

Digital Ghost Stories; Impact, Risks and Reasons

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The Momo suicide challenge, represented by a nasty looking image, instantly became a media storm in late February 2019 by individuals and organisations keen to share warnings. As with many previous *digital ghost stories*, it was quickly established that there was no evidence of children coming to harm and whilst it is unpleasant content, the Momo Challenge was branded a hoax. It had all the hallmarks of a viral chain mail

As we witnessed in previous, similar, incidents, many statutory agencies (especially schools) felt compelled to share these warnings, forgetting fundamental advice around checking sources, exploring evidence and reflecting upon what is seemingly being presented. Warnings and content about *digital ghost stories* merely goes to raise curiosity and drive traffic to the very content that is of concern. It is also important to consider the intent behind many of the warnings; to actually safeguard children or for personal or organisational recognition.

The Internet has some dark corners with unpleasant and risky content, do we really need to drive children, especially those already vulnerable to this type of content? In analysing historical events, here we will discover and quantify the extent of curiosity and its impact.

The Momo Challenge

From 25 February to 2 March 2019, the UK saw what we might regard as a “moral panic” hitting both social media and traditional news outlets related to “Momo”. This was reported in the media as an online “suicide game”, that was encouraging children to self-harm and take their own lives. According to the rumours, the “Momo challenge” placed a disturbing image (actually a photograph of a sculpture of an *ubume*¹ produced by the artist Keisuke Aisawa² in 2016) that appeared in innocuous videos watched by children. Peppa Pig, for example, was a popular target for people to add in Momo images. However, the story continued that the image would “speak” to the viewer, giving them a mobile phone number for them to contact, which would then set up a series of “challenges” for the victim, which involved challenges to self-harm or instructions to commit suicide. News reports claimed the challenge had been linked to the suicides of children in Argentina, Mexico and India³. Obviously this is a very worrying premise for anyone with children. However, most of the tale was entirely fake. While there is plenty of evidence of people placing the Momo image into these videos alongside “instructions” to contact numbers, there is no evidence of a challenge, working mobile numbers, or messaging to a personal device instructing the individual to self harm.

Within these fields there has been some awareness of Momo since 2018 and most have ignored it for what it is – a hoax -simply a folk tale that has been taken up by various online trolls who wish to scare children by placing the image in, for example, videos of Peppa Pig, alongside a few poorly crafted messages. In the same way that “Rickrolling”⁴ placed a video

¹ A supernatural entity from Japanese folklore

² Instagram (2016). “Between.mirrors – Mother Bird”. <https://www.instagram.com/p/BIQlfA2Biju/>

³ The Sun (2019). “SUICIDE WARNING: What is the Momo challenge, is there a UK number and how many deaths has it been linked to?” <https://www.thesun.co.uk/news/6926762/what-momo-suicide-game-whatsapp-deaths-uk-hoax/>

⁴ Wikipedia (2019). “Rickrolling”. <https://en.wikipedia.org/wiki/Rickrolling>

of the pop star Rick Astley in an unexpected link or video, the “Momo challenge” was simply a prank (albeit an unpleasant one) done by trolls and meme creators to generate views and hits on their content, and possibly gain some notoriety by upsetting children along the way.

Therefore, it was something of a surprise to see Momo reappear so significantly in late February 2019, with coverage initially in the press, alongside press releases by police forces, and many celebrities and even academics wishing to gain social media presence by raising awareness of the challenge and calling it out as harmful and in need of control. Sadly, they were simply promoting awareness of a tale that had no basis in fact, yet this did not stop the news media and those fishing for likes to call on social media providers (particularly YouTube) to do the “responsible” thing and control the spread of the challenge on their platforms. To its credit, YouTube responded in a measured way, not rising to the challenge⁵:

Many of you have shared your concerns with us over the past few days about the Momo Challenge—we’ve been paying close attention to these reports. After much review, we’ve seen no recent evidence of videos promoting the Momo Challenge on YouTube.

Same old (digital ghost) story?

We might refer to these phenomena as *digital ghost stories* – in the same way stories of local ghosts and haunted houses get passed via word of mouth, embellished as they are communicated and can see this within these more recent “online suicide games”. This is certainly not the first time that such a digital ghost story has created a social media storm. The Blue Whale Challenge⁶ a few years ago had a near identical modus operandi (although with this one the alleged “suicides” were occurring in Russia) which, on investigation, proved to have been entirely unfounded. At the time of Blue Whale we saw many “responsible” bodies such as the new media, police, education professionals and academics all wishing to raise alarm to such a harmful “game” and alongside these calls a few poorly written news stories or grainy online images as evidence of causation when, in reality, this is very difficult to prove. There are still no corroborated cases of self harm or suicide linked to any tangible “challenge”. While there have been some prosecutions associated with the game⁷, there is still scant evidence that this was anything other than someone taking the Blue Whale story and using it to encourage children to harm. The “challenge” itself remains elusive.

In another example of a concerning reaction from a responsible public body, the Doki Doki Literature Club, an interactive video game with horror and upsetting story threads, was cited by a coroner in the North West⁸ of England as being linked to the tragic suicide of Ben Walmsley. As a result of this warning many police forces issued alerts that were then sent to schools and, via social media, to parents.

⁵Google (2019). “Our Response to the Momo Challenge & Character”.

<https://support.google.com/youtube/thread/1917881?hl=en>

⁶Wikipedia (2019). “Blue Whale Challenge”. https://en.wikipedia.org/wiki/Blue_Whale_Challenge

⁷The Times (2017). “Russian postman lured teenagers into his Blue Whale internet suicide game”.

<https://www.thetimes.co.uk/article/russian-postman-lured-teenagers-into-his-blue-whale-internet-suicide-game-sqwlv07cd>

⁸The Sun (2018). “SUICIDE WARNING What is the Doki Doki Literature Club and why have schools issued a warning to parents over the DDLC online game?”/ <https://www.thesun.co.uk/news/6630711/doki-doki-literature-club-police-school-warning-suicide/>

However, when the evidence was explored in more detail, it becomes clear that this is a game that has been downloaded over 2 million times⁹. Therefore, given the statistics, it is difficult to demonstrate a causation with the game or show any clear evidence on impact of child behaviour.

In all three of these cases the spread of “awareness” was virtually identical – reporting, comment from “responsible” bodies, social media spread, public outcry, then more rational comment in order to calm the hysteria. We fail to learn from the past.

Failure to learn from the past

We need to reflect on this latest moral panic and one of the things that is clearly evident from the experience last week is that when it comes to “online safety”, we really aren’t learning from the past or even fairly standard “online safety” messages that have been part of safeguarding training for well over 10 years. Harmful content online exists – children need to know that if they see it, they need to tell an adult, and that they won’t be in trouble. The adults responsible for their care shouldn’t be the ones pointing them in the direction of this harmful content then telling them not to search for it!

While the Momo challenge is entirely fake as an organised operation aiming to get children to self-harm or commit suicide, it is also evident that online trolls and “meme creators” are willing to inject in the image and upsetting dialogue into children’s videos for young people to stumble across. As such, children can still see the disturbing image and will become upset when they see and hear “it” instructing them to hurt themselves or that others might get harmed. In the same way that the chain letters¹⁰ preyed on the fears of recipients, these memes have a similar goal – while the “challenge” does not exist, the more people search for images and videos where the Momo image has been inserted, the more likely it is that young people will be upset seeing it.

While chain letters were traditionally propagated at a peer level, the change in practice for the digital ghost story is that there are so many outlets who might see this as an opportunity for online notoriety or being seen as a “thought leader” on social media. They may wish to spread to myth, for clicks, likes, readership or financial gain, without reflecting on the potential impact on the very people that these bodies claim to wish to protect.

Others, however, might share the images and promote awareness for the best of intentions, but without thinking through the implications of what their actions might actually achieve. We were told of a primary school where the headteacher decided to ensure that the children at their school did not access anything to do with Momo by calling an assembly, telling all of the young students about it, and telling them not to search for it. We can see below the impact of awareness raising of, we should reiterate, a fictitious story, did in schools. We would

⁹ Jones, A. (2018). “Doki Doki Literature Club! surpasses two million download”.
<https://www.pcgamesn.com/doki-doki-literature-club/doki-doki-literature-club-player-numbers>

¹⁰ Bennett, Charles H., Ming Li, and Bin Ma. “Chain letters & evolutionary histories.” *Scientific American* 288.6 (2003): 76-81.

hope that those with responsibility for children’s safeguarding might think of their training, rather than riding the hype train.

There is a clear need for both news outlets and “responsible” bodies to act in a manner which firstly explores the credibility of the sources to these stories, and the evidence base, rather than clicking share and adding a line of pithy outrage. This is also a lesson to be learned in the “evidence” associated with these stories. Momo is not the first digital ghost story that has claimed suicides in far off locations. We need to reflect on why these, apparently global, phenomena seem to impact in remote locations first. It is no coincidence that the stories of suicides tend to be in developing countries, where coroners reports or death certificates might not be available and would certainly be difficult to access. A single image on the Internet claiming that a self-harm scar looks like a whale does not mean the Blue Whale story is real. We need clam and proportionate response - we now have a history of how these digital ghost stories emerge, yet we do not seem to have learned anything from these events. These “responsible” adults did not search for evidence in a critical manner, but instead looked for similar stories to support the perspective that they wished to present

Momo Week - A Perfect Storm

In the week of the Momo hype wave (which we will subsequently refer to as “Momo Week”), there was a near perfect storm of news coverage, celebrity social media commentary and “online safety” organisations all wishing to become the main player in “solving” this crisis (which in reality didn’t exist). Perhaps the biggest trigger for the spike in interest that week came the Police Service of Northern Ireland (PSNI), who produced a press release that raised serious concerns about the potential harm the Momo challenge posed¹¹. Highlights of this press release included:

“Whilst no official reports have been made to Police, we are aware of the so-called ‘Momo’ challenge and are already liaising with other UK Police Services to try to identify the extent of the problem and to look for opportunities to deal with this issue.”

“This extremely disturbing challenge conceals itself within other harmless looking games or videos played by children and when downloaded, it asks the user to communicate with ‘Momo’ via popular messaging applications such as WhatsApp. It is at this point that children are threatened that they will be cursed or their family will be hurt if they do not self-harm.”

“I am disgusted that a so-called game is targeting our young children and I would encourage parents to know what your children are looking at and who they are talking to.”

“To paraphrase – we have had no evidence of this challenge existing, however there is sufficient hype in the media and online that we feel we need to comment so as not to look like we’re not ahead of the curve.”

¹¹ PSNI (2019). “PSNI Statement regarding Momo Challenge” <https://www.psnipolice.uk/news/Latest-News/250219-psni-statement-regarding-momo-challenge/>

While this release might have come from a place of good intentions, does raising awareness, and naming, something of which there is no evidence outside or poorly evidenced media reports, deliver on those good intentions? This release, in coming from a source of authority, legitimised the reporting from the more tabloid end of news outlets, and other stakeholders in child safeguarding and then triggered a social media storm where parents, concerned about their children’s safety, then propagated further.

Awareness raising resources were provided by some “online safety” organisations talking about how to tackle the Momo challenge (which, we need to bear in mind, doesn’t exist), and these resources were shared by concerned individuals on social media as well as school and informal education settings (for example, sports clubs), therefore driving the Momo challenge further into the public consciousness (while still not actually existing). All of this resulted in many children being made aware of “Momo”, and of course they then went off to search for it online. And then, one would hope not simply to drive likes and traffic to their profiles, celebrities started to comment on social media about the (non-existent) challenge. The following figures illustrate some examples for “responsible” awareness raising.

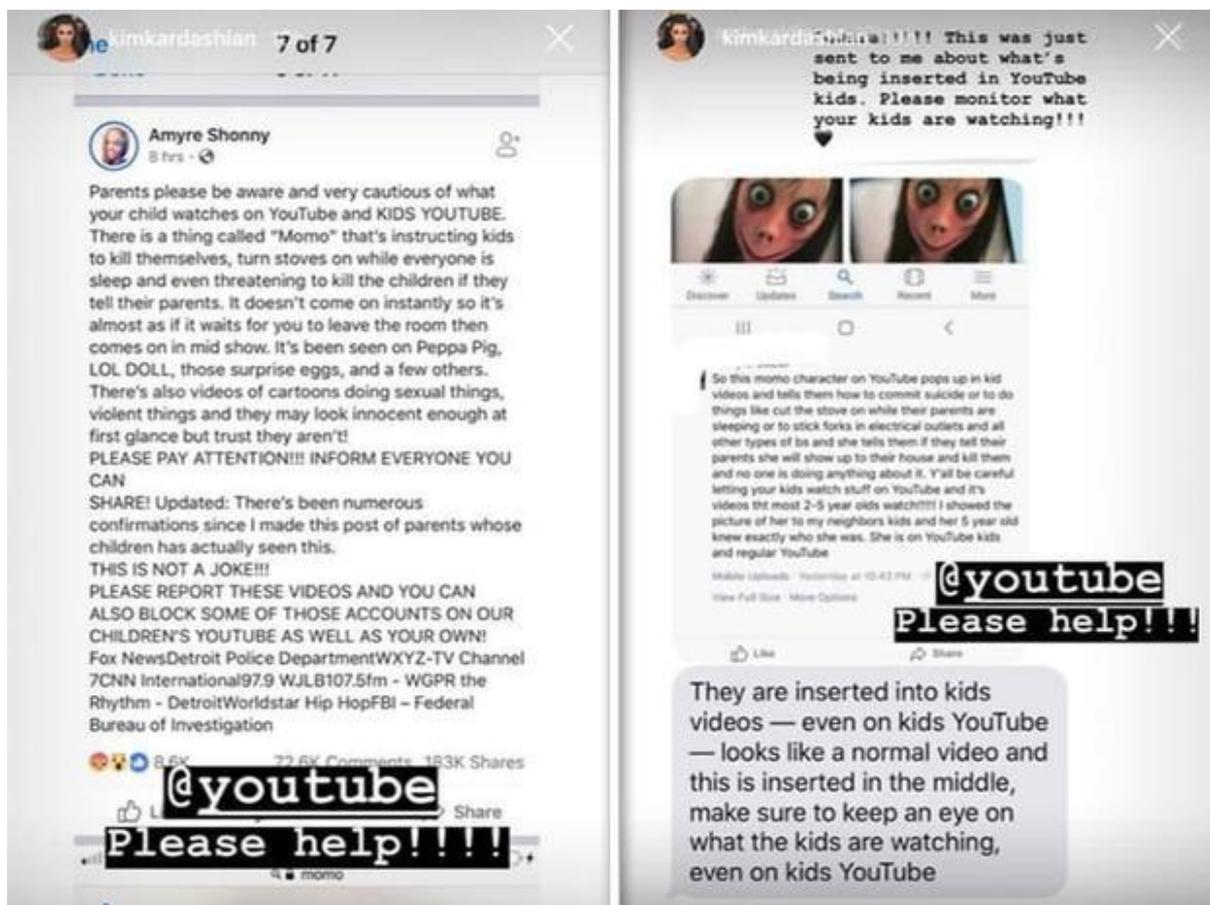


Figure 1 - Kim Kardashian West Instagram post on 27th February 2019



Figure 2 - Stacey Soloman tweet about Momo on February 27th 2019

To summarise, the timeline of Momo Week went something like:

- 25th February 2019: PSNI send press release about their concerns around Momo
- 26th February 2019: An organisation who sell online safety services to schools tweets a “guide to Momo” to help “thousands of concerns schools and parents”
- 27th February 2019: Celebrities (including Kim Kardashian West) start commenting regarding their concerns about Momo on social media.

Measuring the Impact of Warnings

Toward the end of Momo Week (28th February 2019 – 2nd March 2019), thankfully more responsible media reporting¹² caused the hype to die down and interest in Momo soon died down. Now that the dust has settled it is useful to reflect upon the course of events influences and impact of this latest digital ghost story. We can draw upon a number of data sources to see what the impact of media reporting and sharing and to illustrate the consequential risks

If we first explore the prevalence of Momo as a search term via Google Trends¹³, we can see “relative search interest” in the terms:

- Momo
- Momo game
- Momo challenge

Relative search interest, put simply, means how popular a search term is compared to all other search terms at a given location at a given time. The higher the value, the more popular the term is at a given time.

¹² Waterson, J. (2019). “Viral 'Momo challenge' is a malicious hoax, say charities”.
<https://www.theguardian.com/technology/2019/feb/28/viral-momo-challenge-is-a-malicious-hoax-say-charities>

¹³ <https://trends.google.com/>

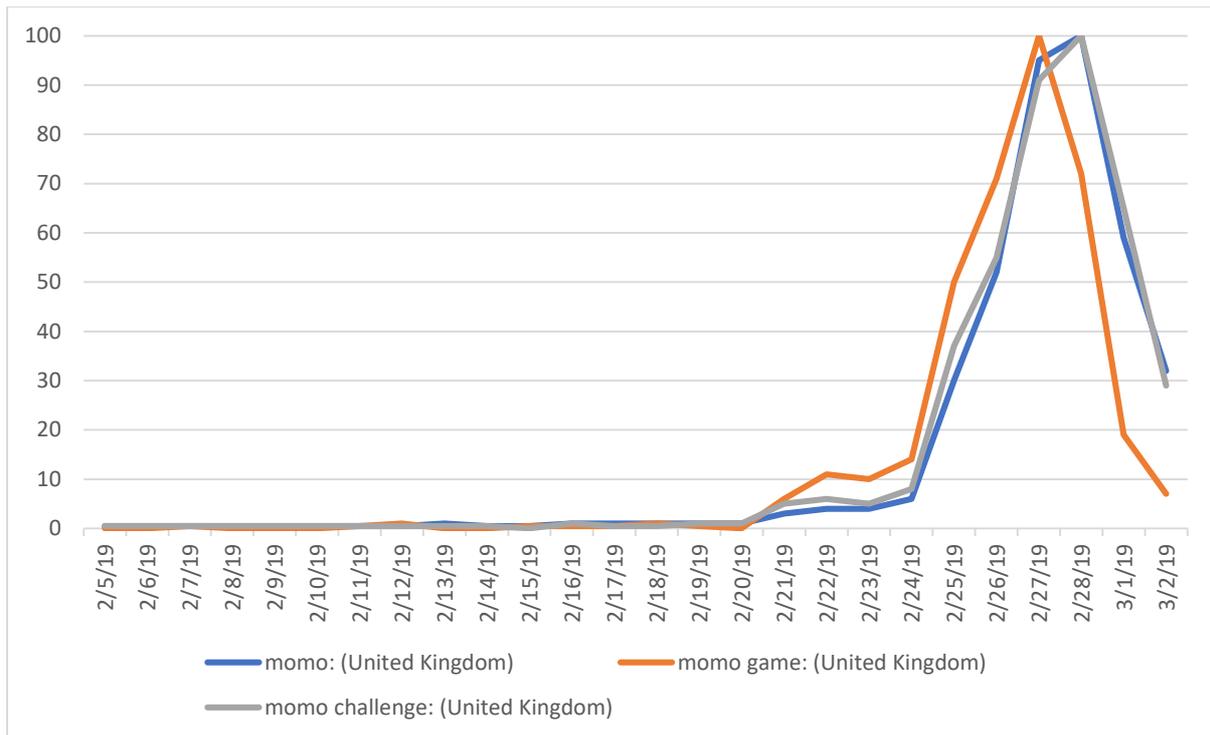


Figure 3 - Google Trend data for Momo searches in the UK

What we can very clearly see from figure 3 is that there was massive interest in Momo from the 25th (when PSNI put out their press release) and then a sharp decline on March 1st (after a lot of media u-turning and recognising it as a hoax).

Further evidence around what raising awareness of something that, we should reiterate, doesn't actually exist is to look at search data in schools. The following data was provided by RM, who provide filtering and monitoring services for a large number of schools. The data provided showed Momo related search terms intercepted by school filtering and monitoring systems, both over the last year and also focussing on Momo Week.

In total the data provided was captures from 2681 schools. These schools both ran filtering and monitoring services provided by RM and also had enabled an assessment of internet searches across their networks. So all of this data was collected on school networks, within the school setting.

Figure 4 shows the Momo related searches¹⁴ that have taken place across the last year, up to and including Momo Week. This figure very clearly shows the huge spike in searches for Momo once "awareness" had been raised around the (non-existent) phenomenon.

¹⁴ The most popular Momo related search strings were: "momo", "momo challenge", "momo game", "momo challenge pic", "what is momo", "momo London", "peppa pig momo", "momo peppa pig", "momo youtube"

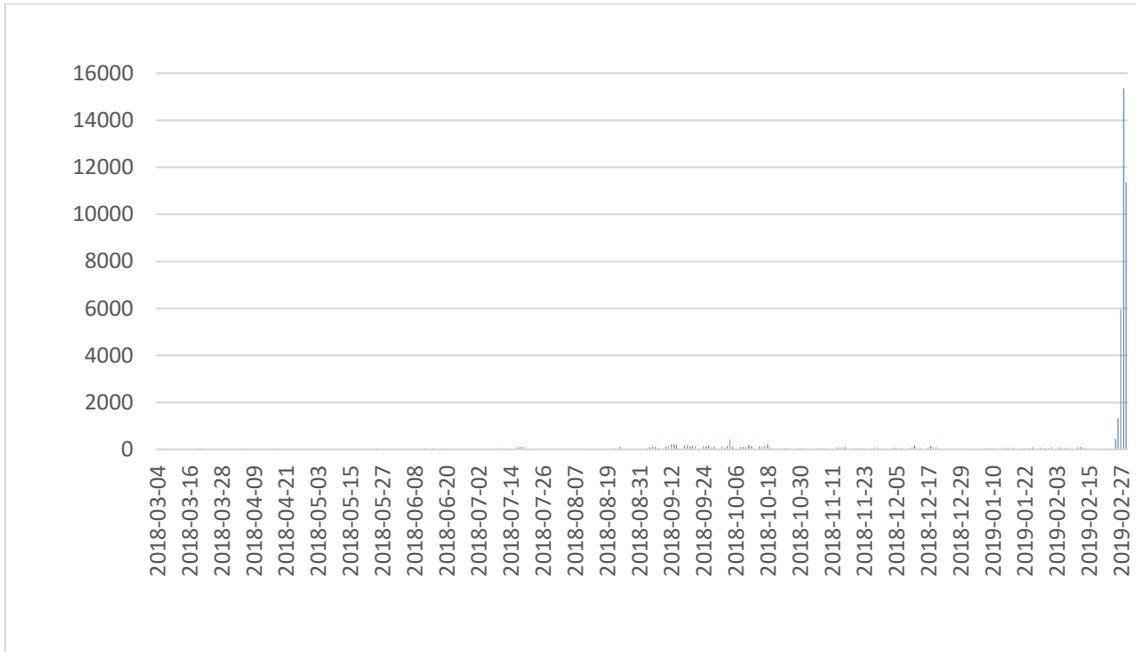


Figure 4 - Search frequency for Momo related terms in RM filtered schools over previous year

Figure 5 shows the searches specifically on Momo Week and strongly correlated between “awareness raising” and search interest in schools. While we cannot categorically state that all of these searches were performed by children and young people, this data is collected from the main school filters and monitors, whereas most staff would use staff machines that that allow them more unrestricted Internet access.

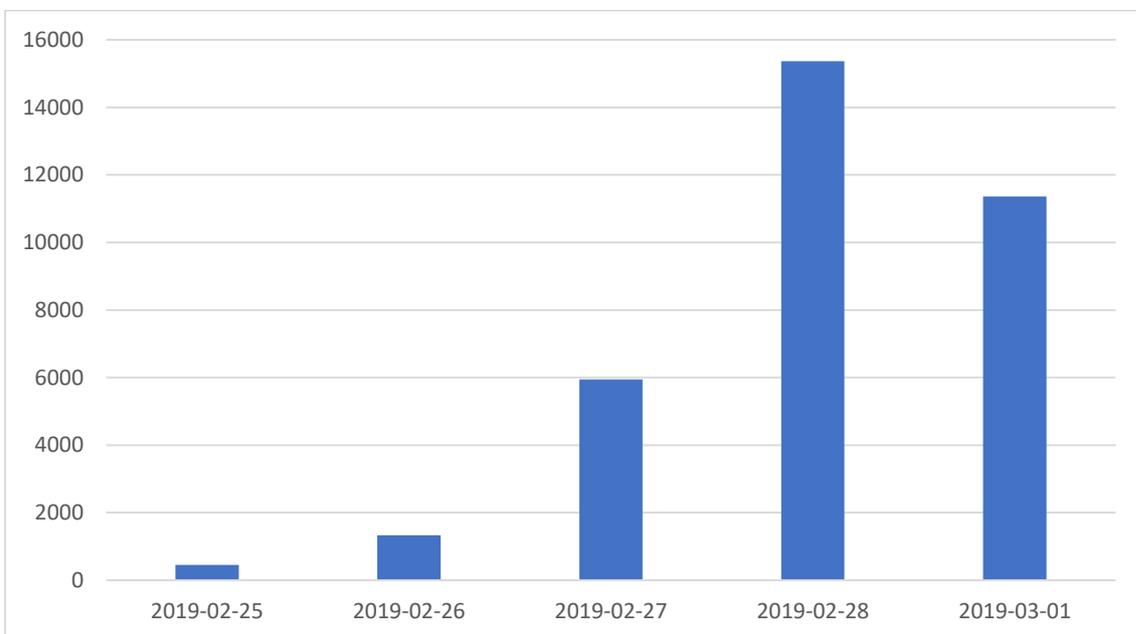


Figure 5 - Search frequency for Momo related terms in RM filtered schools for "Momo Week"

Overall, during Momo Week, Momo related topics were searched for 34464 times, the week before it was search for 76 times. So during Momo Week the searches related to Momo in these 2681 increased by approximately 45000%.

We can also approximate the number of searches that were performed in primary and secondary settings. Table 1 shows this breakdown, acknowledging that some schools did not have their setting identified.

Primary schools and nurseries	7824
Secondary schools and colleges	21541
“Unknown”	5099

Table 1 - Number of Momo related searches in different settings

Given these figures we can see that at least 23% of searches for Momo related topic were carried out in Primary schools.

As a final way of assessing impact, we can draw data from a survey¹⁵ we have carried out over the last three years with young people in schools. The survey is broad ranging, related to young people’s use of technology, their concerns and their approaches to being safe. Among the questions are:

- Question 8 “Have you ever seen anything upsetting online?”.
- Question 9 “If you have been upset by something you've seen online, would you like to explain what this was?”

By exploring the responses to question 9 we can determine whether Momo is something that causes concerns for young people.

In analysing the data we can divide with data collected before Momo Week, and those composed after.

Responses before 24 th February 2019 ¹⁶ :	9525
Mentions of Momo by respondents before 24 th February 2019:	0
Responses since 1 st March 2019:	228
Mentions of Momo by respondents since March 1 st 2019:	20

Table 2 - Mentions of Momo from SWGfL Young People and Internet Use Survey

So clearly there is further evidence of impact on young people here. All of the response since March 1st have been collected from Primary Schools.

In summary it is clear from this evidence that issuing warnings of *digital ghost stories* significantly increases curiosity and interest and results in driving traffic to the content of concern

Who is at Risk

¹⁵ <https://www.surveymonkey.co.uk/r/ypinternet>

¹⁶ No surveys were undertaken during Momo Week.

Children (and others) will react to *digital ghost stories* in a variety of different ways, and the role vulnerability plays in this is still poorly understood. We need to be mindful that in our rush to “save” one child who might be at risk from online harm we might risk exposure of the potential harm to thousands of others. Whilst many will be resilient and able to contextualise the content, the concern is for those who are “vulnerable”, not able to assimilate and even act on the information. Moreover, we cannot predict how different children might react to seeing content such as the Momo image. While we know through existing research into children’s vulnerability¹⁷ we will be better able to measure the number of children who might be considered vulnerable, we cannot predict how these vulnerabilities transform into reaction to a specific piece of online content. In attempting to contextualise vulnerability into a relatable unit, the Children’s Commissioner’s Vulnerability report predicted that in any given school class of 30 young people

- *3 children (11%) living with limiting long-term conditions*
- *8 children (25%) have a parent with mental health problems*
- *1 child (2%) living in a household where both parents have serious mental health problems*
- *3 children (11%) who have relatively serious mental health issues themselves*
- *1 child (2%) caring for their parents or siblings*
- *3 children (10%) with SEN, including 1 child with substantial additional communication needs*
- *2 children (7%) living in homes with domestic violence and abuse*

Recent research by Youthworks/Internet Matters¹⁸ explored what vulnerability means in the online context and whether particular vulnerabilities meant that some children were more likely to be affected by certain types of online risk. In categorising vulnerabilities as:

- Family Vulnerability
- Communication Difficulties
- Physical Disabilities
- Special Educational Needs
- Mental Health Difficulties

And while they concluded that content risks do not have a clear correlation with any specific vulnerability, through compounded harms from other forms of risk, content can play a role in what the report refers to as a “basket of high risks”. In essence, they are stating vulnerability is not static and changes, and other factors can result in content becoming a risk and it is not easy to predict how a specific type of content would impact on a vulnerable child.

We need to be considering all children when issuing these warnings and be particularly mindful that good intentions can have an impact on their wellbeing. However, we equally

¹⁷ <https://www.childrenscommissioner.gov.uk/wp-content/uploads/2018/07/Childrens-Commissioner-Vulnerability-Report-2018-Overview-Document-1.pdf>

¹⁸ <https://www.internetmatters.org/about-us/vulnerable-children-in-a-digital-world-report/#1502101423072-96ef6390-ac4f>

need to be mindful that there are many children that are potentially vulnerable in unpredictable ways, and there needs critical reflection before (over)reacting to the latest digital ghost story. For future events, agencies and organisations might adopt a risk assessment before issuing warnings assessing the (positive and negative) consequences of their actions following an assessment of the risk of harm and *validity* of the threat. It is crucial that's sources are checked and authenticity established ahead of a rush to generate social media presence which can then potentially snowball and "awareness" of a false threat may occur, with potentially harmful consequences for the young people we purport to protect.

The Samaritans conclude that "Research shows links between media coverage of suicide and increases in suicidal behaviour" in their Media Guidelines for Reporting Suicide¹⁹, detailing how to cover suicide and self-harm safely. We are not proposing that the online safety community never uses traditional and social media channels to disseminate a risk, however, we are calling on stakeholders to do some fact checking before they commence dissemination.

Conclusion

For those of us who have worked in the online safeguarding space for a long time (such as the two authors of this article), Momo Week was, extremely frustrating.

The Momo challenge, like other digital ghost stories before, has no evidence of children coming to harm and so was branded a hoax. The sharing of warnings, identifying and naming the Momo Challenge, by individuals and organisations created a moral panic with the result being heightened curiosity and evidenced that this drives interest in the very content that was of concern. There are children (and others), who are already vulnerable who will be less resilient to this content and may be more susceptible to the content and these are the ones we need to have more concern with when issuing warnings in the first place.

The warnings, especially those issued by trusted statutory agencies (in particular the police, health and schools), need to appreciate the position they have and the impact of sharing named warnings, particularly on society's most vulnerable. The Momo challenge (like those before) presented no fundamental change of message to children and young people that any other piece of harmful content – "*if you see something that has upset you, tell someone about it and they can help you*". That is all that is needed. Children and young people tell us they want adults to be able to help them, and to be informed of online risk.

While there is much discussion around "critical digital literacy" for children and young people, we feel that the Momo event raises the urgent need for more effective critical digital literacy training for those in the children's workforce, with an appreciation that some media and organisations are looking for broadcast popularity and social media recognition, rather than putting children's safeguarding as their number one priority. It is also important for the children's workforce to assess the validity of the threat and risk of harm.

¹⁹ <https://www.samaritans.org/about-samaritans/media-guidelines/>

What the Momo challenge has shown us is that stakeholders in child online safeguarding are still failing children and, in some cases, putting recognition ahead of responsible and balanced response and placing vulnerable children at risk of upset and harm. We need to do better.