Liverpool CAMHS Partnership

New Technology, Mental Health and Young People

October 2015

Contents

Executive summary

i. This report was commissioned by Merseyside Youth Association (MYA) on behalf of the Liverpool Child and Adolescent Mental Health Services (CAMHS) Partnership. It has involved a literature review as well as primary research. Key themes emerging from the review of research findings reinforce the findings from the research we have undertaken:

ii. The importance of anonymity for users accessing help via websites linked to the negative stigma still associated with mental health problems. New technology can provide a way that young people can access mental health services such as on-line counselling and peer group discussion avoiding such stigma.

iii. New technology can also provide a private space for young people to access information, that may have be uncomfortable or of a distressing nature if done face to face with a professional or in a group.

iv. The importance of 24 hour access provided by new technology to sites and apps allows users seeking advice or guidance to obtain it instantly. Linked to this is the ability to have wider access to online mental health resources.

v. The concerns about the negative or potentially damaging impact of new technology can be either overstated or fail to compare such risks to those C&YP encounter in other settings.

vi. There is little evidence readily accessible on how vulnerable and diverse groups of C&YP are using new technology and its impact on their mental health or their particular needs in respect of this.

vii. The survey of school parliament students does help demonstrate just how important a part new technology plays in the lives of C&YP. For older students in particular there is a preparedness to use the internet to seek help and advice on emotional concerns, which may be preferred to asking family or professionals.

viii. The observations of the young people involved in the focus groups reinforce what has been found elsewhere particularly in relation to the pros and cons of using the internet in relation to on-line counselling for those who had experience of mental health services. Though they do not dismiss the risks of the internet, participants generally saw it in the context of the risks they might face in other situations.

ix. The concerns of the parents in the focus groups tend to echo those that are voiced elsewhere including the amount of time their children spend on-line and anxieties about what risks they may be exposed to. At the same time there is recognition of the value of the internet especially in relation to its potential educational benefits.

x. It's almost certainly the case that the internet will play an increasingly important part in providing advice and support to young people experiencing emotional and mental health problems. However it needs to complement other services and be an option where appropriate; on-line counselling may be preferred by some young people, but not all.

xi. Arguably the biggest challenge is ensuring that C&YP know where they can get advice from secure and validated sites. This is something that concerns parents and carers along with wanting themselves to know where to get advice. There are direct implications for the Liverpool CAHMS partnership in this and the development and promotion of the FYI website.

1. Introduction

"I'd probably be dead right now if it (the internet) wasn't there. It distracts me from what goes on in my head. What goes on in my head is so intense."

Comment by young women taking part in YPAS focus group[1]

'The digital world has become of utmost importance with its potential to protect and enhance the mental health and wellbeing of our children and young people. We are raising a generation of 'digital natives' who differ from previous generations in the way they communicate.'

Future in Mind 2015[2]

This report was commissioned by Merseyside Youth Association (MYA) on behalf of the Liverpool Child and Adolescent Mental Health Services (CAMHS) Partnership. The first section of the report reviews the research evidence as to what is known about the relationship between mental health and children and young people's use of new technology. This has largely been undertaken via an internet search and its focus informed by an initial survey of members of the Liverpool CAMHS partnership and other key stakeholders.

The second section presents the evidence from research undertaken on behalf of the Liverpool CAHMS partnership. A survey of 339 students taking part in the Liverpool primary and secondary School's Parliament was undertaken in September 2015. Findings from this have been supplemented by results of early surveys of Liverpool students. In addition this report provides commentary from a facilitated workshop for Liverpool CAMHS workforce representatives. It also includes findings from six focus groups undertaken with young people and two with parent / carers.

A significant challenge in undertaking this work has been to give the research a clear focus given the potential scope of any research encompassing mental health, children and young people (C&YP) and new technology. Priorities for the first phase of this research were identified via a survey of the Liverpool CAMHS partnership workforce in June 2015, which was completed by 70 people. The following priorities were identified in order of importance:

- The effectiveness in improving mental health outcomes for children and young people through using technology
- How technology can meet the needs of diverse groups of young people e.g. with Special Educational Needs (SEN), Protected Characteristics or other vulnerable groups (Looked After Children, Young Offenders, Young Carers)
- Building resilience to support mental health through technology
- Technology supporting and promoting self-care
- Technology improving access to and signposting to services
- Technology being a risk factor to mental health

In addition people wanted to know:

- How technology can support C&YP and parents and carers in Service Developments
- What Apps and website young people would like
- What the C&YP workforce would find useful in relation to technology, young people and resilience

It is relevant to note that those completing the survey overall rated their own confidence in the field of mental health and technology as below the mid-point (4.6) on a scale of 1 – 10, with ten being very confident. This in itself suggests the value both of this research and of providing training to the C&YP workforce in this field.

New, digital technologies have revolutionised how we conduct our lives. Many of us remain constantly connected to social media in our working and leisure time publishing updates, tweets, posts, videos and pictures. Technology is ubiquitous in many young people's everyday lives, with a constant desire to check profiles, comment and search for information that is available at their fingertips in a more literal manner than ever before.

Though the amount of information and research evidence in relation to C&YP, mental health and new technology is growing, the fast pace and changing landscape of new technology and the platforms used means that this can quickly become dated and of limited value. We have therefore focused on identifying current research and evidence mainly gathered within the last five years.

Report structure

We have themed the headings for the first section of the report to match the research priorities identified in the Liverpool CAMHS partnership survey. Each of these headings summarises key findings drawn from a range of sources both from the UK and internationally. These include policy documents, reports from the health and social care sector, academic studies as well as evidence elicited from organisational mental health websites in the UK. Inevitably there is a considerable degree of overlap in reporting research findings across the priorities identified, so that in some cases the same research is cited more than once.

The second section of the report presents the research findings according to the different methods used.

We begin this report with a brief overview of new technology and its relationship to mental health and young people. Appendix one provides a list of relevant websites, appendix two definitions of key terms used in this report and appendix three a summary of statistics about the use of new technology including social media platforms such as Facebook and Twitter. Appendix four presents additional data from a survey of four secondary schools in Liverpool.

Section one: Literature Review

2. New technology - Improving mental health outcomes

'The use of digital technology to improve health outcomes has the potential to transform the face of the NHS.'

The future's digital: Mental Health and technology[3]

The positive role that digital technology can play is recognised in the 2015 NHS / DoH 'Future in Mind' report. It offers opportunities to deliver the right information to C&YP and to help reduce the stigma associated with mental ill health. Reference is made in the report to the launch by Mind of the #DontPanicButton initiative and its Digital Ambassador, the celebrity Zoe Sugg, who shares accounts of her own battles with anxiety and panic attacks.

The report recognises the potential of the web to promote resilience; apps and other digital tools can empower self-care, giving C&YP greater control over their health and wellbeing and can also empower parents and carers. The development of a single framework for harnessing the power of digital technology and protecting young people from mental harm is recommended and that young people themselves should be involved in its development. The report also suggests incentivising the development of new apps and digital tools along with consideration of some form of kite-marking scheme.

'The future's digital' report of 2014[4] though primarily focusing on adult services has relevance for young people. A number of NHS-branded mental health apps are currently in use that are identified in the report including Wellhappy, MyJourney, Mindlogr a private video logging tool, Psychology Online an eCBT tool and Buddy app,53. The latter is a digital tool used in therapy services which uses text messaging to keep a daily diary of what users are doing and how they are feeling, which helps to identify and reinforce positive behaviours.

The report make the point that it is difficult to evaluate the impact of digital interventions as this may occur considerably later and may not be obviously related to the previous intervention. It provides a number of case studies of e-mental health a few of which there is some evidence available, this includes the NHS initiative the 'Big White Wall.' This delivers personalised pathways to provide integrated support programmes for a range of long-term conditions and behavioural health issues through a choice of therapeutic services 24/7 via mobile, PC and tablet. It has been

shown that its online therapy service achieves a 58 per cent recovery rate (against an average from other therapy services of 46 per cent and a national target of 50 per cent).

Reference is made in this report to how social media is being used effectively for facilitating self-support and peer networking, it comments that:

'It is fair to say that social media is now an established environment for generalist and peer-to-peer interaction. What's also notable is how research into social media is not only evidencing its value and reach across audiences, it is also gathering the insights and evidence to provide guidance on how to use social media effectively.'

Ensuring that the CAHMS workforce has access to clear guidance on C&YP mental health is highlighted within the report and is being addressed with the launch of the MindEd e-portal in March 2014.

Research commissioned by Comic relief has investigated how information and communications technology can be used to assist young people with mental health needs. The views of and concerns of young people using new technology in mental health interventions including online counselling were gathered.[5] The Warwick research highlighted a number of advantages and benefits derived from using new technology. These largely correspond with the observations made by the Liverpool CAMHS workforce as the positive aspects of new technology (appendix one) and comments made in the focus groups (appendix two):

Anonymity - the feeling of anonymity can be a benefit in using the internet and new technology. A number of young people identified the stigma attached to mental health problems and that the internet can be a safe place to hide if you don't want to talk about it in person or in groups

Privacy - Young people use technology and the internet for privacy that it can provide and. They are more inclined to use the internet and sites to get away from the perceived embarrassment surrounding mental and sexual health that may arise when talking with parents or other adults

Accessibility – the availability of 24 hour professionally supported sites and services for young people on the internet were valued. If they have had a bad experience they always had alternative sites to access for support or help

Seeking of information and support – Information technology provides a way of communicating with health professionals easily, particularly through instant messaging services on sites

Wider access to information - the amount of information available via the internet containing so much information was seen as a particularly benefit to mental health service users

The Warwick report provides evidence demonstrating the extent to which young people can come to rely on new technology, including high levels of attachment to mobile phones. Young people commented on not being able to live without a phone, or that they would be 'freaked out" if they did not have one. One young person reported getting "withdrawal symptoms" if they could not use their mobile phone for a period of time. For some not having access to new technology and in particular mobile phones and Facebook, was not considered an option.

3. How technology can meet the needs of diverse groups of young people

'Recent years have seen an explosion of new, innovative programs that focus on improving the lives of vulnerable young people through the use of technology. The internet has opened doors of opportunity to reach these children and youth in more effective ways with the information and support they need to lead healthy lives.'

'Using Technology to Provide Support to Children and Youth in Challenging Contexts.'[6]

There is limited research directly investigating the needs of different groups of C&YP including Black and Minority Ethnic (BME) and LGBTQ young people to new technology and mental health.

Research looking at counselling in UK secondary schools[7] in 2013 suggests that young people from BME communities are under-represented among those using school-based counselling services. This is particularly true in respect of those from Asian backgrounds. In contrast there is some evidence that they may make greater use of online counselling.

The risks of digital exclusion particularly amongst young people from BME communities and young people not in education, employment or training (NEAT) has been identified in other research.[8] More generally the importance of digital fluency has been highlighted as a concern amongst teachers.[9]

There is some evidence that online peer connections are a key source of social contact for some of the most marginalised or socially isolated young people. A study of young people with long-term mental health evidenced the apparent strength of the relationships formed through their participation in an on-line community.[10] Research looking at the use of Facebook found that it could help young people with less developed social skills build friendships, which then became offline friendships.[11] There is also research demonstrating how social isolation can be reduced amongst migrants and BME young people by their use of the internet to connect with distant peers.[12]

A Canadian research study[13] has explored how technology can provide support to vulnerable children including following groups:

- Children affected by war and refugee children
- Young people affected by natural disasters
- Immigrant young people
- Maltreated children and young people
- Children and young people in alternative care
- Homeless children and young people
- Youth gangs
- Child labourers
- Children and young people with health related challenges

The observation is made that Innovations in technology have not been matched by the development of research and evaluation of those innovations for their potential to improve well-being. The study reviews the range of different ways in which new technology is used and the types of services delivered to vulnerable children including social support, education and violence prevention. One example of the latter is how the GPS on mobile phones has been used in a mapping project to indicate safe places, risky places, and where they go for different services or support in their city by placing a point on a Google map.

Another example given is the use of an app for young people with addiction issues. The apps main feature is a panic button which enables the recovering addict to track their progress, recall their own motivational story in moments of crisis and to communicate with counsellors almost instantly.

A UK app MOMO has been developed for young people making the transition into adulthood and leaving care services, which can often be highly negative. The app provides the young person with advocacy support in their pocket via their mobile phone. It enables them to communicate their needs and helps them stand up for their rights. This can help improve their relationship and the support they receive from the professionals working with them.[14]

4. Building resilience to support mental health through technology

The role that new technology can play in helping young people develop resilience and bolster their mental health has been the subject of European wide research.[15] This has detailed the frequency and nature of negative online experiences that children and young people may have, as well as the responses to this. Key findings include:

- Online vulnerability is related to offline vulnerability. Children with more psychological problems suffer more from online as well as offline risks
- Young people consider their coping strategies to be helpful, with talking to someone being the most commonly used in dealing with online issues
- Coping strategies are often combined with each other, deleting unwelcome messages and blocking senders for example

Those young people with higher self-efficacy employ more proactive coping strategies, but girls, younger children and children with psychological problems are more likely to be passive, as are children with parents who use the internet sporadically. The report recommends the following:

- Encourage open communication, both at home and in school
- Show children how to use (online) protective coping strategies
- Help children tackle their psychological problems and build self confidence
- Keep promoting internet access and use among adults
- Promote a positive attitude towards online safety and proactive coping strategies among peer groups
- Schools should provide more active support with regards to children's internet use and safety

A major Australian literature review in 2011[16] identified a number of positive benefits associated with the use of social networking by young people. These included the extent to which social networking can facilitate supportive relationships, contribute to identity formation and promote belonging and self-esteem. It suggests that, "the strong sense of community and belonging fostered by social networking sites has the potential to promote resilience, which help young people to successfully adapt to change and stressful events." However this is dependent on a good internet and media literacy, which is also important in how young people cope and deal with risks online such as cyber-bullying.

The Canadian research[17] previously referenced has explored how different innovations in technology can be used to help children and young people in challenging environments nurture resilience and prevent mental health problems. It discusses strategies and interventions and identifies gaps in service provision, while attempting to encourage sharing of evidence based practices. A series of recommendations are identified including:

Embrace Technology - assess if and how technology can be utilized to better serve children and youth in challenging contexts. Decide which type of technology would best meet the purpose of your program/intervention. Identify the systems and support needed and start by looking at what gaps could be addressed through the use of technology (e.g., access, support-needs) and how technology could increase the impact of your intervention, program, or research.

Engage Youth as Partners in Developing Programs – young people should be involved in research and programming from the beginning, in program development, implementation, and evaluation. The more that C&YP in challenging contexts are included in research the more valid and contextually relevant the results will be.

Ensure Technical & Professional Competence - in developing a project or intervention, content development and technical design key factors that need to be addressed. Consult with cultural and context experts from the target audience to ensure that technological interventions are appropriate and implemented in a respectful way, with a focus on the cultural conceptualisation of the construct of interest, through engagement and partnership.

Develop a technology marketing plan - through consultation with partners and stakeholders, including young people, develop a strategy for promoting your program/intervention. This will involve intentionally engaging with social media (e.g. Twitter, Facebook), as this is a popular medium which is most frequently used by young people.

Acknowledge diversity, that is, culture and context, in program delivery - not all methods will be appropriate for all C&YP and age and gender must also be taken into account. Make resources available in different languages and engage with families as appropriate.

More Evidence is needed to Support the Use of Technology-Based Programs - evaluations are needed to help develop better mental health and violence prevention outcomes for C&YP in challenging contexts. These should be embedded within each project / programme structure.

5. Technology supporting and promoting self-care

'At a service level, we know the importance of directly involving children, young people and their parents and carers in their own treatment, setting goals that have a meaning for them and using their feedback to guide their treatment and overall service development: it pays dividends in making services effective and efficient.'

Future in Mind 2015[18]

One of the main potential benefits of new digital technologies in respect of health and wellbeing is in how people can access services and resources that will empower them to take active control over their own care, both physical and mental health. This has been explored in 'The future is digital'[19] discussion paper which identifies the need for better use of new technologies to support and improve the delivery of mental health services. There is recognition that there is a shift in the ways in which people use services, with a move towards peer support and self-management through the use of new technology. Service users are becoming 'informed consumers' in that people are self-diagnosing, checking their own symptoms, providing feedback and using public forums as a method of discussion. Social media is being used to disseminate information and used for peer support and providing advice.

With over 100,000 health and mental health apps available worldwide, the question of regulation, governance of new technology, online platforms and tools is identified as a concern. At present, there is little or no moderation of social media sites such as Facebook and Twitter. There are also concerns regarding how users decide which health and wellbeing app to use that will be most beneficial and safe to use. Similarly, online safety of sites that are not regulated is a problem area that is not being addressed. This is particularly a concern in relation to users from vulnerable groups for example the use of pro-self-harm and pro-anorexia sites.

Reference is made to the 'NHS Choices' website that has become the most popular website in the UK and to the "Big White Wall', a digital recovery service for people who are stressed, anxious low or not coping. This 24 hour accessible website uses trained professionals in the online interaction online, were worrying behaviour triggers are responded to by the support team or Psychologists and professionals.

In New Zealand a game-based method of delivering Cognitive Behaviour Therapy (CBT) has been developed. This makes use of interactive fantasy games in working with young people who have depressive symptoms and represents an alternative to usual care in Primary Care:

"Up to a quarter of young people will have experienced a depressive disorder by the age of 19, which is a major cause of disability. Effective therapies exist, with cognitive behavioural therapy recommended as the preferred treatment for mild to moderate depressive disorder. However, fewer than a fifth of young people with depressive disorder receive treatment, partly because of shortages in the workforce and partly because young people may be reluctant to seek traditional help. Computerised therapy offers a potential way forward and may appeal to today's "digital natives." The cost of computerised therapy is likely to be substantially lower than traditional therapy and can increase access to treatment."[20]

There is also evidence that computerised CBT can be an effective and acceptable method of treating eating disorders including bulimia. However there are concerns about lower completion rates amongst young people using this method and the advice that it is best delivered with support to them.[21]

Australian[22] research has evidenced how the use of an app (Appreciate A Mate) can promote positive peer-to-peer communications, respect for self and others, and affirmations of body image. The app mobilises current digital behaviours, such as 'sharing' and 'liking' and was developed specifically to achieve these outcomes. It was also linked to an online social marketing campaign helping young people share 'good vibes' with their friends and to feel good about themselves. Significantly young people were involved in developing both the app and the marketing campaign.

Though not specific to young people, Moodometer is a UK app that allows users to monitor and rate how they are feeling on a daily basis through the use of an easy-to-use interactive mood diary. Users receive tips on how to improve their emotional wellbeing. It provides feedback mechanisms such as ways of monitoring what influences their mood so that they can understand how improve their mood and better understand themselves.[23]

6. Technology improving access to and signposting to services

'In 2007, approximately only one in five adults (18%) used the Internet to access health information using websites such as NHS direct. In 2013, 43% of all adults had used the Internet to find health information online.'

ONS Internet Access, 2013[24]

A recent study[25] has investigated how young people with mental health problems use apps and websites. The study assessed the effectiveness of a number of apps / websites aimed at C&YP with mental health needs launched across the UK in 2014. This study contributed to MindTech's work in the development of new methods and approaches to evaluate and appraise digital health tools. A number of C&YP, professionals, and digital agencies combined ideas to develop seven websites / apps designed to build digital products that may improve C&YP wellbeing. The apps or websites each have their own characteristics, intended audience and values:

Doc Ready an app that helps young people feel more confident and get better results when they see their GP about a mental health issue.

Find Get Give – a support app for young people to find mental health support in their area and give feedback

Madly in Love – a relationship and mental health advice for young people and their partners.

Moodbug - a tool for sharing how you feel with your close friends and letting them know when you're thinking about them

Well Informed – an app for the children and young people's workforce to get instant, accurate support on youth mental health.

In Hand – a digital friend that provides young people with tools, advice and activities when their mental health is at risk.

Headmeds - accessible, straight talking information on young people's mental health medication.

The study found that the two apps (In Hand and MoodBug) had retention rates of 75%-95%. Noteworthy findings from the In Hand evaluation include 68% of users having a positive outlook after using the app and 40% being able to take more control of their life. Using the In Hand app enabled users to manage feelings and emotions and to regularly assess and lift their mood. Satisfaction rates for the In

Hand app suggest that 65% of users would use it again, 84% would recommend to a friend and 92% of those surveyed agreed it was easy to use.

In Hand was primarily used to increase mood and regulate how the user was feeling, whilst Moodbug was commonly used to learn about the users moods and have discussions about them. 60% of users engaged meaningfully with the products i.e. users spent time participating with content or carried out relevant actions in the app. Users were found to be more likely to engage with products that they have seen on social media sites and web searches as opposed to suggestions from friends or by services.

Doc Ready, was also found to be beneficial with 80% of users reporting it had partly (9%) or completely (71%) met their needs. 87% agreed or strongly agreed that it was easy to use with the app averaging 8 out of ten in the survey.

All of the apps show some evidence of improving access to and signposting to services. This study suggests that digital products have a positive role within the landscape of mental wellbeing support. Some of the apps featured in the study have made a positive contribution to user's health and wellbeing and are being used by a large number of people.

This study benefited from collaborative learning – having young people at the very core of the project, learning about their needs and understanding the ways in which technology can be used to alleviate mental health needs.

A 2014 Scottish project[26] has examined the role of the internet and the mapping of digital assets in young people's mental health. 'Aye mind' (formally Project 99) was aimed at young people in Greater Glasgow and Clyde and based on a partnership between the Mental Health Foundation, the Young Scot information agency, Snook (a service design agency) and importantly five local youth groups.

It looked at sixty active mental health 'digital assets' (websites accessed by young people for information and also including social media sites, apps and other new technology). Both positive and negative uses of social media were examined through a literature review, interviews, and case studies with young people. From the data collected it was possible to characterise young people as being in one of the following groups:

- Young people who have mental health problems and engaged with services and want those services to recognise the role of technology in their lives

- Young people who experience distress for whatever reason might not disclose this to services or trusted adults, but instead seek help, information or peer support

- Young people who may be concerned for another person's mental health, or are supporting a friend or family member in distress

- Young people who are exposed to risk factors for poor mental health, including inequalities, exploring the role of technology could play in mitigating that risk and increasing access

There use of technology was characterised in the following way:

Technology for Information: Where young people seek information about mental health and distress using the internet or digital technology, including sites that provide content and information for young people and service directories.

Technology for Service Delivery: Where young people access e-health services, or use technology to engage with or prepare for engagement with services for example self-management sites and service based recovery. Sites and technology improve communication between young people and services.

Technology for Social Connection, Identity and Self-Realisation: Where young people use technology to curate their experience, offer and receive peer support, explore their identities, collaborate and share content. Sites may include storytelling or the curation of experiences, campaigning sites, or informal peer grouping.

As part of this project, young people worked with designers to formulate new, innovative ways of engaging other young people. For example, rather than produce a leaflet or a webpage to discuss mental health issues, they prioritised key points to share and then helped turn the design into a GIF (animated graphic) that was easy to share on social media platform.

The report makes the following recommendations:

- To have a co-design approach for any project that is seeking to develop digital assets for youth and mental health, with a suggestion of developing youth engagement to support this work via internships for young people.

- To develop an online gateway that has user centred content focussed on supporting mental health and wellbeing - not just focussing on mental health issues. This gateway would contain a service directory, an advice directory, a tool kit for wellbeing and links to wider services and connections.

- The gateway should also have 24 hour instant messaging tools, empathy tools, and have access to forums for group peer support. Further, it should have access to tools that are good for maintaining good mental health, as well as practical day to day tips on managing common mental health issues.

The project advocates appointing young people as social media managers for peer related content to create interesting, relevant and engaging content that young people want to share. Collaborating with young people allows a connection to be made with the subject of mental health. It isn't simply about connecting people to service pathways for support but more of a focus on peer support, sharing ideas and being proud of a project that is fundamentally about young people.

Young people involved in the project were able to identify some of the challenges and risks they might find online. In doing so they were able to suggest both strategies for managing these risks and tips to support others with doing so. Other positive outcomes of the project included an improvement in the skills and confidence, pride and achievement and knowledge of influencing the mental health system.

A Canadian study[27] has looked at how young people access mental health information online suggests there is a need both for online support and though face to face contact. A web-based survey of young people aged 17-24 years was undertaken with participants evaluating their use of mental health resources and preferences for various components of a mental health website. It was found that current e-mental health resources either did not meet the needs of young Canadians, or were not widely accessed. This suggests that at least for some C&YP new technology is not a key means of supporting and promoting self-care or improving access to and signposting of services.

7. New technology – Risks to Mental Health

'Harm is a genuine concern, although the extent of young people coming to harm through technology is probably overestimated. Young people generally feel confident in their ability to avoid harm. Issues that continue to need addressing are cyberbullying, technology dependence, grooming, and pro-harm sites...'

'Young people and mental health: the role of information and communication technology'[28]

'With greater levels of access and use, there has been an upward trend in risks. Notably, seeing hate messages, pro-anorexia sites and, to a lesser degree, porn, cyberbullying and meeting online contacts offline, have all increased.'

EU Kids Online[29]

European wide concerns about the need to create a safer online environment for children lead to the 'Strategy for a Better Internet for Kids,' which was launched by the EC in 2012. Research from EU Kids Online[30] identifies a range of risks C&YP may encounter in using the internet. These include unsuitable or potentially harmful content; contact with others online; and risks in which young people themselves may be active participants or perpetrators of harmful online behaviour. EU Kids Online research has shown that four in ten children encountered one or more forms of risk in the previous year: 14% of 9 to 16 year olds had seen sexual messages; 6% had been sent hurtful or nasty messages; 30% had contact online with someone they had not met face to face; 21% of 11 to 16 year olds had come across.

A number of studies have addressed the negative impacts of new technology and the potential risks to C&YP. There has been significant media attention devoted to highlighting the risks of new technology including online grooming and exploitation, sexting and cyber-bullying, all of which are likely to impact on a young person's mental health. However the research tends to suggests that online risks are similar and no greater to offline risks; the observation has also been made that risk is not the same thing as actual harm.

A review of the health implications of new technology[31]recognises the difficulties in generalising its positive and negative effects. This is not only due to the lack of primary data but also because of the variability of new technology. The negative health implications of new technology can include:

- Biological effects including disruption of sleep patterns, poor physical activity and obesity and the risks of radiation from telephone masts
- Behavioural and psychological effects of technology are associated poor eating habits and addiction to the use of technology and media
- Other concerning factors including online bullying (cyberbullying) as well an increase of road traffic and pedestrian accidents due to increased usage of mobile phones

The risks of technology have also been examined from an educational perspective.[32] Concerns are expressed about the reliability of information C&YP are getting via the internet and the increasing amount of misinformation. There are also concerns about anonymity particularly in on-line discussion rooms and the disparities of digital fluency across society.

The Warwick research previously referenced[33] as well as identifying positive aspects of new technology also identified a series of risks for C&YP:

The risk of digital exclusion – for certain users (patients and professionals) who are not up to date or advanced with new technology, as well as the danger of the breakdown of communication and interaction between users.

The misinterpretation of messages - through technology rather than face to face contact. Raising questions about how a young person interprets what is being presented to them. How does a child or young person know they are making the correct decisions?

The inability to recognise harming emotional effects - of new technology such as cyber bullying, and 'cyber suicide' - and uncertainties of whether there would be any long-term impacts on young people and their lifestyles in the future.

The importance of dealing with cyberbullying in highlighted in the 'Future in mind' report:

'It is important that schools tackle bullying, including cyberbullying, robustly... Schools can help to contain cyberbullying during the school day by banning or limiting the use of personal mobile phones and other electronic devices. Schools also have the power to search for, and if necessary delete, inappropriate images (or files) on electronic devices, including mobile phones.'[34]

At a local level it's relevant to note the findings of the Liverpool 2014 Schools Bullying Audit.[35] This sampled 6236 C&YP and found that 12% of students said they had been subject to online bullying (chat-room and e-mail) and 10% had been subject to bullying via mobile phone. Girls were slightly more likely to be the subject of online bullying (14%) and also via mobile phone (12%).

An online survey examining which social media sites are most popular with young people was undertaken for the BBC in 2105.[36] 92% of those surveyed used the internet for socialising, 90% use the internet for watching videos 90%, 89% use it for sending messages to chat with friends, 84 % use it for playing games and 81% use it to access social networking sites. The most popular social media sites were YouTube (86%) Facebook (71%) and Instagram (50%)

The survey revealed the pressures experienced by young people (11-16 year olds) when using social media platforms and interacting with their friends online. There were peer pressures and emotional anxieties experienced in using social media. 41% of girls surveyed felt pressure to worry about how many likes or shares you get on postings and pictures. There was also the pressure to update the social media status profiles with pictures and postings that made them 'look good' (34%).

47% of respondents had looked or read things that their carers or parents wouldn't like them to see online, and 29% of those surveyed have signed up to services or websites that aren't meant for young people. Additionally, 61% of 14-16 year olds had taken part in inappropriate activity and one in five of respondents have put pressure on others to take part in negative activities online. 66% of girls and older children were more likely to have experienced or witnessed online bullying.

There has been concern about the possible negative effects as to the extent to which C&YP are involved in online gaming/video gaming. Perhaps counter-intuitively a review of research evidence on the links between videogames and mental health suggests they make a positive contribution to young people's mental health, even violent games can have beneficial effects:

'There is a range of evidence suggesting that videogames have a positive impact on young people's wellbeing. Existing research suggests that videogames contribute to young people's emotional, social and psychological wellbeing. Specially, videogames have been shown to positively influence young people's emotional state, self-esteem, optimism, vitality, resilience, engagement, relationships, sense of competence, self-acceptance and social connections and functioning. Emerging

research suggests that how young people play as well as whom they play with may be more important in terms of wellbeing than what they play.' [37]

In its final policy recommendations the EU Kids on Line report calls upon governments to coordinate multi-stakeholder efforts to bring about greater levels of internet safety.[38] Currently in the UK there is no regulatory body, licensing laws or accreditation for health and wellbeing app's used on mobile phones and tablets. The British Standards Institution[39] provides a code of practice in the form of recommendations and guidance for the development of any app in health care and wellbeing sectors and includes the following advice:

Functionality: apps should be governed or controlled using case studies and stories and have a relevance that shows how the app enhances or inhibits care, whether this is professionally administered care, self-guided care, or informal care.

Age Appropriateness: paying attention to the requirement for regular user updates after a period of time.

User friendliness: can the app be used by its intended audience and how is this quantified?

Rules for validating data from the user: so data is not lost or misused – a set of guidelines is needed for this.

Highlight issues around network connectivity: if the connection is lost while using an app and how does this affect the user.

Section two: Research Findings

8. Schools Survey

A total of 339 students taking part in Liverpool primary and secondary age schools parliament in September 2015 self-completed questionnaires as part of this research. The aim of the survey was broadly to find out about their use of new technology and the extent to which they might access the internet to seek help and advice with any emotional or mental health concerns.

Though not a random sample, it was none the less felt that this group of children and young people represented a reasonable cross-section of Liverpool school students.

Findings from a survey of four Liverpool secondary schools undertaken by MYA early in the year for the CAHMS partnership are also referenced. While a somewhat different survey was used for this, the findings are directly relevant. Slightly more students (344) participated in the four schools survey than the schools parliament survey.

Characteristics

Nearly two-thirds (63%, n 212) of the students completing the schools parliament survey were from primary schools, with almost three-quarters (74%)[1] being nine or ten years of age. There were slightly more girls (54%) completing the survey than boys.

The age profile of the secondary school students was wider, but with over two-thirds (70%) being between 14 and 16 years of age. Again there were slightly more young women completing the survey (53%) than young men.

Of the total of 339 students completing the schools parliament survey, 70% gave their ethnicity as White British (n 238), with the next largest groups being mixed or dual heritage 6%, Asian or Asian British 6%, Black or Black British 5% and White other 3.5%. Twenty of the students (6%) said they had a physical disability.

Findings

Internet access:

All but two of the students completing the schools parliament survey owned or had access to new technology such as mobile phone or tablet pc (figure one). The great majority 96% (n122) of secondary school students could access the internet via mobile phones, this falling to 56% (n119) for primary age students, though 64% of primary students could access the internet via a tablet pc (figure one).

[1] Percentages rounded to the nearest whole number

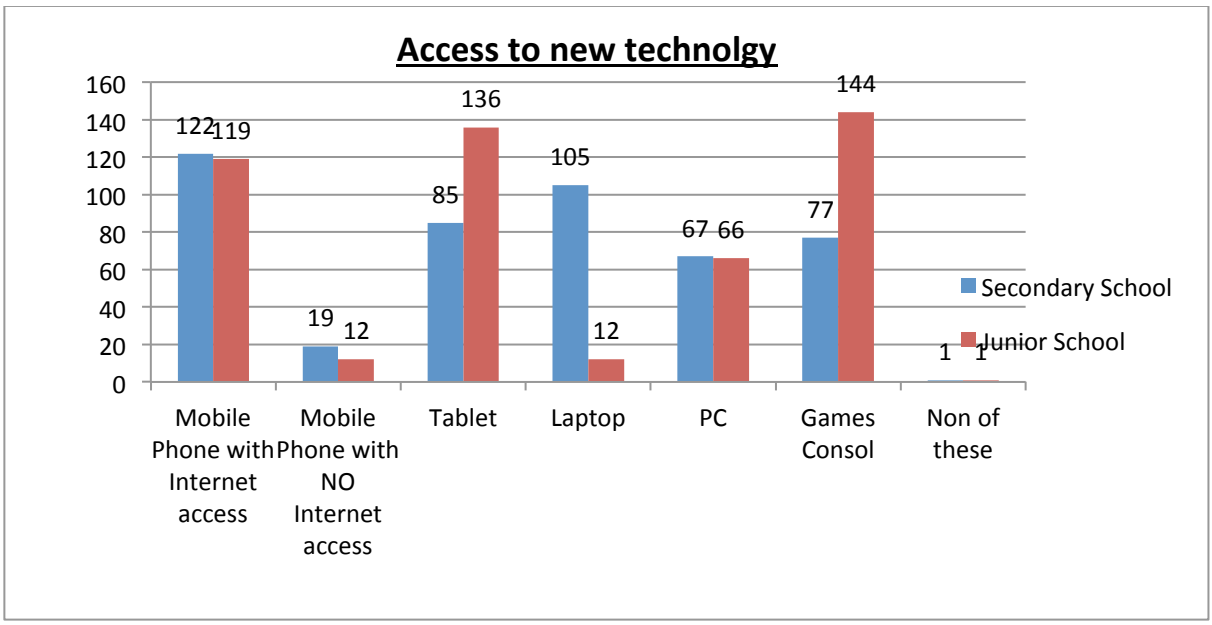


Figure 1

Worries and concerns:

For secondary school age students the biggest worry or concern they saw for young people their age was identified as school work and passing exams (89%) and then concerns about getting a job (66%). This was followed closely by concerns about drugs (60%), peer pressure (57%), alcohol (55%), not having enough money (53%), sex (52%), sexting (40%) bullying (48%) and violence (44%).

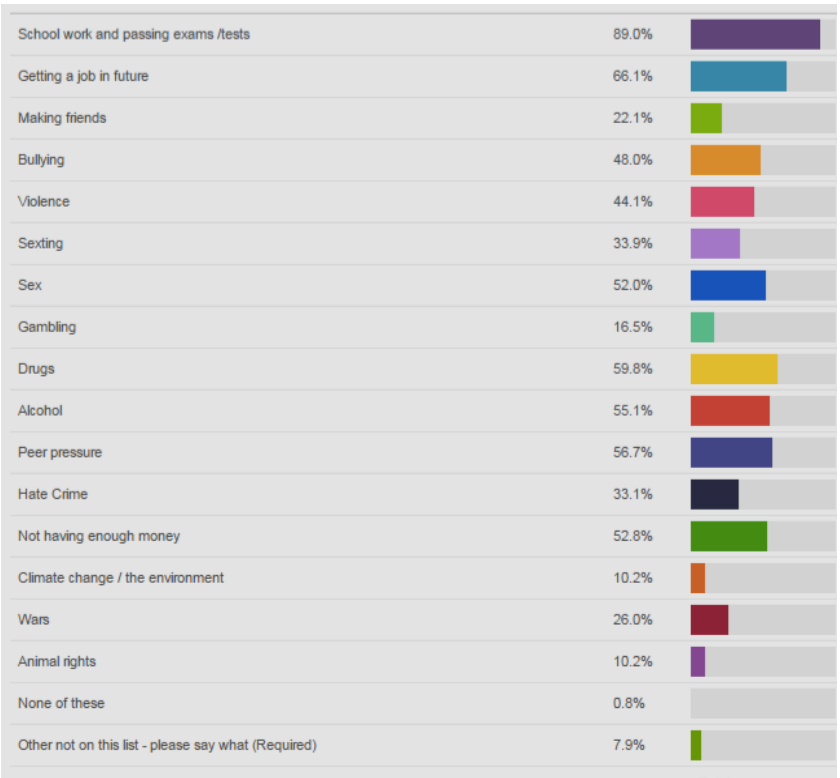


Figure 2

The primary school age children were asked a slightly different set of questions, though some questions were the same as those for the senior students. Over three-quarters (77%) said bullying was the biggest concern for children their age followed by school work and passing exams (64%), making friend and not fitting in (63%) along with concerns about war (56%). A significant number thought their age group worried about being treated badly because of who they were e.g. being a member of an ethnic minority (49%), what people thought of them (47%), and about how they looked (42%). They also thought that many children their age worried about being depressed or sad a lot of the time (46%) and being anxious of stressed a lot of the time (38%).

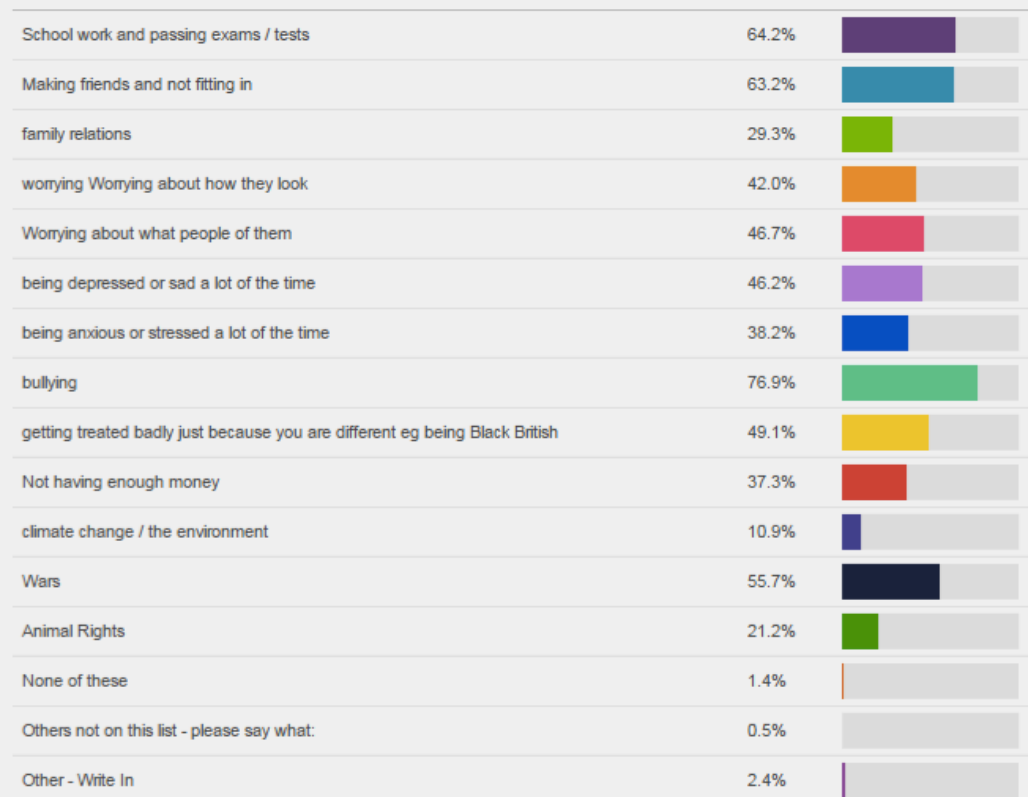


Figure 3

The secondary school students were specifically asked to identify the feelings or emotions they felt were most common amongst young people their age. Worrying about how they looked (87%) and what people thought of them (85%) were the most frequently given responses followed by a lack of self-confidence (76%). Being left out or not fitting also figured highly (69%) along with self-harm which was identified as a concern by two-thirds (66%). Feeling anxious or stressed a lot of the time was seen as a concern of a similar number (65%), while being depressed or sad a lot of the time (58%), feeling lonely (47%), social anxiety (46%) and feeling unsafe or insecure (43%) also figured prominently.

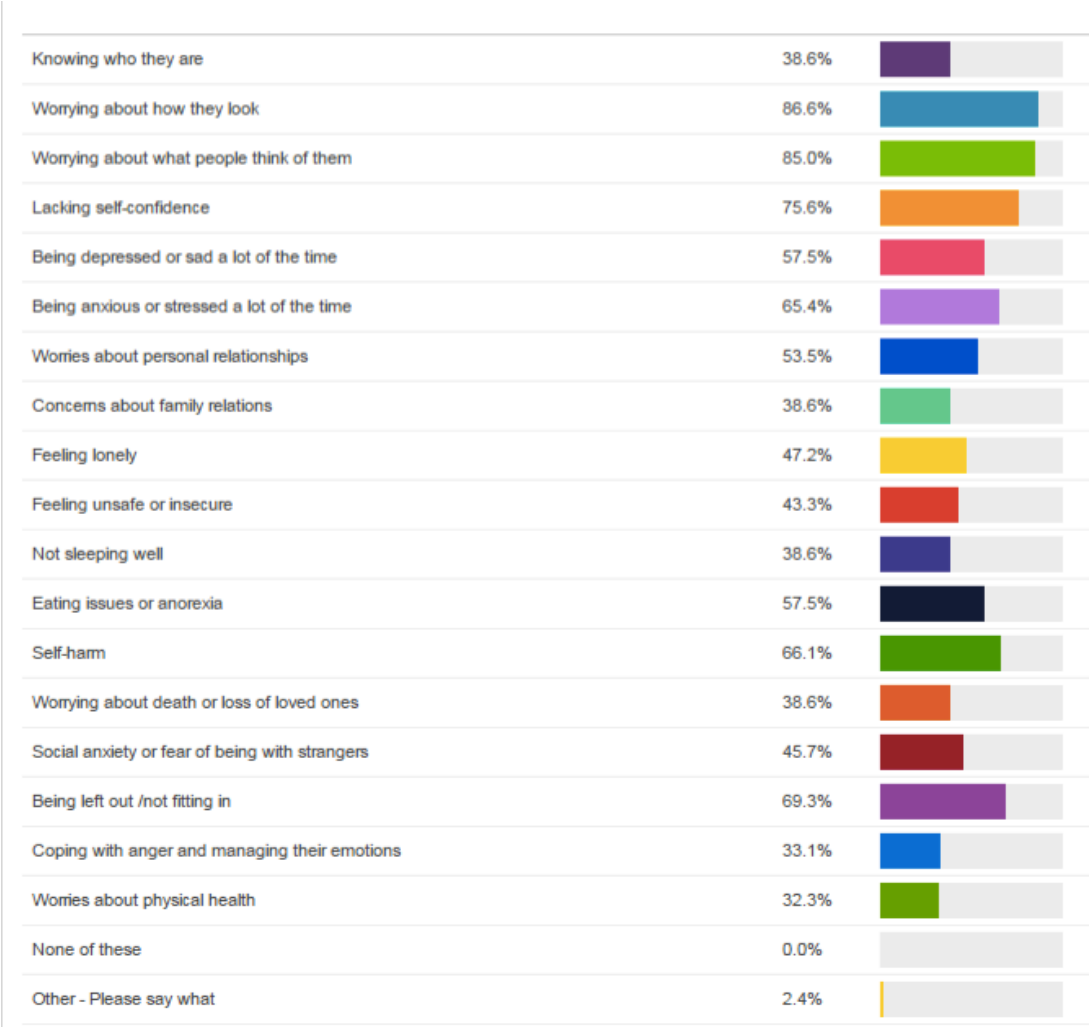


Figure 4

The concerns identified by the young people completing the four school survey were similar to those of the students completing the schools parliament survey. When combined they suggest that nearly three-quarters (73% n 500) thought emotional distress including anxiety, low mood, poor self-esteem and lack of confidence were concerns for C&YP their age. A similar number (72%) identified concerns about relationships and not fitting in. Worries about school work, exams and future prospects (70.5%) also scored highly, while concerns about their identity were mentioned by two-thirds.

Seeking help and advice:

Over half (57%) of the senior aged students said they would use the internet to look for help or advice if they had such concerns or worries, with another quarter (25%) were undecided. Childline and NHS sites were the mostly frequently mentioned sight that might be used to seek help or advice and in one instance CAHMS website was

identified. The most important factor that would make them trust the information they got from a website about mental health was if a professional e.g. teacher or youth worker had told them about it (83%) or if it was an NHS / official health site (81%).

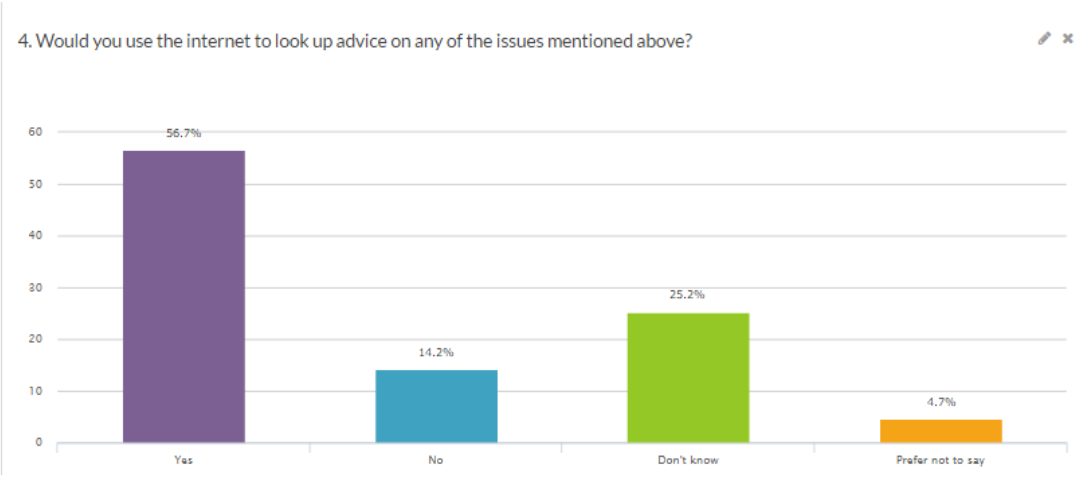


Figure 5

Of those saying they would not use the internet parents and friends were given as the most common alternative in looking for advice or help. A doctor or GP was mentioned just twice and a teacher once as the potential source of help or advice.

The younger group of students were much more likely to turn to parents or carers for help or advice if they were worried about things (95%) followed by teachers (70%) and friends (57%). The internet figured much less as a source of help or advice for this age group (figure 6). Even so 42% said they knew where to look for help or advice on the internet if they were worried or concerned about any of the issues identified. They were much more likely to say they would trust the information they got from the internet if a family member told them about it (73%) than the older group of students were (figure 7)

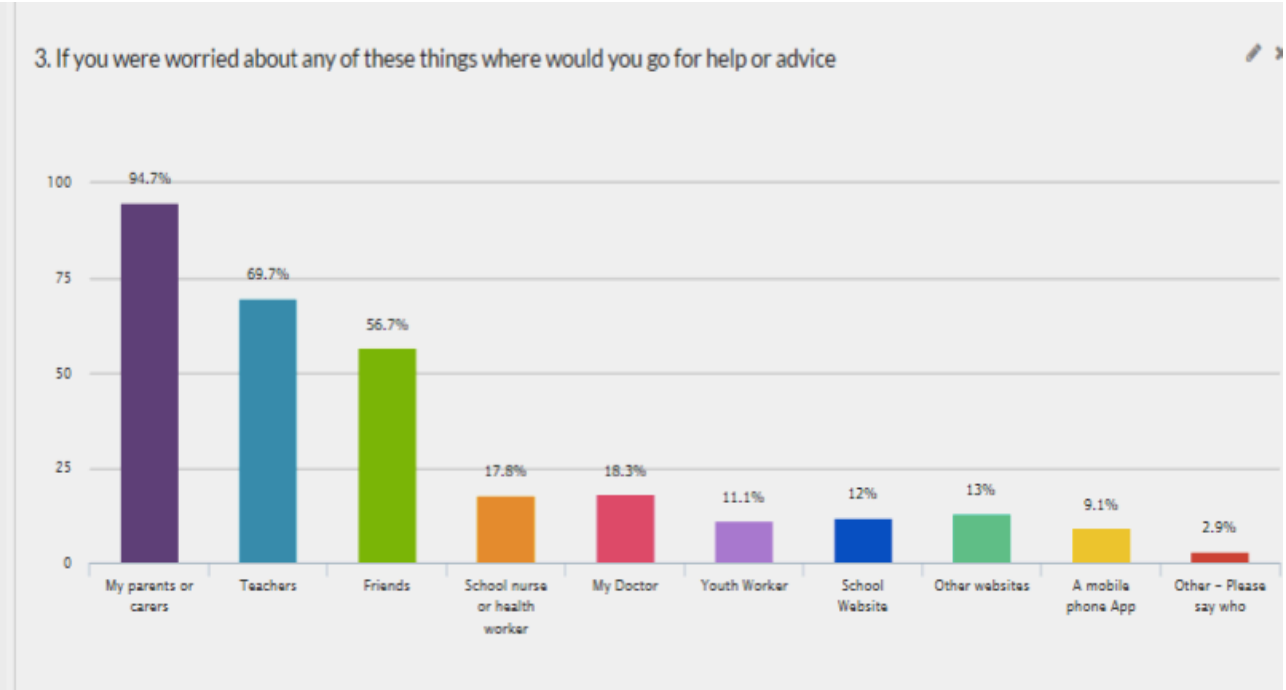


Figure 6

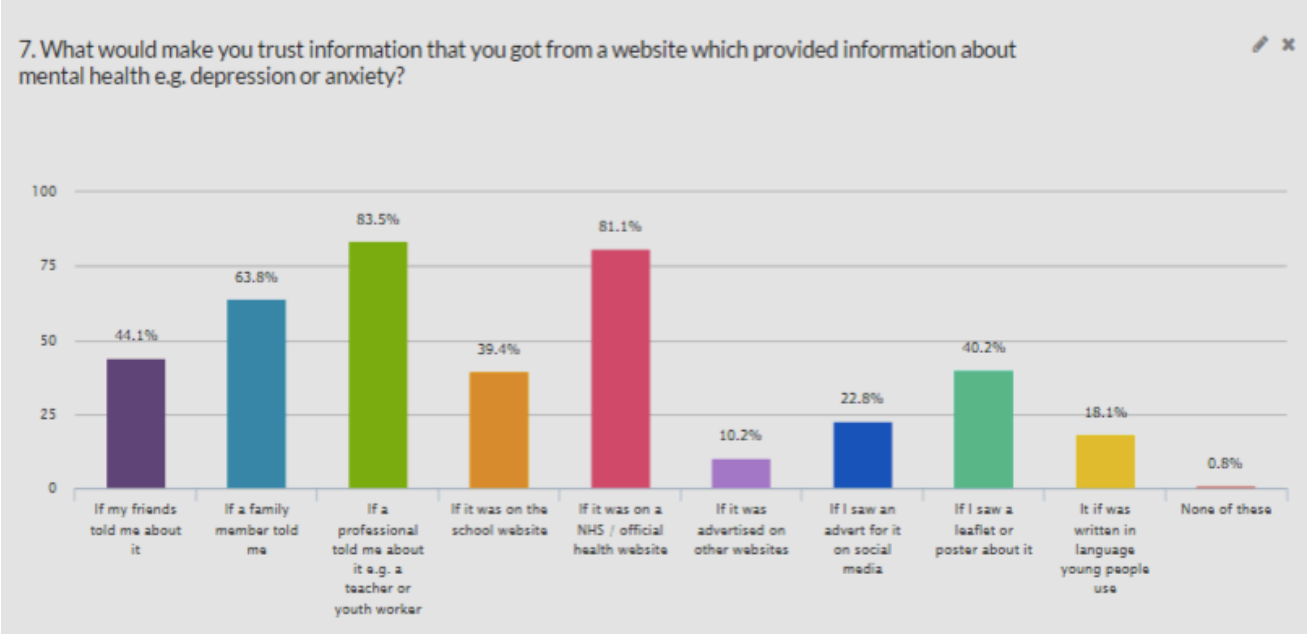


Figure 7

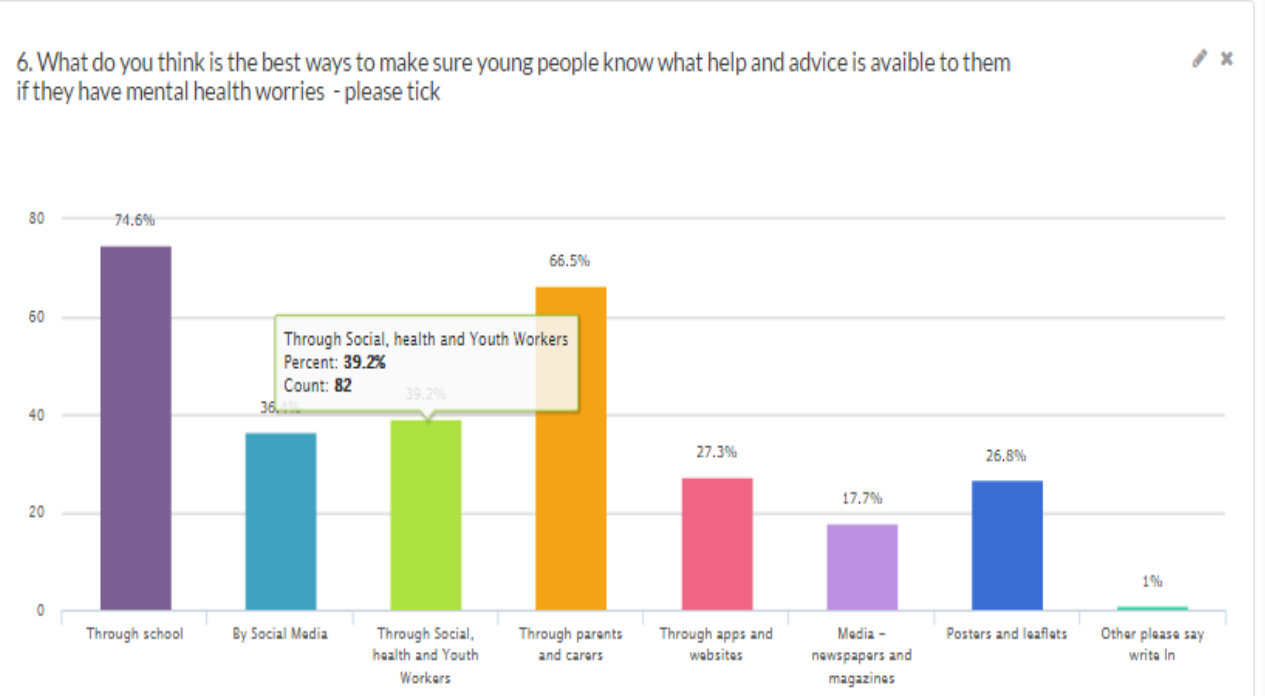


Figure 8

Both the secondary and primary school aged students were asked what they felt was the best way to make sure young people knew what help and advice was available if they had mental health worries. For both groups three-quarters identified school and two-thirds parents and carers. Social media and websites were more frequently mentioned by secondary age students, though still significant amongst the younger age group.

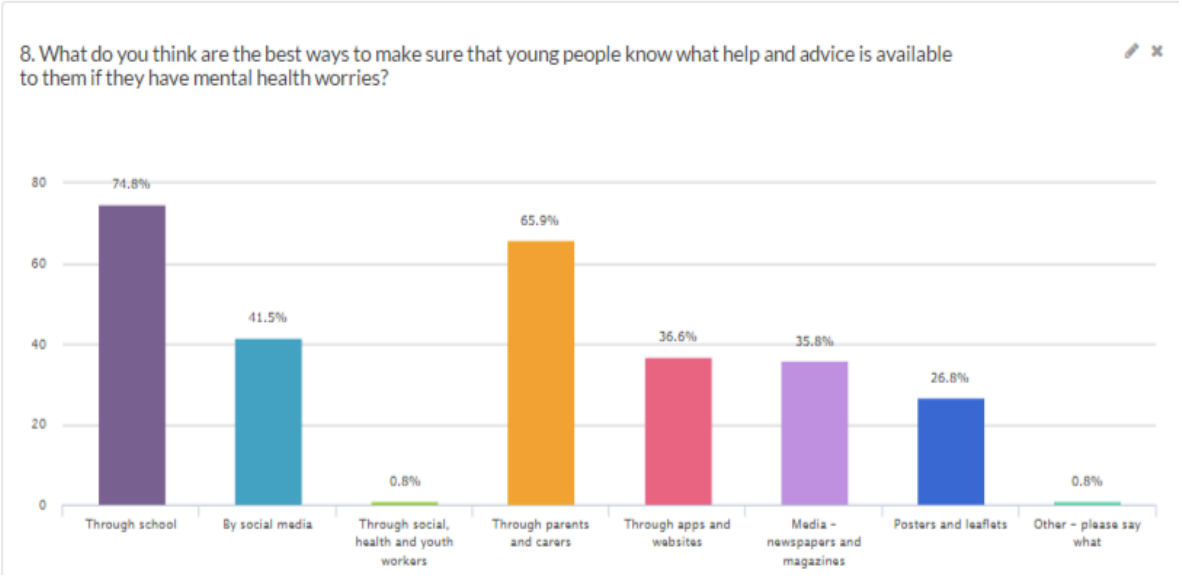


Figure 9

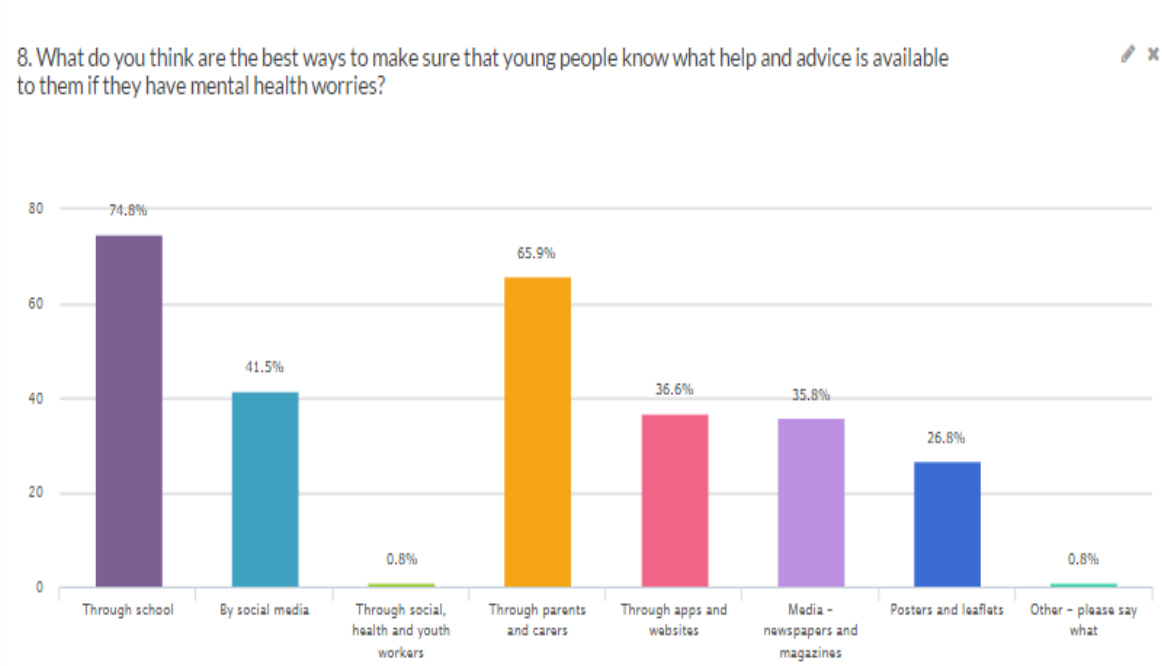


Figure 10

Emotional well-being

To an extent the survey of the schools parliament students illustrates the pressures C&YP are under and their worries. However, it would be a mistake to then interpret this as meaning that all young people are continually worried about such things and that this is impacting on their emotional wellbeing.

Both the schools parliament survey and the four schools survey asked the students about their own well-being. Just 0.5% (n=1) of secondary age students said they never felt safe and happy in the place that they lived, with a further 2% saying they rarely did. In contrast two-thirds said they were always happy, with a further 22% saying they were most of the time. None of the junior age children said they were never happy, though two said they rarely were. There were similar responses to the question of having friends and feeling that they belong, with just one person saying they did not feel this and the same in relation to saying they did not know who they were.

9. Complete the following questions about your own well-being

	Never	Rarely	Some of the time	Often	All of the time
I feel safe and happy in the place that I live.	0 0.0%	2 1.6%	19 15.1%	37 29.4%	68 54.0%
I have friends and feel that I belong.	1 0.8%	2 1.6%	23 18.5%	40 32.3%	58 46.8%
I enjoy learning new things.	1 0.8%	3 2.4%	23 18.4%	40 32.0%	58 46.4%
I cope with problems well.	4 3.2%	13 10.3%	44 34.9%	42 33.3%	23 18.3%
I know who I am and what I'm good at.	0 0.0%	6 4.8%	33 26.2%	38 30.2%	49 38.9%

Figure 11

7. How do you feel about your own well-being

	Never	Rarely	Some of the time	Often	All of the time
I feel safe and happy in the place that I live	1 0.5%	4 1.9%	21 10.0%	46 21.8%	139 65.9%
I have friends and feel that I belong	1 0.5%	7 3.3%	28 13.4%	47 22.5%	126 60.3%
I enjoy learning new things	3 1.4%	6 2.9%	23 11.1%	65 31.3%	111 53.4%
I cope with problems well	6 2.9%	30 14.4%	47 22.6%	63 30.3%	62 29.8%
I know who I am and what I am good at	1 0.5%	8 3.9%	16 7.8%	33 16.1%	147 71.7%
I prefer not to answer this question	7 35.0%	0 0.0%	5 25.0%	1 5.0%	7 35.0%

Figure 12

Comment

The survey of school parliament students does help demonstrate just how important a part new technology plays in the lives of C&YP. For older students in particular there is a preparedness to use the internet to seek help and advice on emotional concerns and that this may be preferred to asking family or professionals.

9. Focus groups

Praxis undertook eight focus groups as part of this research over the summer of 2015. Two of these were with parents and carers; the first with parents who had a child with special educational needs and disabilities (SEND) and the second with parents of children accessing Liverpool CAHMS services. The six other focus groups were with C&YP. Three of these were undertaken with young people attending group activities at YPAS[2] all of whom had mental health concerns, one group involving LGBT young people and another a transgender group. In total 20 young people participated in the YPAS focus groups and were aged between mid to late-teens. Another focus group involved the CAHMS young people's participation group (FRESH) at the Liverpool TATE, with four male and two female participants' ranging in age from 13 to 21. The final two groups were with young people involved with summer activities at FACT[3], the first involving six boys and two girls aged between nine and thirteen and the second eight young men and two young women aged 13 to 16.

The focus groups with the young people at FACT revealed just how extensively new technology was a significant part of the C&YP daily lives. All the participants had access to a mobile phone, tablet pc and/or home pc, as well as different games consuls. A couple said they would use the internet if they were worried about something like bullying to look for advice if they wanted to keep it to themselves. Mobile phones figured prominently with Instagram, Facebook and Twitter being used. All but one of the younger group had parental controls and time restrictions on their use of the internet and comment was made about parents knowing what sites and apps they were using. There was also the observation by some of the group that other members of their family or friends made too much use of the internet. One of the group felt this have a negative effect on family life.

Some of the young people involved in the CAHMS participation group reported bad experiences from being on the internet, including bullying and were more concerned about the potential risks than the FACT C&YP. They made similar observations about the time they and people they know spent on the internet including playing games, but also for researching for school work.

One of the group talked positively about access she had at university to a student internet site, which including providing emotional wellbeing advice. Another member

[2] Young Peoples Advisory Service
[3] FACT - Film Art and Creative Technology

of the group spoke about a website their school ran. Only one of the group had previously heard of the FYI site and comment was made that other young people involved with the group did not know about the site. It was suggested that texting young people about the site could be used to raise awareness about it.

The young people at YPAS made use of a wide range of internet sites including Facebook, twitter, You Tube and in particular Tumblr:

"I have some friends on Tumblr who have mental health problems and usually they just post in on Tumblr and that helps a bit."

"Usually on Tumblr people are more open on it than other social media because there is no danger of family finding out like Facebook. A lot of the time people like to talk about it and e-mail their issues. People are genuinely quite vocal about it on there and can find support on there if they're looking for it."

Some participants also used mental health apps and sites:

"I have this mini game on my iphone that kind of helped me keep my mood up."

"I have a hypnosis app for depression and a hypnosis app for anxiety."

"There was this website that I would go on and it was text based so it was like saying you're alright, smiling and all. I found it really good and it made me smile. It gave me confidence."

"I usually just have weird little posts and rants or whatever. That's how messed up my head is when I'm having a bad day."

"Yeah, I do that. I just whinge about everything and then I feel better."

However not everyone was comfortable with using the internet or disclosing personal things via it:

'I wouldn't use it (Skype) – I'm too paranoid. I'm too scared of being 'papped' '

'It's not important to me (Facebook) – I'm not comfortable putting stuff out there'

As a whole they said they were 'savvy' in how they used the internet, though nearly all had had bad experiences in the past. However there was a view that such incidences were no worse than in other aspects of life. There was also the observation that social media was not the problem it was just the people who used it who could be:

'You'll come across just as many arseholes on there (the internet) as you do in everyday life'

"I think anyone our age gets all of the constant warnings of all the dangers of the internet when they are pretty harmless. I've become immune to people being horrible on the internet."

'Everything is a risk (the internet), you should expect bad things to happen'

'You get immune to people being shit on it' (the internet)

There was considerable agreement between the YPAS focus group participants about the positive aspects of new technology in relation to mental health including the value of anonymity/privacy:

'I like online because I cannot speak face to face with someone'

"I would definitely rather do it (counselling) online because then it allows people with anxiety and people who aren't that comfortable with feelings to be able to get it out because they don't have to see the person behind it."

'There's anonymity behind online counselling – I like that'

'A lot of my friends list their mental disorders on their page (Tumblr) and that helps them'

'I've known of people being really thankful for online counselling'

"Plus there's no appointment, if you feel like talking you can just do it."

There were also several who thought face to face contact was better for counselling:

"I've been doing counselling for a while now and I think it's better to have interaction with a person just because they can have more input."

'It's better to have interaction with a person. On a website there is only so much they can give you'

'I prefer face to face so you can get your feelings out'

Being able to get peer support was also viewed as of significant value:

'I use it to talk to people who have common interests'

'I just whinge about everything (on Facebook) and then I feel better'

Participants seemed largely unaware of the FYI (Liverpool CAHMS website) and were asked about the value of a local mental health website. The observation was made that this would be of value for signposting, but it was important to increase awareness amongst teachers and adults. Another young person commented on any such site needing to keep their attention and not be boring.

Comment

The observations of the young people involved in the focus groups tends to reinforce what has been found elsewhere particularly in relation to the pros and cons of using the internet in relation to on-line counselling for those who had experience of mental health services. Though they do not dismiss the risks of the internet participants generally saw it in the context of the risks they might face in other situations.

Parents

Seven parents took part in the focus group for parents and carers of children with SEND. Nearly all made quite extensive use of new technology and the internet using Facebook, Twitter, e-mails and You Tube. Only one person did not use it. They tended to see it positively in terms of its educational value, including the use of apps that helped with speed and language and sensory difficulties:

'My children would not have sat the National Curriculum without it. They are going to get As and Bs in their exams'

'My son isn't good at speech so he uses Google search / YouTube… now he puts more effort into doing his work better so he gets more out of it'

'My son, because he has sensory processing needs, it all has to be very visual for him and he likes that, it's stimulating for his eyes' (discussion about YouTube)

Comment was made on its use in helping children communicate with their parents, with one parent saying her daughter used it this way if there was something she wanted to otherwise say:

'My daughter used to have a worry box; she uses it like a video diary…now she uses an iPad like a video diary. She'll get it to show it to me and get it off her chest in that way'

New technology was also viewed in both positive and potentially negative terms in respect of its use for 'babysitting' i.e. keeping children occupied with computer games. Overall they viewed the negative aspects of new technology in terms of concerns in relation to safety e.g. Chat-rooms and accidental access to unsuitable sites. One parent commented on how her child's chronological age did not correspond to their mental age and the dangers they felt this presented when they used chat rooms. Another was concerned that her child's school had introduced the child to the 'kooth' online counselling site for 11-25 year. She had no recollection of having been asked to agree this, which lead to a discussion on whether parents should know what their children were doing on-line. There were also worries about peer pressures and children being encouraged to go on inappropriate sites.

'You just don't know everything that is out there'

There were also concerns about its potential impact on child development and the time C&YP spent on it and how they could become obsessive and its impact on family life. There was also anxiety that some children with autism might have particular difficulties distinguishing fantasy from reality:

'There's difficulty in seeing reality from fantasy, it's like getting a permanent marker and putting it on a whiteboard'

'They just zone out…it's like no-one else is in the room' (gaming)

Five parents with children accessing CAHMS service took part in the second parent carer focus group. Much of the discussion focused around signposting and access to mental health websites both for parents and children:

"My son, he's 17, he didn't know about the FYI website, until very recently, and that is despite him doing a big search himself....you know if you think of young people they will get all of their information through social networking, and they'll look elsewhere for the information they won't look at a leaflet in the doctors, they won't necessarily look at posters around, if it pings up on twitter or Instagram, they are more likely so."

"Obviously age appropriate (websites), you know children have the ability to think well, what do I want to look for, and they will be able to find those sites....but put links in on their school website, having interactive games on the schools website, maybe have an interactive part about moods."

The difficulties parents had keeping up with the speed of change in the digital world was discussed, along with how you would know whether you could trust the

information you found. One suggestion was that schools could help keep parents up to date with developments:

"People are bombarded with information. I think the website has to be written by professionals and parents, because then it goes to jargoned...it has to be plain English, with anecdotes from families, because I think a lot of professionals have got no idea…"

"And link on the school's website, parents utilise the schools websites for term dates and whatever, so the children will go on for anything interactive and appropriate to them so they would see it was well. So if you could have links on both, the side for the children and the side for the parents and you know it's reputable, quality advice you know you are accessing."

Comment

The concerns of the parents in the focus groups tend to echo those that are voiced elsewhere including the amount of time their children spend on-line and anxieties about what the risks they may be exposed to. At the same time there is recognition of the value of the internet especially in relation to its potential educational benefits.

10.CAHMS Workforce facilitated workshop

The Liverpool CAHMS Partnership Workshop was attended by 19[4] individuals representing the range of agencies and organisations involved with the partnership. An overview of the review of research findings and initial feedback from four focus groups was presented by Praxis. Working in groups participants were then asked to comment on different aspects of new technology and its impact on young people and mental health.

The positives of new technology to C&YP

The workshop agreed that there were a number of potential benefits to new technology for children and young people:

- 24 hour access – online services are often available outside of the normal service provision delivery periods, allowing interventions to occur when users require them.

- Connecting with peers – online communities provide relatively unprecedented opportunities for children and young people to communicate and build relationships with other young people, regardless of geographical constraints.

- Responsiveness – online tools can be quickly configured to better meet the needs of service users, which can themselves be rapidly changing.

- Cheap to access – the barriers to accessing these services can be minimal. Many young people will have smart phones or be able to access online services at home, in a library or at school, regardless of personal income.

The risks of new technology to C&YP

Participants were asked to consider the risks that new technologies might pose to children and young people. Several key themes emerged:

- Anonymity – while there are some benefits to the anonymous nature of online communication it can also lead to bullying and other risks such as grooming.

[4] More attended the workshop than the 19 who signed in

- Self-diagnosis – online tools may not provide the professional oversight needed to ensure that service users are diagnosed correctly. Self misdiagnosis is an area of potential concern.

- Accessing inappropriate material – the risks of young people accessing pornography, gambling sites, pro-anorexia or pro-suicide material have been well published.

- Lack of parental oversight – a balance must be struck between the rights of parents and the rights of children and young people. Monitoring young people's online activities itself presents a number of ethical and practical issues, meaning that parental oversight can be difficult to ensure even when required.

Priority research questions

Participants identified a range of questions around a number of different themes. These included:

Organisational based questions:

- How do we get small organisations tech-ready?
- How do we develop our workforces / organisations to work with new technology with no money and jobs decreasing?
- How do we pay for training in new technology? Where is the funding?
- Where do organisations find analytics around internet usage?
- What are the staff barriers to using new technology?
- How able / willing / ready would staff be in to deliver evidence based interventions via other channels?
- How does the third sector get new technology resources?

Parental / family themed questions:

- How can new technology bring families together?
- How confident do parents feel in noticing mental health issues and them acting on it?

Accessibility themed questions:

- How do we make new technology age appropriate?
- Who has access to the internet and new technology devices?
- How many C&YP use online tools recommended by NHS between assessment and therapy?

Minority community themed questions:

- How does new technology affect minority communities?

- How do we ensure that information is endorsed by, is accessible and 'good' for a minority community?
- How do we research minority communities in relation to their religion, culture and values?

Other:

- Should new technology be available on prescription?
- What do young people want? What do providers want?
- Have we discussed things used after diagnosis or service used? Social media is very powerful in changing attitudes and raising awareness's. How do we utilise this in preventative measures (i.e. de-stigmatisation?)
- Is the internet 'new' (i.e. 'new technology')?
- How willing / useful would C&YP be in sharing their social media assessment in therapy?
- How likely is a C&YP to use a tool recommended by an adult or professional?
- How many young people use online counselling (Skype?)
- Should we be thinking more about training young people rather than consulting with young people to support the economy and empowers C&YP Sampling must include tier 2/3/4 service users with randomisation and be reflective of population. Needs to reflect UK geographical variations

Recommended apps and websites by participants

Bracketed numbers show number of multiple recommendations.

Websites:

http://liverpoolfyi.co.uk (5)
http://youngminds.co.uk (5)
https://www.minded.org.uk (3)
http://www.freshcamhs.org (3)
http://www.docready.org (2)
http://ceop.police.uk
http://riseabove.org.uk
http://www.7cupsoftea.com
http://www.healthymindsbucks.nhs.uk
http://www.mind.org.uk/information-support/helplines
http://www.thestudentroom.co.uk
http://www.samaritans.org
http://www.carers.org
https://www.tumblr.com
http://www.getselfhelp.co.uk
https://www.headspace.com

Apps:

- In Hand (4)
- Flowy (3)
- Happify (2)
- Mindfulness
- Clinical / Non Clinical
- LayAR
- Head-Meds
- Lift My Mood
- Butterfly App
- Hearing Voices
- Catch –It (Developed by Liverpool University)

11.Conclusion

Much of the evidence on the relationship between new technology and young people's mental health is descriptive i.e. it tends to describe how the technology is used and young people's preferences. There is less data on the impact that new technology has when used in mental health settings and the extent to which it can help build resilience in young people. As noted this is partly because of the challenge of isolating the intervention from the range of over variables that impact on a person's life and being able to show it was responsible for any planned outcome. This is further complicated by the length of time that elapses between the intervention and measuring outcomes.

Some key themes emerge from the review of research findings that overall is reinforced by the findings from the research we have undertaken:

- The importance of anonymity for users accessing help via websites linked to the negative stigma still associated with mental health problems. New technology can provide a way that young people can access mental health services such as online counselling and peer group discussion avoiding such stigma.
- New technology can also provide a private space for young people to access information, that may have be uncomfortable or of a distressing nature if done face to face with a professional or in a group.
- The importance of 24 hour access provided by new technology to sites and apps allows users seeking advice or guidance to obtain it instantly. Linked to this is the ability to have wider access to online mental health resources.
- The concerns about the negative or potentially damaging impact of new technology can be either overstated or fail to compare such risks to those C&YP encounter in other settings. An observation by a parent in one of the focus groups illustrates this when she compared her worries about the time her child spent on the computer, to the possible dangers of being out of the home.
- There is little evidence readily accessible on how vulnerable and diverse groups of C&YP are using new technology and its impact on their mental health or their particular needs in respect of this. The numbers involved in the schools survey we undertook were too small to allow for analysis of subset data e.g. any differences between students associated with ethnicity.

It’s almost certainly the case that the internet will play an increasingly important part in providing advice and support to young people experiencing emotional and mental health problems. However it needs to complement other services and be an option where appropriate; on-line counselling may be preferred by some young people, but not all.

Arguably the biggest challenge is ensuring that C&YP know where they can get advice from secure and validated sites. This is something that concerns parents and carers along with wanting themselves to know where to get advice. There are direct implications for the Liverpool CAHMS partnership in this and the development and promotion of the FYI website.

Appendix one: Websites

The websites below have been selected based on content and information relevant to this report. Sites and App's have also been chosen for the educational resources they contain, appealing aesthetic values (for C&YP) and for the new technology services presented. Websites offering alternative ways of thinking or new approaches to mental health are also listed. Some of the sites below are also mentioned in this report.

Local Websites

1. http://liverpoolfyi.com **:** Further investigation is required to evaluate the current impact of the Liverpool FYI Website. Statistical information including the number of users, how they navigate around the site and the click-through rates would help to formulate who is accessing the site.

   Currently (July 2015) the site does not offer online counselling or live chat features in the site and is a 'signposting site' for other organisations. There appears to be little content from C&YP on the site (blogs, stories, short videos) and it does contain social media platforms.

   Additional information regarding improving the FYI websites visibility online would be beneficial, as would data about the search engine optimisation.

2. http://www.talkliverpool.nhs.uk: A Liverpool based service that aims is to provide psychological treatments, talking treatments, to help people who have common mental health problems

3. http://www.listeningearmerseyside.org.uk: A Liverpool charity established in 1992 offering counselling and support and therapeutic services for people aged six and upwards. One of three organisations in Merseyside offering British Association for Counselling and Psychotherapy (BACP) accredited Counselling Services for adults and young people aged 16 and over.

4. http://xenzone.com: A Manchester based award winning online counselling service

5. http://xenzone.com/qwell.html: An online counselling site that supports people with emotional or mental health problems

6. http://www.nwcahsn.nhs.uk : established by the NHS in England (2013-2014), its aim is to 'close the gap' between best practice and current practice through collaborating with patients, the NHS, academia and industry to co-develop solutions to joint challenges.

7. http://www.wellbeingliverpool.org.uk : An online directory aiming to help people find their way through mental health and wellbeing options including sign posting to services, tips and stories.

8. http://www.ypas.org.uk : The Young Person's Advisory Service (YPAS) have been working with children and young people in Liverpool since 1966 and offer a range of services, including counselling, activates and group sessions.

9. http://www.ehealthcluster.co.uk : 'Where technology meets health and wellbeing 'A community developing ideas and products to solve health and social care problems it uses sustainable technology to support health needs. Aimed to create a better understanding of the problems facing health and social care.

10. http://www.healthyminds.info : An interactive website aimed at C&YP and schools to help build resilience to a range of mental health needs.

National Websites

11. http://ayemind.com: A platform for encouraging positive Approaches to youth wellbeing as the work progresses. New work to be added to site in 2015

12. http://Apps.nhs.uk/Apps/mental_health: A NHS library of mental health Apps, with rating system. Apps in the library must comply with data protection laws and comply with trusted sources of information, such as NHS Choices. Apps are checked via the clinical assurance team

a. http://www.beyondcurrenthorizons.org.uk: Educational site about how social and technological change over the coming 20 or so years may present new challenges or opportunities for education

b. http://www.bigwhitewall.com: An anonymous site available 24/7 providing support and recovery service for people who are stressed, anxious, low or not coping. Users create their own profile, that users update and professionals refer back to and assess.

13. (also available in the US).

14. http://www.childnet.com: A research site that works with children and young people to find out about their real experiences online

15. http://www.enquiringminds.org.uk: An educational resource to help children and young people develop enquiry-based Approaches to the curriculum, teaching, and learning

16. http://www.headmeds.org.uk: A site that offers young people in the UK general information about medication (not an medical advice site)

17. http://www.keepitusable.com; An organisation that uses psychology, human behaviour, neuroscience, ergonomics, expert researchers to create user experiences online

18. http://www.mentalhealthcare.org.uk: A site specifically about psychosis. The site contains lots of other useful links to resources and sources

19. http://www.mindtech.org.uk: A research organisation focussing on the development, adoption and evaluation of new technologies for mental healthcare and dementia.
20. http://www.saferinternet.org.uk: A partnership of three leading organisations; Childnet International, the South West Grid for Learning and the Internet Watch Foundation. Promotes the safe and responsible use of technology
21. http://www.samh.org.uk : Scotland's leading mental health charity providing support and information
22. http://www.youngminds.org.uk: Information site about the UK's leading charity committed to improving the emotional wellbeing and mental health of children and young people
23. https://www.kooth.com: an award winning online counselling site for 11-25 year olds in England and Wales
24. https://www.minded.org.uk: A research organisation focussing on the development, adoption and evaluation of new technologies for mental healthcare and dementia.
25. https://www.relate.org.uk: The UK's largest provider of relationship support. Provides counselling, meditation in centres across the UK
26. http://mindapples.org: an independent non-profit that helps people talk and learn more about their minds, maintain their health and achieve their personal and professional goals. Mind apples offers a set of wellbeing programmes based on a set of public engagement and educational tools.

International Websites

27. http://au.professionals.reachout.com: Content, tools and technology for professionals supporting youth mental health and wellbeing
28. http://au.reachout.com: An Australian mental health site that provides information and support for people with mental health needs
29. http://doingsomethinggood.com.au : An Australian organisation specialising in community engagement. Organisers of events in Australia (Victoria region) and strategic planners, helping young people build resilience to new technology
30. https://moodgym.anu.edu.au: An Australian resource that uses cognitive behaviour therapy skills to prevent and help cope with depression
31. https://www.patientslikeme.com: US site that encourages users to share stories and experiences about mental illness

Appendix two: Key definitions

These definitions aim to give context to some of the language used in this report and to the studies and literature reviewed:

New Technology

The term new technology has a broad and range of meanings that can take on a number of forms and usages. In its broadest sense new technology is computers, Appliances, gadgets, drones, GPS Mapping, 3D printing, connected cars, tablets, smart-watches and glasses and Smartphone Applications (Apps).

New Technology can also be a form of Apparatus used online through social media platforms, on Smartphone Applications and social gaming platforms. It is a method of communication, a way of engaging social life and as a method of interaction.

For children and young people new technology is increasingly being used in daily lives as it often offers a free or cheaper alternative that is easy to use. This increased usage is having a profound impact on changing behaviour. This relationship between new technology, children and young people is multifaceted having potentially both positive and negative impacts on their lives.

Mental Health

Mental health can be described as a state of well-being in which every individual realises their own potential. They can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. However, when coping becomes imbalanced, mental health can become a disability.

According to the UK Government, 'A mental health condition is considered a disability if it has a long-term effect on your normal day-to-day activity.' A condition can be deemed as 'long term' if it lasts, or is likely to last, 12 months, and is defined under the Equality Act 2010.

Children and Young People

The term 'children' can refer to younger people who do not have the understanding to make important decisions for themselves. In the UK a child is aged from 5 – 14 years.

A report by the Health and Social Care Information Centre (2015) concludes that there is no single definition of 'young people'. Broadly the term covers individuals up to the age of 25, whether this is of new-borns infants, childhood, teenage years and young adulthood. The term young person can refer to older or more experienced

children who are more likely to be able to make decisions for themselves and generally is viewed as including anyone under 25 years of age.

Well-being

The World Health Organisation defines wellbeing as: 'a state of mind in which an individual is able to realise his or her own abilities, cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.'

Resilience

In the context of psychology, resilience can be referred to as being able to adapt to stress and difficulty. Being resilient can be associated with having a positive attitude, being optimistic and having the ability to regulate emotions. Resilience is seen as an important factor in mental health problems as it can help to maintain our wellbeing in difficult circumstances (World Health Organisation, 2015)

Applications (Apps)

The British Standards Institution describes an App as 'a software Application that can be executed (run) on a computing platform, and is typically a small Application run or accessed on mobile device'. App software is downloaded to a Smartphone allowing it to operate and achieve different tasks such as, sharing photographs, weather information and computer games.

Cyberbullying

The NHS 'Choices' website says cyberbullying involves using technology to bully people including texting, instant messaging, and posting on social media and gaming websites. It is made worse by its potential to happen at any time and for bullying messages and images to be shared and quickly get out of control. This can make it harder to get over than other kinds of bullying. And this kind of sharing can quickly get out of control. Examples of cyberbullying listed on the NHS site include:

- emailing or texting threatening or nasty messages to people
- posting an embarrassing or humiliating video of someone on a video-hosting site such as YouTube
- harassing someone by repeatedly sending texts or instant messages through an App or in a chat room
- setting up profiles on social networking sites, such as Facebook, to make fun of someone
- "happy slapping" – when people use their mobiles to film and share videos of physical attacks

- posting or forwarding someone else's personal or private information or images without their permission – known as "sexting" when the content is sexually explicit
- sending viruses that can damage another person's computer
- making abusive comments about another user on a gaming site

Digital Native

A term originating in 2001 created by Prensky who used the term to describe a person brought up in the age of digital technology; 'our students today are all native speakers, of the digital language of computers, video games and the Internet'.

Digital Media

There is no fixed term for digital media however it can refers to the use of computer technology including software and programs. Digital media is created viewed and distributed by computers, as opposed to other analogue media such as print based, audio or film based media.

Digital Technology

Digital technology refers to the way in which information is accesses through resources. At its most scientific, digital technology refers to the engineering knowledge used with computerised devices. A current definition of how the term digital technology is used can be understood as the methods, devices and ways in which users communicate. Sutch, (2012) states that 'digital technology can offer new ways of addressing challenges faced by young people. It enables new forms of collaboration; it facilitates new communities of support and provides affordable new ways of accessing information and resources'.

Social Media

Social media is a term used to describe a variety of online Applications and channels that enables and encourage interaction and communication between users. It is centred in content sharing, collaboration and input from online groups, communities and networks.

According to Ellison, (2014) there is no universally agreed definition of social media. In its widest context social media as a product of new technology and is a method of communication. Ellison maintains that the main difference between social media and traditional, broadcast technologies (such as television or print based media) is social media allow users to create, share, consume, and collaborate around content in ways not previously supported by earlier technologies. Other activities enabled by social media may include rating, recommending, remixing, and sharing text, video, or image content.

Purewel, (2014) maintains that social media has the potential to help individuals, groups and communities communicate more effectively. This is primarily because social media - a melting pot of social connectivity, conversations and content sharing - allows people not only to create and disseminate their messages in their own way and on their own terms.

World Wide Web / Internet

The internet is a global computer network that provides information and communication facilities. It allows global communication, to take place including communications from governments, for educational purposes, at on a social and commercial level.

Originating in the United Kingdom in 1980s Tim Berners-Lee in the United Kingdom, worked on the World Wide Web, and theorised the fact that protocols link hypertext documents into a working This marked the beginning the modern 'Internet'.

In 2014 it was the 25th anniversary of the World Wide Web that has an estimated 2.4 4 billion users worldwide. To contextualise the speed and rate of the dominance of the World Wide Web, or the internet as it is now commonly referred to, radio took 38 years to reach 50 million users, and television took 13 years and Facebook 10 months.

Appendix three: New Technology Statistics

The Ofcom 2014 Attitudes Report[40] provide evidence of the extent to which children aged up to 15 years of age are engaging and using new technology and the difference types of technology that C&YP are using. It is of relevance to note:

- A significant increase in access to, ownership of and use of tablet computers by children of all ages.
- TVs and games consoles in the bedroom is declining, while smartphone ownership remains steady
- 12-15s are twice as likely to say they would miss their mobile phone than the TV, say they spend more time going online than watching television in a typical week, and say they prefer to socialise online rather than watch
- Older children are making judgements about the truthfulness of online content, including search engine results and how accurately people present themselves online.
- Boys are more likely than girls to have a profile on YouTube (29% vs. 15%) Girls are more likely than boys to have a profile on Instagram (42% vs. 30%),
- 75% of 12-15s with a profile considered Facebook to be their main profile, 9% Instagram, 6% Twitter.
- More online gamers are now playing against someone elsewhere, whom they do not know personally
- The role of TV and the internet the majority of 12-15's agree that TV and the internet increase their understanding of different people and current issues.
- Four in ten 5-15s own a mobile phone, rising to almost eight in ten children aged 12-15.
- A big increase in smartphone ownership at 13, when ownership is 41% for 12 year olds and 67% for 13 year olds.
- Among 12-15s the mobile phone is the second most likely device to be used to go online, preceding laptops and tablets.

Access to new technology

- A Childwise monitoring report in 2014 stated that 8.6 million children aged 5-16 in the UK 73% have a laptop, PC or tablet and on average this age group spend 2.5 hours watching television and 1.5 hours online per day.
- A NHS report published in 2014 reported that 74 % of households are online with an average user spending 14.2 hours per week online. 91% of UK adults use a mobile phone and 30% of all adults use a Smartphone.
- An Ofcom report in 2011 stated that almost half of all teenagers (47%) own a Smartphone.

Facebook

Founded in 2004, Facebook is a free social media site that aims to 'give people the power to share and make the world more open and connected. According to Facebook it is used to 'stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them'.

Worldwide statistics for Facebook users as of March 2015:

- 936 million daily active users on average for
- 798 million mobile daily active users on average for
- 1.44 billion monthly active users as of
- 1.25 billion mobile monthly active users
- Approximately 82.8% of daily active users are outside the US and Canada

More than a third of the UK population now visit Facebook site every day, and of the daily users some 20 million – 83% – use a smartphone or tablet to check updates on Facebook.

Twitter

According to Twitter it is a 'free, web-based social media messaging network, where each tweet is a single message that must be less than 140 characters long' and it is Twitter's vision to 'give everyone the power to create and share ideas and information instantly, without barriers.' (REF 9)

Worldwide statistics for Twitter users (as of June 2015):

- 302M monthly active users
- 500M tweets sent per day
- 80% users on mobile phones

Founded in 2006 users of Twitter have posted over 170 billion Tweets since the platform was first created. With around ten million of these users are British. The Twitter network can be used to find specific topics, words or names within it. Twitter is well known for using its use of 'hashtag' (#) to start trends, spread information and topics. The # symbol, mark keywords or topics within a Tweet is also a method used to monitor responses to your messages and subjects of interest.

YouTube

YouTube is a free video-hosting website that allows its members to store and serve video content online (REF 11).

Worldwide YouTube statistics:

- Over 1 billion users
- 300 hours of video are uploaded to YouTube every minute
- 60% of a creator's views come from outside their home country
- YouTube is localised in 75 countries and available in 61 languages
- 50% YouTube views are on mobile devices

Users are expected to be of 18 years old and over to upload onto the site, with most of YouTube's video content is uploaded by individuals rather than large corporations or businesses.

Tumblr

Founded in 2007 and owned by Yahoo! Inc, Tumblr is described as a microblogging platform and social networking website. It allows users to post multimedia and other content to a short-form blog. Lending itself to blog style posts users can upload links, music, videos stories and photos.

Tumblr worldwide statistics (June 2015):

- 243.6 Million Blogs
- 114.7 Billion posts

Instagram

Launched in 2010, Instagram is an online photo and video sharing social web service allowing users to share pictures and photos captured with a mobile device. Photos can be shared on a variety of social networking platforms, such as Facebook, and Twitter. It has facilities such as 'liking' and sharing photos incorporated into the software.

Instagram worldwide statistics (June 2015):

- Instagram Worldwide Statistics
- 300 Million monthly users
- 70% of users are outside the US
- 30 Billion photo's shared online
- 2.5 Billion 'likes' daily
- 70 Million photo's per day

SnapChat

A free, downloadable Application used to share photos, videos, text, and drawings. SnapChat advertises itself as itself as 'the best way to reach 13-34 year olds. (REF 15). SnapChat allows stories to be published live that then expire in 24 hours. This is describes as 'Snaps are a reflection of who you are in the moment, there is no need to curate an everlasting persona'.

SnapChat worldwide statistics (June 2015):

- 2 Billion video views each day
- 100 million active users each day

Smartphones

A smartphone is a mobile phone that includes a screen that can be swiped with your finger, has a built in camera, and that can access the internet. Smartphones store and run Apps on a smartphone device.

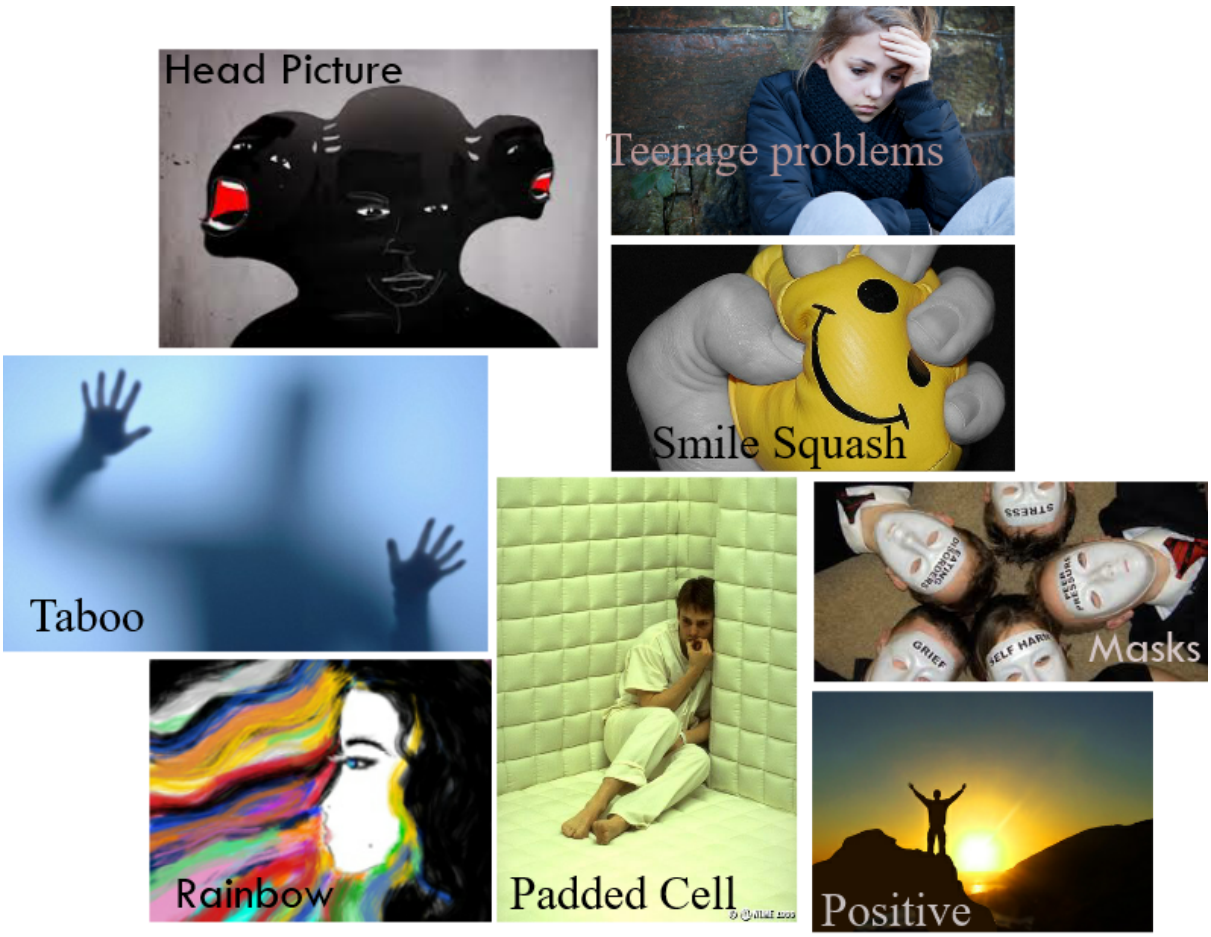
Tablets

A *tablet* computer is a mobile computer with a touchscreen display. *Tablets* are have sensors, including cameras, microphones and touchscreen display that uses finger gestures substituting it for the use of a computer mouse and keyboard. In 2014, OfCom reported that twice as many children aged 5-15 are going online via a tablet than in 2013, with access to the internet at home via a PC/ laptop/ netbook has declined

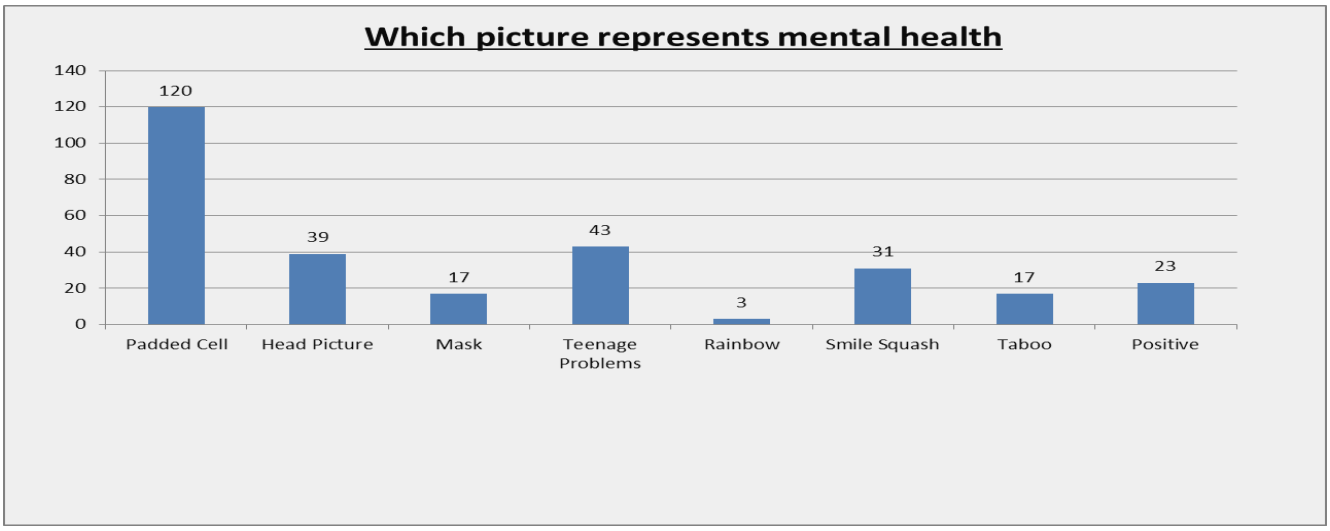
Appendix four: Additional data from survey of four secondary schools

Stigma

We showed 285 young people in secondary schools the following 8 pictures and asked them to say which picture represented mental health to them



It concerns us that the top chosen image is that of a padded cell as it demonstrates that within the majority of children and young people that we surveyed indicated mental health was about a fairly outdated mode of service intervention. It could be argued that there is a urgent need to reframe the language to that of Resilience and personal Assets is required, whilst at the same time undermining stigma within a school based context is a clear requirement. We need to work with children and young people to create more of a sense that mental health can be viewed positively and work collectively to challenge / undermine stigma..



We asked young people what websites they liked, and below are a few of the responses they gave;

Notes

[1] Young Peoples Advisory Service; focus group run by Praxis as part of this study

[2] Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing'; NHS / DoH 2015

[3] 'The future's digital: Mental Health and technology.' Mental Health Network NHS Confederation, 2014

[4] 'The future's digital: Mental Health and technology.' Mental Health Network NHS Confederation, 2014

[5] Young people & Mental Health: the Role of Information Communication Technology: Warwick Medical School, 2010

[6] Zinck, E., McGrath, P., Fairholm, J., Contursi, M. L., Mushquash, C., Forshner, A., & Ungar, M. (2013). Using Technology to Provide Support to Children and Youth in Challenging Contexts. Halifax, NS: CYCC Network.

[7] Counselling in UK Secondary Schools: a review and critical evaluation. M Cooper, Glasgow University of Strathclyde; 2013

[8] As cited in two above

[9] Bartlett and Miller - Technology & Literacy
Third and Richardson (2010)

[10] Ellison et al 2007, as cited in The Australian Cooperative Research Centre for Young People, Technology and Wellbeing (YAW-CRC)

[11] Valkenburg et al, 2005; as cited in The Australian Cooperative Research Centre for Young People, Technology and Wellbeing (YAW-CRC)

[12] Third and Richardson 2010, as cited in The Australian Cooperative Research Centre for Young People, Technology and Wellbeing (YAW-CRC)

[13] Zinck, E., McGrath, P., Fairholm, J., Contursi, M. L., Mushquash, C., Forshner, A., & Ungar, M. (2013). Using Technology to Provide Support to Children and Youth in Challenging Contexts. Halifax, NS: CYCC Network.

[14] This is referenced in 'The future's digital' report

[15] How to cope and build online resilience: EU Kids Online 2013

[16] The Australian Cooperative Research Centre for Young People, Technology and Wellbeing (YAW-CRC)

[17] See Zinck et al above

[18] Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing'; NHS / DoH 2015

[19] Mental Health Network of the NHS Confederation: Discussion Paper

[20] The effectiveness of SPARX, a computerised self help intervention for adolescents seeking help for depression: randomised controlled non-inferiority trial; S. Merry et al 2012, BMJ

[21] Young people & mental health: The Role of Information and Communication Technology, Powel et al, Warwick |Medical School 2010

[22] The Australian Cooperative Research Centre for Young People, Technology and Wellbeing (YAW-CRC)

[23] As referenced in 'The future's digital'

[24] ONS Internet Access - Households and Individuals, 2013

[25] Learning from the Labs: Innovation Labs 2015

[26] Mapping the Territory of Digital Tools 2014

[27] E Mental Health Experiences and Expectations: A Survey of Youths' Web-Based Resource Preferences in Canada

[28] Young people & mental health: The Role of Information and Communication Technology, Powel et al, Warwick |Medical School 2010

[29] EU Kids Online Deliverable D6.4 Please cite as: O'Neill, B. and Staksrud, E. (2014). Final recommendations for policy. London: EU Kids Online, LSE.

[30] EU Kids Online Deliverable D6.4 Please cite as: O'Neill, B. and Staksrud, E. (2014). Final recommendations for policy. London: EU Kids Online, LSE.

[31] Hegall: *Health Implications of new Technology*: *AYPH Research Summary*

[32] Bartlett and Miller - Technology & Literacy

[33] Young people & Mental Health: the Role of Information Communication Technology: Warwick Medical School, 2010

[34] Future in mind: Promoting, protecting and improving our children and young people's mental health and wellbeing'; NHS / DoH 2015

[35] (Praxis Feb 2015)

[36] Populous Research Strategy BBC: Be Smart 2015

[37] Videogames and Wellbeing: A Comprehensive Review Gaming Research Group, Young and Well Cooperative Research Centre, Johnson et al 2013

[38] EU Kids Online Deliverable D6.4 Please cite as: O'Neill, B. and Staksrud, E. (2014). Final recommendations for policy. London: EU Kids Online, LSE.

[39] BSI Health and wellness apps. Quality criteria across the life cycle. Code of practice, 2015

[40] Ofcom Attitudes Report 2014