**Crowdfunding: An innovative way of funding your project**

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Getting research funded is extremely difficult with over 70% of research council grant applications being rejected (Else 2014), even more so if you are a junior researcher where you don't have a track record of being awarded grant money, or leading a research project. Crowdfunding may offer a solution. It is a method of raising funds from members of the public online and can offer an alternative to the more formal methods of research funding, and has brought people and research closer together. Aim: To outline how this model works and give you tips on designing your own campaign. Objectives: An overview of the literature regarding this model will be provided, together with a good set of resources for future reference when designing your own campaign.

Introduction

Getting research funded is extremely difficult with over 70% of research council grant applications being rejected (Else 2014), whilst applications to some of the schemes at the Australian Research Council in 2013 had a meagre success rate of around 23% (Walsh, 2014). The low success rate is partly due to the growing number of people applying for finite resources. There are now more higher education establishments seeking funding, for example India added nearly 20,000 colleges between 2000 – 2010 (Choudaha, 2012), whilst in Kenya, the number of public universities tripled in 2013 (ICEF Monitor, 2015). This growth shows no sign of easing, with student numbers projected to double between 2012 and 2025 (Maslan, 2012). This increase in the student body is concurrent with the growth in academic staff, e.g. an increase of around 13% between 2003 – 2010 in the UK (Universities UK, 2012). As research, both funding and ensuing publications, is required for research frameworks and academic promotion by most higher education establishments, demand for grants far exceeds supply. For example, in the National Institutes of Health which funds health related research in the USA, the number of research grant applications doubled between 1997 and 2011, from roughly 31,000 to 62,000 (Howard and Laird, 2013). This increase in applications, without an increase of budget held by the funders, means that it is far more competitive than previously and it is expected for researchers to submit even more proposals in the anticipation that the vast majority of them will fail (the Editors, 2011). Over the period of 1997-2006 it was estimated that the average research award applicant had to submit 30% more proposals than previously, with success rates for first time applicants to the National Science Foundation in the USA, falling from 22% in 2000 to 15% in 2006 (National Science Foundation, 2007). This is a huge waste of time and money. Furthermore funders are more likely to fund research, which makes incremental steps forward, which is safe, rather than high-risk research, which could potentially be transformative (ibid). This impedes breakthrough research, such as finding a cure for cancer (Kolata, 2009). In addition to this, the award process may be bias in that success breeds success (winning applicants will go on to publish papers which is necessary to obtain further grants). Reviewers of grant applications give weight to previous grant success, as this would indicate experience of managing the research process, budgets and teams. Therefore, junior researchers are given less weight compared to more experienced researchers, and thus are less likely to be funded. For example, on one of the National Institute for Health Research (NIHR) frequently asked questions page, in response to how expert the lead investigators should be, they respond, “Lead applicants should have a strong track record of achievement in applied health research. This would be expected to be demonstrated through: Publications in an area relevant to the subject of the application; Experience of managing large research grants (while it is not possible to put absolute figures on this previous awards would be expected to be in excess of £250k and likely to be more than £500k); Evidence of impact on NHS service provision.” (NIHR, 2016)

It can also be extremely difficult for even the most eminent researchers to secure small pockets of money to gather some pilot data, or for some public, patient involvement perspectives to their research prior to applying for a substantive grant in order to inform it and make it a stronger candidate for success. It also appears that getting research funding is significantly more difficult for women than men. In 1997, Wenneras and Wold published a study of the awards given by the Swedish Medical Research Council. They concluded that based on the grades given to individual applications, that women needed to be 2.5 times more productive to receive the same competence scores as the men (Wenneras and Wold 1997). Another study found that female fellowship applicants were approximately 20% less successful than the males, and that they needed to have published 7.1 papers to be successful, compared to the 5.8 expected from the men (Gannon, et al 2001).

Alternatives to traditional research awards

To overcome any of these issues and if only a small amount of pump priming money is needed, there is a funding avenue which is relatively unknown at the moment, i.e. crowdfunding. Crowdfunding is a method of raising funds from members of the public online and can offer an alternative to the more formal methods of research funding, and which has enabled the possibility of bringing people and science/research closer together. Crowd opinion regarding awarding funding appears to be comparable to that of experts (Mollick and Nanda, 2014). The funds can buy anything to do with research; such as an extension for a trial, or to purchase some software or equipment for the study (often items which are not covered by formal grants).

Crowdfunding began in the US as a way of funding innovative start-up businesses, or creative projects. For example, one of the most successful Crowdfunding sites, Kickstarter which since its launch in 2009, has raised over $1.9 billion, funding 90,000 projects (for web addresses of mentioned crowdfunding sites please see the resource section at the end of this paper). It is only recently that crowdfunding has become a viable option for funding scientific research however (Kickstarter does not fund research). One crowdfunding web site aimed at research, Experiment, claims that the projects they host have a 44% success rate, and that these projects have gone on to inform 20 peer-reviewed publications, and 69 conference oral presentations. Until very recently however, these research aimed crowdfunding web sites have only operated in the USA (including Experiment). Fortunately, there is now a quickly growing international crowdfunding market with Malaysia becoming the first country in Asia-pacific legislating equity crowdfunding in 2015 approving six platforms. Whilst in the UK, a report was produced in 2014 by the National Endowment for Science, Technology and the Arts (NESTA), which argued that the ‘alternative finance sector’ (including crowdfunding) grew by 150% between 2012-2013 in the UK with an estimated worth in 2014 of £1.74 billion, doubling in size year on year, from £267 million in 2012 (NESTA, 2014). NESTA also noted other beneficial effects from crowdfunding with 29% of donors giving feedback to the researchers about their campaign [ibid] (which could be regarded a patient, public involvement). One crowdfunding web site that has been set up in the UK is Walacea. To ensure that they only promote high quality campaigns however, you must be based at a reputable institution (e.g. university, hospital, charity) or have a reputable person (such as a known researcher) on your team. This is required to try to avoid misuse of the platform. Another point of note here which may be of great benefit, is that the turnaround time in crowdfunding is much quicker than traditional funding methods. With crowdfunding an award can be obtained within a few months, e.g. Walacea gives you up to 3 months for your campaign, whereas a grant proposal from submission to decision can take up to a year.

How crowdfunding works

Crowdfunding’s basic premise is that funding will be achieved via many small donations from many members of the public, with people donating an amount they feel comfortable with. Through crowdfunding, people with common interests can together fund research which matters to them. In general, you state the target amount of money required, and if that amount is raised, the money is awarded, less the crowdfunding site’s fee. Crowdfunding sites will charge you for their service of hosting and promoting your campaign. They do this by taking a percentage of all wining campaigns. This varies between sites, e.g. Walacea takes 5% with a further 3% taken by the payment gateway. Therefore, if you decided to place your campaign with Walacea, you should budget for 8% over what is actually needed. If the target is not reached, no award is given and no one who has donated, will be charged. This is known as the ‘all or nothing’ model. Because of this, most campaign requests are quite small, about £10,000 or so. However, usually there is usually no cap imposed by the crowdfunding website as to how much you can request.

Another crowdfunding model, is where the funds which are raised are kept even if the target is not reached, i.e. the ‘keep it all’ model. One such site which hosts UK science campaigns is Rockethub who also crowdfund for the arts and community projects. These charge 4% if the target is reached, and 8% if it is not. They also do not require the campaigner to be ‘reputable’ like Walacea. The worry with this model is that poorly designed research may secure money from the public and that people could promote campaigns quite frequently that, although never reach their goal, are used as a source of small amounts of funding. This could tarnish the reputation of funding research via crowdfunding and do harm to the innovation. The benefits of choosing a crowdfunding site which operates under the ‘all or nothing’ model is that generally they are better known platforms which require a campaign to be completed in a concentrated period of time, even at the risk of ultimately receiving nothing if the target is not reached.

Designing a crowdfunding campaign for research

* Choose the most appropriate platform

This paper gives you some ideas of platforms to review, however this is by no means an exhaustive list. Do a search to find one which is the most appropriate for you and your requirements. This will involve reading many FAQ’s and ‘about us’ pages as sometimes the information is not obvious. The first question you should ask is whether they fund research, and whether they operate in your country. If both of these points are ok, choose whether you want a platform which is ‘all or nothing’, or ‘keep it all’. Other questions you should ask is what percentage of the funds do they take, and what is the maximum amount (if any) you can campaign for and ensure this is enough for your project. Have a look at the other campaigns they host. Do they complement yours? For example, if all the other campaigns are regarding global warming and animal welfare, and you want to study the effect of eating ice cream on mental health, the site may not be the most appropriate for you (bearing in mind that crowdfunding sites will have their ‘members’ who regularly donate to campaigns on that site, therefore they may be animal lovers rather than interested in psychology)! Also have a look to see how successful previous/current campaigns are.

* To run a successful campaign:

1. Appeal to the public

One may believe that only research which is glamorous, cute or personal, will be funded, however this is not necessarily the case. It appears that the research which is funded, is associated with the efforts the researcher makes in engaging with their audience, such as promoting the crowdfunding campaign via social media, therefore you have to invest time and energy in promoting your campaign.

Even though your topic maybe very niche, explain it in easy to understand, interesting narrative. Tell people why they should care about your project. Let your enthusiasm shine out. Although this can be a difficult skill to develop, any researcher should make the effort to learn this skill as traditional grant applications ask for a layman’s abstract, dissemination to the general public, and also public, patient involvement (Walker, 2014).

1. Develop an excellent marketing strategy

Use all social media outlets such as twitter, linkedin, etc. For example, it has been found that pledges correlate with the number of tweets and retweets (Verhoeven et al., 2015). If you are working with a patient group who have an associated charity, will they promote your crowdfunding campaign for you? How about posters around your university/hospital? Is it the type of research the media would be interested in reporting on? You have to be aggressive in promoting your campaign and have to keep it in front of people.

1. Funding target

Start with the smallest amount you need to raise as you are more likely to be successful if you have opted for an ‘all or nothing’ model of crowdfunding. Include a summary of your budget in relation to what amount you are asking for so donors are fully informed as to what their money will be attributing to.

1. Your crowdfunding page

This needs to be eye-catching, interesting, clear and understandable. Make it personal. Include:

1. A video

Campaigns with videos raise double the funds than those without. The video should explain and/or describe succinctly your idea and describe what you are trying to achieve. Videos should not be more than 3 minutes long. Be sure to sound confident and focus on the benefits/impact that the success of your project will deliver.

1. Project description

Share the story behind your project. Include descriptions of the research you have done to date underpinning the present proposal. This will increase a donor’s confidence in you and what you are trying to achieve. Provide a timeline regarding how you plan to manage the stages of your project. Invite donors to ask questions, ensuring that you give a variety of methods for contacting you such as phone or email, etc.

1. Campaign rewards

You can also incentivize donors with a reward system, which can also be part of your campaign. Rewards offer a way to show gratitude. The more directly relevant they are to the impact you will make with the outcomes of your research, the more connected donors will feel towards your cause. Offering some form of reward improves your chances of reaching your funding goal. To be successful requires you to have an understanding of who your donors will be and what they may appreciate. A crowdfunding campaign will generally have between four and six reward levels dependent upon how much is pledged. Allow for the cost of these rewards in your budget request. There are a range of rewards that can be offered such as a mention on twitter (which also serves to further promote your campaign), a signed certificate, a personal thank you letter, their name on a list of donors on your web site, etc. Or the reward could be an experience, e.g. invitation to a guest lecture, meet you in person or via Skype/phone, etc.

If you think crowdfunding is for you, you may wish to look at Rockethub’s ‘Success School’ pages, which holds a host of videos and information about making your campaign successful. More tips and videos can also be found on SciFund Challenge (web address in the resource section at the end of this paper).

Examples of crowdfunding campaigns

Crowdfunding paid for the first imaging study of the brain on LSD. This study led by Professor Nutt at Imperial College London, needed to raise £25,000 to enable analyses of data which had already been collected. The crowdfunding site chosen for their campaign was Walacea. Their campaign ran for 45 days over which period they received 1,628 backers, who gave a total of £53,390 (over double the request)! If you have a look at their web page: <https://walacea.com/campaigns/lsd/> (last accessed: March 15 2016) you will see an excellent example of a crowdfunding campaign. There is a video that is extremely professional, and very easy to understand with key members of the research team explaining their research. You will also see under the ‘backers’ tab, that the vast majority of the donations were between £10-£30 with three figure donations featuring only rarely. The page was regularly monitored also as you can see from the comments page. If a backer asked a question or left a comment, it was responded to in a matter of days by one of the research staff. Another good marketing ploy is the incentives for donating they offered. These ranged from a tweet from Professor Nutt for a £5 donation, to dinner with the scientists for a £1,000 donation.

Another good example, this time on Experiment looked at the influence of genes in relation to exercise: <https://experiment.com/projects/a-prescription-for-health-and-fitness-based-on-your-genes> (last accessed: March 15 2016). Although the research team asked for $1,000 to pay for gene sequencing, they in fact raised $6,500. The page is easy to read and each team member has posted a picture and profile. Of interest is under the ‘lab notes’ tab, where you will see they have posted updates of the research, and also other information which would be of interest to their donors.

An example from the UK which was led by a nurse is #wegettogether campaign: <http://www.crowdfunder.co.uk/WeGetTogether/> [last accessed June 16 2016]. This campaign was not to pay for research, but rather to help pay for the health care professionals who are passionate about tweeting get together to discuss the potential for social media in health. They had hoped to raise £6,000 but in fact exceeded this with £8,500 from 208 donors in 28 days!

A university which has completed many crowdfunding initiatives is Deakin University in Australia. One fully funded project which raised A$12,382 from a total of 45 donors was the Healthy Gigglers project whose aim was to fund a low-cost, sustainable online platform to support health eating and active play in children: <http://www.pozible.com/project/22890> (last accessed: March 17 2016). Another raised A$9,767 from 57 supporters to fund some equipment for a lab researching muscular dystrophy. Indeed, Deakin ran eight campaigns between May-June 2012 with 6 of them being funded and a total raised of A$61,572, from approximately 700 different donors. As they have actively used crowdfunding to fund their scientific research, they also evaluated the process and published a report (Verhoeven, et al. 2015). Deakin set up a partnership with Pozible to provide a funding avenue for early career researchers and for projects requiring only a small amount of funding (up to A$20,000). Applicants for a crowdfund were supported by the University’s marketing, public relations and social media departments.

Potential risks and drawbacks

Many people who conduct research do not only do so for the benefit of their clinical practice and patients, but also for career progression. One of the potential drawbacks from funding your research via crowdfunding is that this method of funding research is still relatively new, and therefore may not be recognised in the same manner as funding from a traditional research council. As it is not competitive or peer reviewed either, it will not carry the same weight as a traditionally funded grant. Although this attitude will change over time. This said, traditional awards may not be appropriate for you at the present time. Perhaps your research is high risk so less likely to be funded by the traditional funders, however with positive results, could be ground-breaking and have massive impact. Your crowdfund may also increase your chances of securing a larger traditional grant. For example, if your crowdfund paid for a pilot/feasibility study that informed a larger grant. In addition, scientific publications may be published using the data collected during the crowdfund, which is not only good when applying for further grants, but also good for your CV/résumé. Furthermore, if new to research, a small grant such as this will provide experience of managing a research project and budget, “…crowdfunding is not just about the money. It’s about the skills that you learn, the networks that you build, and the boost for the dissemination of your research. That’s got to be worth something.” (O’Donnell, 2014)

Although it is not necessarily the easy option. Initially, crowdfunding is a lot of work; setting up a new campaign up, making a video, etc. However, this is not necessarily any more work than writing a formal grant application. Do not underestimate how much effort and time a winning campaign will take to set up and maintain. Do your homework prior to the launch. Grow your social network and develop your marketing strategy. Search Facebook, Twitter, Instagram and other sites for groups, who may be like-minded, for example charities on whose pages you could advertise your campaign. Be sure to encourage your social media contacts to spread the word within their networks also. Ideally, the project should have enough support in place to raise 50% or your requested funds within the first few days after launching. Decide how frequently you will promote your campaign to each group over each medium, and set a timetable with reminders to make sure you follow this through.

Furthermore, crowdfunding is also a totally new way of working, which some of your research collaborators may be uncomfortable about as it relies on ‘pitching’ and ‘salesmanship’ often using social media and live events such as webinars in which funding requests are made. These type of skills are not necessarily ones which academics and clinicians find easy. However, utilising social media for research is a skill we all need to learn in the 21st century. We will utilise it more and more whether that is for dissemination, recruitment or for data collection (for a discussion of online research methods please see (Walker 2013a; Walker 2013b).

Once the campaign is live, you will also need to monitor the page regularly. Do you have the time to respond to all of the donors, for example sending out their rewards, or answering any questions? From a donor point of view, there is always the risk of pledging and then never hearing from the researchers again. Worries about this can be abated with links to your research page or staff profile, or answering any questions in a timely manner so potential donors are reassured that you are who you say you are.

However, it maybe that your place of work will have a marketing/public relations/research department who will help. Otherwise, there are private companies set up to support crowdfunding campaigns such as Krowdster: <https://www.krowdster.co/how-it-works> (last accessed 18 March 2016). This company will conduct your twitter marketing through to writing press releases for your campaign.

Conclusion

Crowdfunding may offer a real solution to fund speculative or small-scale pilot work, or if you are a junior researcher. It offers a model of bringing people and scientific research closer together, and encourages engagement via novel methods such as social media, thereby not only informing your research design, but also developing your skills in explaining sometime complex ideas to a lay audience, as well as your skills in managing a research project.

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Resources

*Crowdacure:* is a crowdfunding platform specifically for medical research: <https://www.crowdacure.com/> (last accessed 18/03/16).

*Experiment:* [www.experiment.com](http://www.experiment.com) (last accessed: March 15 2016),

*Fundscience:* is a non-profit crowdfunding platform in Australia: <https://fundscience.org.au/how-it-works/> (last accessed 17/03/16). It works to a ‘stretch model’.

*Kickstarter:* [www.kickstarter.com](http://www.kickstarter.com) (last accessed: March 15 2016).

*Pozible:* is the world’s 3rd. largest crowdfunding platform and has a dedicated ‘research’ category and the site has been used with great effect by Deakin University as mentioned. Although at first glance donations are in A$, you can choose various currencies: <http://www.pozible.com/list/pop/20/all/0> (last accessed 17/03/16). Operates an ‘all or nothing model’.

*Rockethub:* [www.rockethub.com](http://www.rockethub.com/) (last accessed: March 15 2016)

*Scifund challenge:* [www.scifundchallenge.org](http://www.scifundchallenge.org) (last accessed: March 15 2016).

*Walacea:* [www.walacea.com](http://www.walacea.com) (last accessed: March 15 2016)