

RESEARCH AND DEVELOPMENT

The Squeezy pelvic floor muscle exercise app: user satisfaction survey

M. Robson

Physiotherapy Department, Lewisham Hospital, Lewisham and Greenwich NHS Trust, and Propagator Ltd, London, UK

Abstract

Squeezy is a pelvic floor muscle exercise smartphone application (app) that was launched in September 2013 at the POGP Annual Conference. It advises women about how to perform pelvic floor muscle exercises (PFMEs), supports a physiotherapy-led exercise programme and encourages adherence. Over 60 000 copies of Squeezy have been sold worldwide, and it has been a winner or runner-up in seven awards. This paper describes the results of an in-app survey that was completed by over 464 users in 2015. One of the most notable results shows that over 90% of those who were surveyed had increased the frequency of their PFMEs after beginning to use Squeezy.

Keywords: app, pelvic floor muscle exercise, Squeezy, user satisfaction survey.

Introduction

The Squeezy pelvic floor muscle (PFM) exercise (PFME) smartphone application (app) (Propagator Ltd, London, UK) was launched via the Apple App Store in September 2013. It is an evidence-based and peer-reviewed mobile device program that was designed to educate women about and motivate them to perform PFMEs. Pelvic floor muscle exercises are recommended as the first-line treatment for female urinary incontinence by the National Institute for Health and Care Excellence (NICE 2013).

Squeezy comes preset with a standard exercise regime, but it can also be personalized to match any programme given by a specialist physiotherapist. The app also has customizable reminders with a snooze function, and an exercise record to monitor adherence and show a clinician. Since the initial launch, a version of Squeezy has been developed for the Android operating system, and Squeezy for Men has also been released. There is also a version of Squeezy for people with cystic fibrosis (Squeezy CF), and a bladder diary attachment is due soon.

A comparison of iPhone apps that teach PFMEs was undertaken by Hui & Johnson (2015). These

Correspondence: Myra Robson, Physiotherapy Department, Lewisham Hospital, Lewisham and Greenwich NHS Trust, Lewisham High Street, London SE13 6LH, UK (e-mail: myra.robson@nhs.net).

authors found that only three of the 23 apps analysed fulfilled all the criteria that they considered essential, i.e. education, exercise reminders, exercise progressions and the facility to record exercises, and would be suitable to recommend to patients in practice. Furthermore, of these three apps, only Squeezy was curated by a specialist women's health physiotherapist, peer reviewed and endorsed by the National Health Service (NHS), meaning that it was relevant, used information from trusted sources and complied with the Data Protection Act.

There are many aspects of Squeezy that the development team are interested in researching, but a lack of funding and time restrictions limit these activities. The receipt of a £500 Dame Josephine Barnes Bursary from POGP enabled the present author and her colleagues to perform a subjective survey.

Participants and methods

The development team devised a survey that could be written into the app. The design followed standard app surveys, which meant that it was detailed but as concise as possible. A considerable amount of time went into devising the questions and layout. The aim was to extract as much information as possible, but keep the questionnaire short enough to encourage maximum uptake.

The survey ran for a period of 3 months from June to September 2015, and was designed to pop up when someone opened the app. Users were given the option to refuse to take the survey or to delay it up to three times, after which no further reminders appeared. A final message was sent out via the app before the survey closed; this was to encourage anyone who had not yet completed it to do so.

Results and discussion

A selection of the most relevant results for the readers of this journal are described below, but the complete set of questions and responses can be obtained from the present author, if required.

There were 464 responses from 12 000 downloads. This represents a response rate of 3.9%. The expected response rate for a survey of this type is only approximately 10–15% at best (SurveyMonkey 2017).

Pelvic floor muscle exercises

Some questions were designed to gather more information about Squeezy users’ attitudes to PFMEs.

Users were asked to rate how much they thought that they needed to do PFMEs on a 10-point scale (Fig. 1).

They were then asked to rate how much they thought that PFMEs could improve their symptoms on another 10-point scale (Fig. 2).

Users were also asked whether they had any concerns or queries regarding PFMEs, and 96 (21% of those surveyed) responded as follows: (“Am I doing it correctly?”) 60%; (“Doing them regularly”) 16%; (“Will they work?”) 7%; and (“Other”) 17%.

A high proportion of users were already motivated to do their PFMEs: 88% responded \geq 8

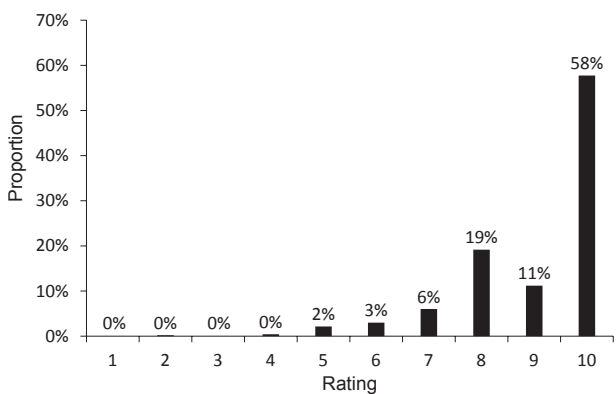


Figure 1. “How much do you think you need to do pelvic floor muscle exercises?” Key: (1) not at all; and (10) extremely necessary.

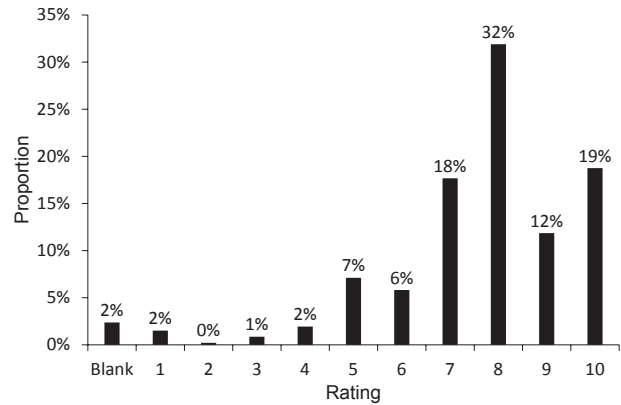


Figure 2. “How much do you think pelvic floor muscle exercises can improve your symptoms?” Key: (1) not at all; and (10) resolve them completely.

when asked how much they felt that they needed to do their exercises.

Ninety-three per cent of those surveyed believed that their symptoms would improve (\geq 5). This is particularly impressive because 69 users (15%) indicated that they had no symptoms in a separate question.

Only 21% of respondents had concerns about the PFMEs, of which a significant number (60%) wondered if they were doing these correctly.

Why Squeezy?

Another set of questions was devised to discover why those surveyed were using the app.

When asked how they had heard about Squeezy, users responded as follows: (physiotherapist) 54%; (online search) 28%; (friend) 13%; (other healthcare professional) 4%; and (other) 1%.

They were then asked to state whether they would recommend Squeezy to a friend. The responses were as follows: (“Yes”) 79%; (“Already have”) 19%; and (“No”) 2%.

When asked why they were using Squeezy, the users’ responses were as follows: (“I have a pelvic floor, bowel or bladder problem”) 33%; (“I’m a patient undergoing men’s/women’s health physiotherapy”) 20%; [“I’m pregnant” (women)] 20%; [“I’m a new mum” (women)] 18%; (“I am doing pelvic floor muscle exercises to try and prevent problems later”) 8%; and (no response) 1%.

With regard to whether Squeezy was the first PFM app that they had tried, 84% and 16% of users responded “Yes” and “No”, respectively. Those that had previously used another app responded to a follow-up question about how this compared as follows: (“Squeezy is better”) 92%; (“Squeezy is the same”) 7%; and (“Squeezy is worse”) 1%.

Fifty-four per cent of users had heard about Squeezy from a physiotherapist, which illustrates how much patients trust the recommendations of healthcare professionals, and 13% had found out about Squeezy through a friend. Seventy-nine per cent would be happy to recommend Squeezy, and 19% already had. These results are very encouraging since one of the objectives of the app was to make people be more open about pelvic floor dysfunction and treatment.

There was a wide range of reasons why the respondents were using Squeezy. As expected, the largest group (33%) were those with pelvic floor, bladder or bowel problems, but it was encouraging to see that 8% were exercising preventatively, not including the 38% of pregnant women and new mothers who may also have been taking pre-emptive action.

Only 16% of those surveyed had used a different app before, and of those, 92% said that Squeezy was better (only 1% said that it was worse). Comments in the survey and in other reviews of the app have made it clear that the National Health Service logo and recommendations by healthcare professionals are key reasons why people choose Squeezy over other apps, even though there is a cost involved.

User experience

Users were asked to rate Squeezy overall on a 10-point scale (Fig. 3).

They were then asked to rate the main features of the app on a 10-point scale (Fig. 4).

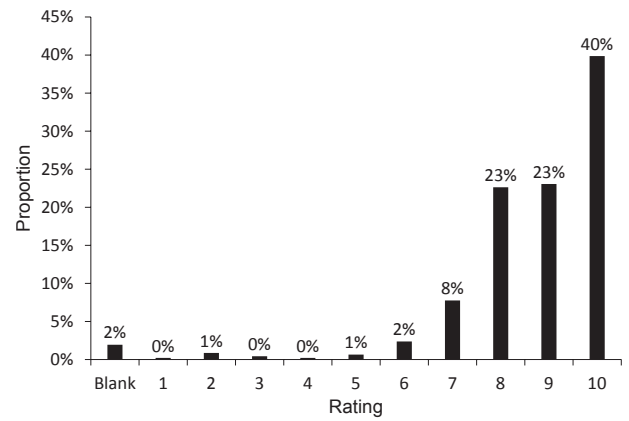


Figure 3. Ratings of the overall user experience: (1) really dislike; and (10) really like.

When asked whether they had personalized the settings, users responded as follows: (“Yes – I worked it out myself”) 40%; (“No – I am using the preset numbers”) 31%; and (“Yes – as guided by my physiotherapist”) 29%.

Eighty-six per cent of those surveyed rated the overall user experience as being between 8 and 10 on a 10-point scale (Fig. 3). Squeezy has consistently had >90% five-star ratings on the Apple App Store, and remains consistently within the top five paid medical apps in the UK.

The various features within Squeezy were also rated in the survey, and all were liked by the respondents (Fig. 4). Of particular interest were the popularity of the reminder facility (75% responded ≥ 8), which ties in with the clinical experience of patients struggling to remember their exercises, and the Squeezy ball visual aid (90%

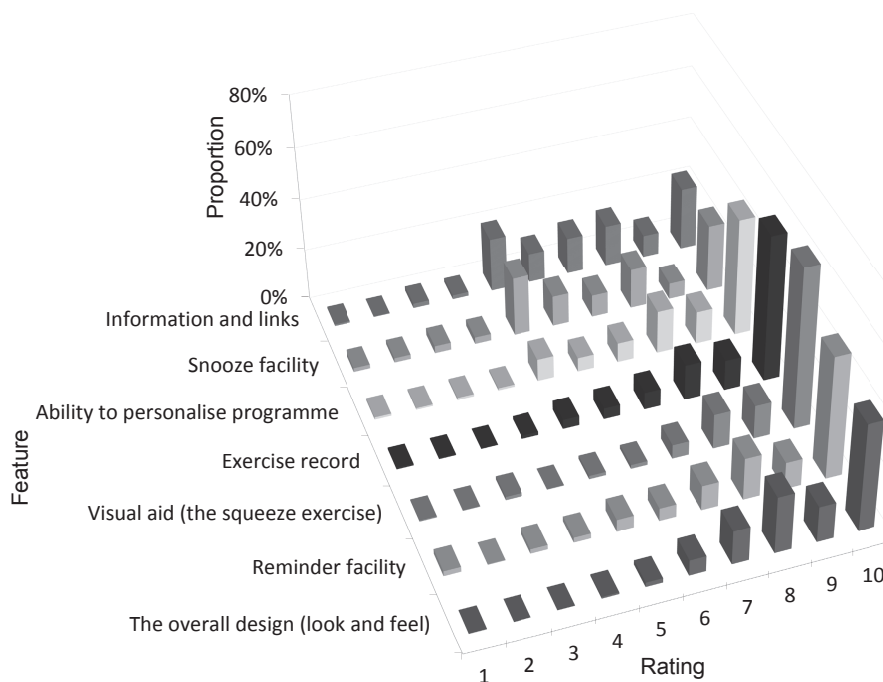


Figure 4. User ratings of the main features of the app: (1) really dislike; and (10) really like.

responded ≥ 8), which was designed to help users to understand and perform their exercises correctly; it is very pleasing to see that users felt that it was doing so.

The app was designed so that it could be used with or without guidance from a physiotherapist. The results from the question about whether users had personalized the settings demonstrate that this is happening in practice. Forty per cent of users had personalized Squeezy themselves, which illustrates the degree of confidence that they had about using the app and shows that it is user-friendly.

Effectiveness of Squeezy

A final set of questions were devised to learn more about how effective Squeezy was at improving adherence.

Users responded to a question about whether they were doing PFMEs more frequently than before as follows: (“More”) 73%; (“Never did them before”) 21%; (“Same”) 3%; and (“Less”) 3%.

When asked about how often they did their PFMEs when they got a reminder, users responded as follows: (“Always”) 39%; (“Sometimes”) 54%; (“Rarely”) 5%; and (“Never”) 2%.

The following responses were given to the question, “Thinking back over the last week, how many days did you do all your pelvic floor exercises?”: [“Always/Almost always (6–7 days)”] 47%; [“Sometimes (3–5 days)”] 33%; [“Rarely (1–2 days)”] 14%; and [“Never”] 6%.

Finally, when asked whether Squeezy had led them to seek treatment for their symptoms from a healthcare professional, users responded as follows: (“No – because I am already having/have already had treatment”) 64%; (“No – because I have no symptoms”) 29%; and (“Yes”) 7%.

The responses show that over 90% of respondents had increased the frequency of their exercises: 90% do their PFMEs when prompted by the app; and 80% are doing all their PFMEs at least 3 days a week. Adherence is always a challenge for patients and clinicians, and a paper by Sluijs & Knibbe (1991) found that physiotherapists’ estimation of short-term adherence to exercise programmes was 64%, but that for long-term adherence was only 23%. The results of the present survey seem extremely good; in particular, an adherence rate of 39% of respondents always doing their exercises as recommended is excellent. Adherence is essential to any physiotherapy approach so as to ensure behavioural change and the active participation of the individual;

without these, the intervention is unlikely to work (Steiner & Earnest 2000). We know that PFM training and interventions such as electrical stimulation can have excellent cure rates in cases of stress urinary incontinence; for example, Bø *et al.* (1999) reported a cure rate of 44% in an exercise group compared to one of 6.7% in a control group of over 100 women. Adherence is the key to continuing this success.

In addition, 7% of users stated that they had sought treatment for their symptoms after using Squeezy. The remainder were already receiving treatment, or were free of symptoms.

Conclusions

The number of downloads, positive reviews and regular position of Squeezy in the top five paid medical apps makes it clear that it is popular with both the public and professionals. The present survey allowed us to gather more information on users’ opinions about and utilization of Squeezy, and indeed, the place of apps in supporting PFMEs. The data will help to direct further studies.

The present results show that the respondents are: performing their PFMEs more regularly than before; recommending Squeezy to others; and seeking treatment after using the app. These were the primary objectives when Squeezy was first developed, and hence, these findings are of particular interest.

The responses to the survey have helped to influence discussions with researchers, and preparations are currently underway to gain funding for two randomized control trials.

Acknowledgements

All technical work was carried out by Propagator Ltd, and part of the funding came from the Dame Josephine Barnes Bursary that we were awarded. No other outside funding was received.

We would like to extend our continued thanks to Teresa Cook, both for her support and advice about this survey, and on all things related to Squeezy.

References

- Bø K., Talseth T. & Holme I. (1999) Single blind, randomised control trial of pelvic floor exercises, electrical stimulation, vaginal cones, and no treatment in management of genuine stress incontinence in women. *BMJ* **318** (7182), 487–493.
- Hui A. & Johnson L. (2015) iPhone apps as an adjunct to supervised physiotherapy for pelvic floor muscle training in women: a content analysis. *Journal of*

Pelvic, Obstetric and Gynaecological Physiotherapy **116** (Spring), 38–50.

National Institute for Health and Care Excellence (NICE) (2013) *Urinary Incontinence in Women: Management*. NICE Clinical Guideline 171. National Institute for Health and Care Excellence, London.

Sluijs E. M. & Knibbe J. J. (1991) Patient compliance with exercise: different theoretical approaches to short-term and long-term compliance. *Patient Education and Counseling* **17** (3), 191–204.

Steiner J. F. & Earnest M. A. (2000) The language of medication-taking. *Annals of Internal Medicine* **132** (11), 926–930.

SurveyMonkey (2017) *Survey Sample Size*. [WWW document.] URL <https://www.surveymonkey.co.uk/mp/sample-size/>

Myra Robson is a senior physiotherapist who specializes in pelvic health. She trained at the Royal London Hospital and the University of East London, qualifying in 1991. Myra currently works part-time at Lewisham and Greenwich NHS Trust, and is also the physiotherapist involved in the development of the Squeezy app.