



An evaluation of the resources for home fitness

Ailie Ross-Oliver

May 2020

Edinburgh Napier
UNIVERSITY



Queen Margaret University
EDINBURGH



THE UNIVERSITY
of EDINBURGH

Abstract

This paper will evaluate resources that are widely available for home fitness as part of People Know How's Walking Befriending research. By evaluating both the accessibility and adaptability of resources for service users of different fitness levels, as well as the quality of said resources, a comprehensive understanding of home fitness resources will be obtained. This will provide research material for future studies into the success of home fitness materials and other relevant research areas.

Keywords

fitness, wellbeing, health, online, resources, digital, coronavirus, COVID-19

Key points

- There are clear barriers to accessibility as many services rely on users having home WiFi.
- Users frequently require a device that can connect to the internet and they need to be comfortable using their device and the internet.
- Some resources seem to have been developed without the use of professional advice, but this varies across resources.
- There are some factors which remain unknown to do with how users' data and algorithms influence accessibility and adaptability of resources for home fitness.

Introduction

This research briefing will evaluate the methods through which individuals can maintain their physical health through home fitness, as part of research for People Know How's [Walking Befriending](#) project, improving health and wellbeing. In a climate of social distancing, many are staying at home for an extended period of time in order to minimise contact with others. In addition, typical facilities for exercise, such as gyms and leisure facilities, are closed until further notice. This can lead to a lot of change

to daily routines and habits, including changes to the ways in which people exercise.

Whilst current COVID-19 UK Government advice allows those that are not considered to be at high risk to the virus to exercise outside of the home once a day, for the purpose of this paper, an assumption will be made that service users are unable to leave their home for exercise. The term 'service users' will be used throughout this paper to refer to

people using resources for home fitness. By assuming that service users are unable to leave their home for exercise, a more comprehensive understanding of resources for home fitness rather than discussing fitness options outside of the home. This briefing can be referenced both during the COVID-19 pandemic and in the period once normality resumes, as home fitness is the preferred fitness option for many both in current and normal circumstances.

The briefing will explore three main groups of materials for home fitness that are available for service-users. These materials are; online video tutorials provided through YouTube, book resources, as well as fitness apps and subscription services. Each of these groups of materials will be evaluated in terms of their accessibility to service users and the variety in terms of capacity to adapt materials for service users with different fitness levels. In the evaluation of the capacity of materials to be adapted for different service users, the quality of resources will also be considered.

Limitations

Some resources that are evaluated in this paper, are only available to people from Edinburgh and it is expected that there will be geographical differences in resource availability. Therefore, a more comprehensive Scotland or UK wide study could be undertaken to further the understanding of this topic.

Resource 1 - YouTube

YouTube is the largest video sharing platform in the world with one billion hours of content watched every day

(YouTube, 2020). Since the platform was launched in 2005, many genres and sub-genres of video have been created and found their way to the platform including fitness and health related videos.

Is this an accessible resource for service users?

The most recent OFCOM data highlight that, as of 2019, 87% of UK households have home WIFI (Office of Communications, 2019). As YouTube is an internet enabled search engine, internet access is necessary for usage. Whilst the vast majority is therefore able to access the YouTube site, there is a clear minority that cannot access this resource. This would indicate that for a potentially isolated section of the population, this resource is inaccessible. Indeed, a recent report by Age UK, highlights that four million people in the UK aged 65+ have never used the internet (Age UK, 2016). Whilst the COVID-19 pandemic looks set to produce a rise in internet usage, particularly for on-demand video services (OMDIA, 2020), it is clear that there remain some clear accessibility issues with YouTube.

Aside from these preliminary barriers to participation, if service users have home WIFI and are comfortable and able to use it, then most service users should not encounter further barriers to accessing this resource. The YouTube site can be navigated in 80 different languages and a captions feature means that videos can be watched in many other languages (YouTube, 2020). The caption feature also makes videos accessible for those that are hard of hearing or deaf (YouTube, 2020). Some fitness channels have gone a step further such as Joe Wicks the Body Coach, who has

partnered with the Cambridgeshire Deaf Association so that British Sign Language can be added to his videos (Lamy, 2020).

YouTube videos make physical exercise financially accessible, as users save money on gym memberships and equipment costs (Furjan-Mandic, et al., 2018). Furthermore, many save time by using YouTube for exercise as they do not have to leave their home which works well for those who are unable to commit to lengthy or set times for physical exercise. YouTube videos have also been shown to be an accessible resource through which people can gain confidence to go on to participate in sports in their off-line lives (Quennerstedt, 2013). Similarly, videos also provide an accessible resource for those who do not like loud or crowded places such as gyms (Furjan-Mandic, et al., 2018) or those that may have body image or self-esteem issues and so would rather exercise in private. This demonstrates that whilst there are some issues with accessibility (if service users do not have internet access) YouTube is largely a very accessible resource for home fitness.

Does this resource provide variety for service users of varying fitness levels?

In light of the COVID-19 pandemic, there has been a sharp rise in the number of YouTube uploads with the words “workout at home” in the title (Wallace, 2020). There is a massive variety in content available on YouTube and, as a result, many argue that this enables service users to tailor their fitness programmes to their own needs and personalise their workout routines (Quennerstedt, 2013.; Shen, et al., 2019). However it

remains unclear how the YouTube algorithm prioritises certain content whilst other content rarely appears as suggested videos, which needs to be further investigated. Without proper understanding of this, a full assessment of the capacity of the resource to offer variety to service users cannot be made.

Furthermore, there are serious questions about the credibility of YouTube as a fitness resource. Despite what appears to be large variety in content for service users of different abilities, YouTube is a user-generated video platform meaning anyone can create and upload content. Whilst there are some creators that are public about their qualifications and experience, such as Joe Wicks who has a degree in sports science and five years experience as a personal trainer (The Body Coach, 2020) many videos on YouTube are created by amateurs and individuals sharing their personal experience (Kauppinen & Pavlova, 2017). There are legitimate concerns that, without the expertise of coaches and trainers, some service users may put their health or wellbeing at risk by taking advice from non-experts (Furjan-Mandic, et al., 2018). For example, prominent fitness channel on YouTube Chloe Ting has, at time of writing, amassed 72 million views for her “[Get Abs in 2 WEEKS Abs Workout Challenge](#)”. However, her about page and a simple Google search list her as “a fitness lover” as opposed to someone with the experience and qualifications that should be necessary to be giving out professional advice.

This links to the phenomenon known as para-social interaction (PSI) through which service users feel that they have developed a relationship with the content creator and, so, trust their advice

as if they were a close friend (Lee & Watkins, 2016; Kauppinen & Pavlova, 2017). However this means that users may trust content creators more than medical or government advice, which may have an adverse affect on service users' health and wellbeing. Therefore, this means that whilst YouTube does have a vast array of content available to users, the format of the platform means that those producing fitness content do not necessarily have the skills and expertise appropriate for sharing this with users. Whilst we do have to note that, of course, quality will vary across the millions of videos available, there is a risk that in some instances, service users may be given incorrect advice or partake in exercise that is not suitable for their ability level.

Resource 2 - Book resources

Book resources are a more traditional source of information for home fitness. Whilst some service users may already have suitable physical book resources, this section will outline the resources that can be accessed online from the home. By examining the book resources available through Edinburgh City Council's public libraries, particularly their online resources, a more comprehensive evaluation of book resources for service users in Edinburgh can be gauged.

Is this resource high quality and does it provide variety for service users of varying fitness levels?

Edinburgh City Council has 34 public libraries including a mobile library that are typically open most days. However, in light of the COVID-19 pandemic, all public libraries in Edinburgh have been closed indefinitely as of the 20th

of March 2020 (The City of Edinburgh Council, 2020). Despite this there are many online resources available for service users that are accessible for anyone who has joined the library.

There is a concern that visits to libraries are decreasing, based on figures from the early 2000s (Linnan, et al., 2004). Several studies have shown that austerity policies taken in response to the global financial crisis of 2008, may have further contributed to a reduction in library visits (Hastings, et al., 2012; Bailey, et al., 2015). Indeed, a combination of shortened opening hours, reduced service capacity and reduced resource availability is believed to have contributed to a decline in library visits (Hastings, et al., 2012; Bailey, et al., 2015). However from the position of home fitness resources, public libraries remain accessible, as service users can join the City of Edinburgh public library network for free remotely. This means that users can join the system and access resources from home.

Book resources available through public library online resources are highly accessible, as users can now access a substantial number of resources from home (Gillaspy, 2005); and this trend has increased over the past 15 years. However, this does rely on service users having home WIFI and as outlined in the analysis of YouTube. This means that a substantial vulnerable section of the population may be unable to access these resources (Age UK, 2016).

However, amongst the online resources available, there are e-books and audio books that are suitable for all age groups, as well as books available in Polish (The City of Edinburgh Council, 2020). Polish is the most common first language in Scotland aside from English (Scotland's

Census, 2018), with an estimated 15,000 Polish speakers in the Lothian area as of 2011 (Scotland's Census, 2014). This means that book resources are also accessible for Polish speakers in Edinburgh which removes this language barrier as an issue of accessibility. It is clear that whilst the online book resources provided by public libraries are inaccessible to those without internet access, efforts have been made to ensure that audio and e-book resources can be accessed with ease by people of all ages who speak various languages. Further, as more resources have been put online, this has made book resources more accessible in recent years.

Is this resource high quality and does it provide variety for service users of varying fitness levels?

The City of Edinburgh Council online library services have an extensive catalogue of health and fitness material that members have free access to. Under the health and fitness section, there are many book resources on topics such as physical exercise, sports and recreation and self improvement (The City of Edinburgh Council, 2020). Whilst some resources have a waitlist, presumably as a result of increased demand on the service, there is a large variety of book resources available on the online service.

Public libraries are highly trusted institutions (Morgan, et al., 2016) and since the 1990s, there has been a large expansion in the number of health and fitness book resources written in plain English that are available in public libraries (Gillaspy, 2005). Furthermore, many successful published health and fitness books have been written by

experts and have been peer-reviewed and edited. As books in this category are often produced by professionals, there is often detailed advice on how to adapt fitness routines and health advice for people with varying health conditions and levels. Combined with the high levels of trust in libraries, that suggests people would trust recommendations from librarians and library webpages, it is clear that online book resources are often of a high quality. Therefore, it can be determined that due to the vast availability of texts, book resources do provide substantial variety for service users of varying fitness levels.

Resource 3 - Fitness apps

The third group of resources that will be evaluated in this paper are fitness apps and subscription services. In 2019, it was estimated that there are 2.6 million apps available for Android devices and 2.2 million apps for iOS devices (Iqbal, 2020). Amongst these, one of the biggest categories is health and fitness.

Is this an accessible resource for service users?

As highlighted in the evaluation of YouTube and online book resources, app resources rely on service users having access to home WIFI. It is clear that this is a common accessibility issue for fitness resources, and it is likely that this may be an accessibility issue for many other services.

It has been argued that some of the most popular fitness apps are not accessible for older fitness users (Silva, et al., 2014). In an evaluation of some of the most popular health and fitness apps

available on the app store (including Nike+ and RunKeeper), Silva et al. (2014) argue that the resources on these apps do not accommodate for older adult users, due to the targets being set and not flexible. There are also visual design issues, as users often cannot make changes to font size or the contrast in the colours and the navigation of these apps can prove too complex for older users (Silva, et al., 2014). Regular physical exercise is crucial to keep people healthy and as the UK, like many other countries, has an ageing population, this is especially important (Oliver, et al., 2014). Therefore, it can be argued that fitness apps need to become more accessible to serve all users (Yoganathan & Kajanan, 2014).

Furthermore, many of these issues of inaccessibility that are faced by older service users, are also be faced by other groups. For example, those that are typically physically inactive, as well as people with reduced mobility or people with learning difficulties, may find these apps inaccessible. Indeed, numerous issues including navigation of apps as well as rigid targets will make fitness apps inaccessible to people across the population. Moreover, whilst some would argue that, as many apps are free or cheap, they are a cost effective solution to physical inactivity (Yoganathan & Kajanan, 2014), it must similarly be taken into account that 1 in 4 apps are deleted after only one use (Perez, 2016). This suggests that many apps do not provide accessible or comprehensive fitness guidance.

Is this resource high quality and does it provide variety for service users of varying fitness levels?

As highlighted above, some users may find this resource inaccessible due to rigid and inflexible content. Therefore, due to limited adaptability this resource may not provide variety for service users of different fitness levels. There are also some concerns that the majority of fitness apps seem to focus on an idealised body type (Depper & Howe, 2017); both in expectations of users' pre-existing fitness level and the projected fitness goal. By creating a specified norm, and alienating those of other body types, there is an increased likelihood that service users may not meet their fitness goals.

In the evaluation of the quality of fitness apps, it is important to note that quality will vary between apps. However, studies have shown that across many fitness apps, professional guidelines do not appear to be followed (West, et al., 2012., Lister, et al., 2014). Further, it is advised that medical professionals sparingly recommend fitness apps for home fitness (Lister, et al., 2014) as the content is often vague or rigid. Therefore, app resources are often limited in variability and instead only provide rigid advice that is often of poor quality due to limited adherence to genuine expert advice.

Future research

There does remain significant questions for future research into the new and adapting technologies through which some of these resources function. For example, complex algorithms and resultant search engine optimisation, is

not well understood by consumers and so the ordering and subsequent variety of content presented to service users cannot be fully determined.

Conclusion

In conclusion, it is clear that across the three resource groups of YouTube resources, book resources and fitness apps, there are varying levels of accessibility, adaptability of resources and varying quality. A common issue across all of the resources that have been examined is the reliance on users having home WIFI. As previously mentioned, current statistics show that 13% of UK households have no home WIFI (Office of Communications, 2019). This presents a clear inequality in access to home fitness resources meaning that for this group, home fitness resources are routinely inaccessible. Whilst all of the resources that have been evaluated are affordable at face value, indirect costs such as WIFI and home computers and devices mean that these resources are not available to everyone. Book resources are the most affordable as joining the library is free – however in a climate of social distancing when libraries are closed and only online resources are available, there are more indirect costs.

In terms of adaptability of resources, it must be acknowledged that within each resource group content will vary in levels of quality and adaptability. However, there are concerns that YouTube and App resources may frequently be produced without any professional guidance. Book resources are typically written by those with qualifications and/or experience in their field and so are less likely to risk damaging the health of service users. On the other hand, there are so many YouTube resources that there is more variety than book resources. It is likely that due to such wide and varied content YouTube is the most adaptable resource. Overall, it is clear that different resources will work well for different people and all of the resources evaluated have some clear strengths and weaknesses.

People Know How is currently working to deliver computers to people so that they can stay connected during this COVID-19 pandemic (Baldacchino, 2020). This is a great step forward, that will help people stay connected, as well as enabling people to use home fitness resources as detailed in this briefing.

- Age UK, 2016. *The Internet and Older People in the UK – Key Statistics*, London: Age UK.
- Bailey, N. et al., 2015. *The cost of the cuts: the impact on local government and poorer communities*, York: Joseph Rowntree Foundation.
- Baldacchino, C., 2020. Delivering computers to the community. [Online]. Available at: <https://peopleknowhow.org/delivering-computers-community>
- Depper, A. & Howe, P. D., 2017. Are we fit yet? English adolescent girls' experiences of health and fitness apps. *Health Sociology Review*, 26(1), pp. 98-112.
- Furjan-Mandic, G., Bilbija, B., Radas, J. & Ivkovic, G., 2018. Impact of Home Fitness Program on Anthropological Characteristics of Physically Active and Physically Inactive People. *Sport Mont*, 16(1), pp. 33-36.
- Gillaspay, M. L., 2005. Factors affecting the provision of health information in public libraries. *Library Trends*, 53(3), pp. 480-495.
- Hastings, A., Bailey, G., Bailey, N. & Watkins, D., 2012. *Serving deprived communities in a recession*, York: Joseph Rowntree Foundation.
- Iqbal, M., 2020. *App Download and Usage Statistics* (2019). [Online] Available at: <https://www.businessofapps.com/data/app-statistics> [Accessed 22 April 2020].
- Kauppinen, P. & Pavlova, A., 2017. *YouTube influence on Well-being brands- Understanding millennial perceptions of brand endorsements on fitness and health vlogs*, Lund: Lund University School of Economics and Management.
- Lamy, J., 2020. Joe Wicks workout videos made more accessible thanks to Cambridgeshire charity. [Online]. *Peterborough Telegraph*, 20 April. [Accessed 16 April 2020].
- Lee, J. E. & Watkins, B., 2016. YouTube Vloggers' influence on consumer luxury brand perceptions and intentions. *Journal of Business Research*.
- Linnan, L. A. et al., 2004. Public Librarians as a Resource for Promoting Health. *Health Promotion Practice*, 5(2), pp. 182-190.
- Lister, C. et al., 2014. Just a fad? Gamification in health and fitness apps. *JMIR serious games*, 2(2).
- Morgan, A. U. et al., 2016. Beyond Books: Public Libraries As Partners For Population Health. *Health Affairs*, 35(11), pp. 2030-2036.
- Office of Communications, 2019. *Communications Market Report 2019*, London: OFCOM.
- Oliver, D., Foot, C. & Humphries, R., 2014. *Making our health and care systems fit for an ageing population*. London: The King's Fund.
- OMDIA, 2020. *What will Covid-19 mean for AVOD, SVOD & pay TV?*. [Online] Available at: <https://www.omdia.com/resources/product-content/what-will-covid19-mean-for-avod-svod-pay-tv> [Accessed 12 April 2020].
- Perez, S., 2016. *Nearly 1 in 4 people abandon mobile apps after only one use*. [Online] Available at: <https://techcrunch.com/2016/05/31/nearly-1-in-4-people-abandon-mobile-apps-after-only-one-use> [Accessed 19 April 2020].
- Quennerstedt, M., 2013. PE on YouTube – investigating participation in physical education practice. *Physical Education and Sport Pedagogy*, 18(1), pp. 42-59.
- Scotland's Census, 2014. *Scotland's Census 2011 – National Records of Scotland Table DC2119SC – Language other than English used at home by sex by age– All people aged 3 and over*, Scotland's Census.
- Scotland's Census, 2018. *Ethnicity, Identity, Language and Religion*. [Online] Available at: <https://www.scotlandscensus.gov.uk/ethnicity-identity-language-and-religion> [Accessed 17 April 2020].
- Shen, C.-C. et al., 2019. Do YouTube Fitness Videos Help YouTube user to Learn Fitness?. *International Journal of Innovation, Creativity and Change.*, 5(2), p. Special Edition.
- Silva, P. A., Holden, K. & Nii, A., 2014. Smartphones, Smart Seniors, But Not-So-Smart Apps: A Heuristic Evaluation of Fitness Apps. In: *International Conference on Augmented Cognition*. s.l.:Springer, pp. 347-358.
- The Body Coach, 2020. *Background About Joe*. [Online] Available at: <https://www.thebodycoach.com/about.asp> [Accessed 14 April 2020].

The City of Edinburgh Council, 2020. *Your Library Home*. [Online]. Available at: <https://yourlibrary.edinburgh.gov.uk/web/arena> [Accessed 16 April 2020].

Wallace, A., 2020. People welcome online workouts to fill gap left by shuttered gyms and studios. *The Washington Post*, 27 March, p. online.

West, J. H. et al., 2012. There's an App for That: Content Analysis of Paid Health and Fitness Apps. *Journal of Medical Internet Research*, 14(3).

Yoganathan, D. & Kajanan, S., 2014. What drives fitness apps usage? An empirical evaluation. In *International Working Conference on Transfer and Diffusion of IT*, pp. 179-196.

YouTube, 2020. *YouTube About*. [Online] Available at: <https://www.youtube.com/about/press> [Accessed 10 April 2020].

Contact People Know How

525 Ferry Road
Edinburgh
EH5 2FF

www.peopleknowhow.org

0131 569 0525

contactus@peopleknowhow.org

Registered Charity No. SC043871

 /peopleknowhow

 @PKHinnovation

 @peopleknowhow

 /PeopleKnowHow1