionally. While more research is needed, it has been suggested that sensations related to anoxia and changes in cerebral blood flow resulting from SAB become addictive.⁴

Parent support groups are the source of much valuable information and have provided momentum to promote awareness and seek change for the better. Such groups exist in all the countries where deaths from SAB have been reported, but in France the organisation there (APEAS)⁵ has become the national 'voice' on this issue. In addition to scientific forums, public education and parent support, this group has achieved the precedent of effectively engaging the Ministries of Health and Education in strategies to inform and educate, which have been adopted nationally. In response to the need to address the role of social media as a positive as well as negative agent for change, this group is now expanding health promotion activities related to SAB to include cyber bullying.

The role of social media and availability of graphic video via the internet are troubling newer facets of risk-taking behaviour with relevance to both the epidemiology and prevention of SAB. The explicit instructions, graphic images and participatory videos regularly posted on the web are the information sources widely used by youth; this content should also be viewed by any adult who doubts the existence or harmful potential of SAB. And because the use of social media and cell phones are central elements of life for young people nowadays, it is important that we look at the potential contribution of social media messages and cell phone texting when planning health promotion programmes designed for youth to address SAB, or any other risk-taking behaviour.

Paediatricians need to be aware of the content of this review so as to be able to provide appropriate preventive participatory guidance and advocate for prevention. There are parallels to be drawn with the early days of our becoming aware of child abuse; we now have to accept that SAB is a widely practiced behaviour, consider it as a diagnostic possibility, learn to recognise the signs of participation and acknowledge that solitary activity in particular is a cause of accidental death. The established prevalence of this risk-taking behaviour and significant 'chance' of adverse outcome requires that all minds are 'prepared' as fully as possible, so that tragic injuries that are wholly preventable can be avoided. Hence, the call by Busse *et al* for more research to better

¹Faculty of Medicine, Department of Pediatrics, University of British Columbia, Vancouver, British Columbia, Canada; ²Independent Addiction Specialist, Neuville sur Saône, France; ³Chief Medical Examiner, New Hampshire, USA

Correspondence to A J Macnab, Department of Pediatrics, University of British Columbia, Room C234, BC Children's and Women's Hospital, 4500 Oak Street, Vancouver, British Columbia, Canada V6H 3N1; amacnab@cw.bc.ca

understand the risk of harm in SAB in parallel with more investigation effective prevention is welcome.

Competing interests None declared.

Provenance and peer review Commissioned; internally peer reviewed.

To cite Macnab AJ, Triviaux D, Andrew T. *Arch Dis Child* 2015;**100**:1101–1102.

Received 20 July 2015

Accepted 24 July 2015

Published Online First 14 August 2015



CrossMark

► <http://dx.doi.org/10.1136/archdischild-2015-308187>

Arch Dis Child 2015;**100**:1101–1102.

doi:10.1136/archdischild-2015-308916

REFERENCES

- 1 Busse H, Harrop T, Gunnell D, *et al*. Prevalence and associated harm of engagement in self-asphyxial behaviours (Choking Game") in young people:

a systematic review. *Arch Dis Child* 2015;100: 1106–14.

- 2 Andrew T, Macnab AJ, Russell P. Update on "The Choking Game". Implications for pediatricians and health educators. *J Pediatrics* 2009;155:777–80.
- 3 McLave JL, Russell PJ, Lyren A, *et al*. The choking game; physician perspectives. *Pediatrics* 2010;125:82–7.
- 4 Pelladeau E, Goslin P. Le jeu du foulard pourrait-il conduire de l'ordalie à l'addiction? *Perspectives Psy* 2013;52:355–65.
- 5 APEAS. Association de parents d'enfants accidentés par strangulation. <http://www.jeudufoulard.com>