

# Effect of Framing and Feedback Levels on Funding and Emotional Support in Medical Crowdfunding

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## ABSTRACT

Despite the rise of medical crowdfunding and its benefits to patients, including reducing financial hardships and providing emotional support, limited attention has been paid to how a medical crowdfunding campaign organizer can drive performance. In this study, the authors investigate how the communication style used in a medical crowdfunding campaign can affect the funding performance and emotional support received. They find that emotional framing and the level of feedback communicated positively affect funding and emotional support and discuss its implications.

## KEYWORDS:

Medical Crowdfunding, Framing, Feedback, Emotional Support, Helping Behavior, Emotional Communication

## INTRODUCTION

More recently, online medical crowdfunding – soliciting funds from the internet crowd - has become an increasingly common response to rising healthcare costs, especially in the United States. Medical crowdfunding has been helping patients finance medical expenses and reduce medical bankruptcy (Burtch & Chan, 2018). However, there are a limited number of studies examining the factors that contribute to medical crowdfunding campaign performance. In addition to financial resources, medical crowdfunding also serves as an avenue through which patients receive emotional support, including encouragement and prayers from the Internet crowd. Emotional support is very critical to patient mortality (Penninx et al., 1997; Thong, Kaptein, Krediet, Boeschoten, & Dekker, 2007), how patients cope with their illness (Strine, Chapman, Balluz, & Mokdad, 2008), and adherence to treatment (DiMatteo, 2004).

While prior research in crowdfunding has explored the different drivers of a crowdfunding campaign's performance (e.g. Cordova, Dolci, & Gianfrate, 2015; Mollick, 2014), and have demonstrated the importance of communication in attracting donations to crowdfunding campaigns (e.g. Wang, Li, Liang, Ye, & Ge, 2018), they have mostly focused on communications used in the entrepreneurial crowdfunding context with little attention paid to charitable contexts like medical

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crowdfunding. The way in which the message is communicated to the recipient matter and this is especially true when trying to acquire resources from potential benefactors (Chen, Yao, & Kotha, 2009). Moreover, different communication styles matter in different crowdfunding contexts. For instance, Parhankangas and Renko (2017) show that the communication style that matters when crowdfunding for social projects is different from the communication style that matters when crowdfunding for commercial projects. Further, Gleasure & Feller (2016) documents that factors related to communication are the most important predictors of charitable giving to individuals. As such, we expect that communication style may play a significant role in the financial performance of medical crowdfunding campaigns. In addition to fundraising, patients often receive emotional support during their medical crowdfunding campaigns. We also expect that communication style may play a significant role in the amount of emotional support received by patients during their medical crowdfunding campaign.

Against this backdrop, we investigate how the communication style used in a medical crowdfunding campaign relates to its performance in terms of funding level and emotional social support. Particularly, we ask the following question: *how does the emotional framing of a medical crowdfunding campaign narrative and the level of feedback communicated to the crowd affect the level of funding and emotional social support received?* We investigate the aforementioned question because medical crowdfunding is unique and the willingness to donate may still be limited due to its relative newness and because unlike other types of crowdfunding, there is a huge emotional support component to it. In other forms of crowdfunding, complete success may be just raising the required funding goal. However, in medical crowdfunding, apart from raising the required funding goal, support that helps with the patient's mortality is very valuable. There are little to no studies exploring factors that drive these dual outcomes of funding and emotional support in medical crowdfunding.

Given the altruistic nature of giving in medical crowdfunding and the fact that scholars have shown that emotions can sometimes motivate people to action more than cognition (Bagozzi & Moore, 1994; Sudhir, Roy, & Cherian, 2016), we argue that the emotional framing of a medical crowdfunding campaign narrative will play a positive role in its overall performance. Further, we argue that a medical crowdfunding campaign whose organizer has a high level of interaction with the crowd through feedbacks will receive more funding and emotional support because the crowd will feel better informed and connected with the patient, their progress, and their medical crowdfunding campaign.

To test our hypotheses, we use a sample of 306 medical crowdfunding campaigns extracted from the YouCaring<sup>1</sup> platform. In line with our prediction, we find that communication that makes the campaign more emotional, informs and builds a connection with the Internet crowd is associated with higher funding and emotional support. Our study makes a couple of contributions. First, it contributes to the growing literature on medical crowdfunding. While prior literature on medical crowdfunding has mostly focused on understanding some of its impact (e.g. Burtch & Chan, 2018) potential consequences (e.g. Snyder, 2016; Snyder, Mathers, & Crooks, 2016), and have now started looking at some of the determinants of performance (Ba, Zhao, Song, & Zhu, 2021; Zhang, Xue, Li, Li, & Liu, 2021), we take the perspective of the campaign organizer to understand how the communication style might impact the funding level and emotional support. Second, our study also contributes to the literature on framing effects. While extant literature in healthcare on framing effects have looked at how framing affects the perception and adoption of health related public service messages (Akl et al., 2011; Gerend & Maner, 2011), we take the perspective of the patient to see how the message conveyed to the Internet crowd about a medical condition affects their response to the patient in terms of financial donation and emotional support.

Beyond contributing to the literature, our findings have important implications for organizers of medical crowdfunding campaigns, especially now that medical crowdfunding platforms are exploring campaign-coaching services (e.g. Giveforward.com) and providing guidelines on how to structure

campaign narratives (Paulus & Roberts, 2018). The subtle nuances of the medical crowdfunding organizer's communications in terms of emotional framing and level of feedback to the crowd are important for the funding performance and emotional support received.

## BACKGROUND AND HYPOTHESES

### Medical Crowdfunding

Whereas online crowdfunding has been adapted into fundraising for medical expenses, it initially gained prominence as a mechanism through which individuals could raise funds from the Internet crowd for projects and business ventures. With the growing cost of health care, medical crowdfunding has become commonplace. Medical crowdfunding differs from crowdfunding activities targeted at entrepreneurial funding for projects and business ventures. For instance, while individuals organizing projects and business venture crowdfunding can offer different tangible incentives (e.g. rewards, equity, or interests) to motivate donors, organizers of medical crowdfunding campaigns do not offer tangible incentives and therefore may rely on donors altruism and empathy for funds. Donors in medical crowdfunding typically are less influenced by the geographical and social proximity of the donee compared to entrepreneurial crowdfunding (Agrawal, Catalini, & Goldfarb, 2011; Gleasure & Feller, 2016).

Research on medical crowdfunding has been on the rise with studies seeking to understand its usage (Berliner & Kenworthy, 2017; Vox, Folkers, Turi, & Caplan, 2018), impacts (Burtch & Chan, 2018), and potential consequences (Snyder, 2016; Snyder et al., 2016). With respect to usage, Berliner and Kenworthy (2017) documents that medical crowdfunding is utilized by financially constrained individuals. Vox et al.(2018) suggests that a large number of people may be using medical crowdfunding to pay for unproven and potentially dangerous treatment. Burtch and Chan (2018) show that medical crowdfunding helps reduce financial hardship and medical bankruptcy, while Snyder et al. (2016) warns about the potential for loss of privacy for patients who engage in medical crowdfunding and the potential of fraud to donors.

Studies have investigated how campaign organizers can demonstrate trust and motivate the crowd to donate (e.g. Kim, Kong, Karahalios, Fu, & Hong, 2016; Snyder, Crooks, Mathers, & Chow-White, 2017). They find that organizers typically rely on close-connections, collective endorsements, and a demonstration of the patient's depth of need in order to motivate the crowd to donate. More recently, studies have examined the factors that contribute to a medical crowdfunding campaign's fundraising performance. Ba et al. (2021) and Zhang et al. (2021) look at some of the determinants of medical crowdfunding campaign performance in China. They show that apart from social and demographic factors, the nature of the disease and the stage of the disease at diagnosis impact medical crowdfunding campaign performance. Ortiz et al (2018) link strong social media network and videos to the fundraising performance of medical crowdfunding campaigns, while Ba, Zhao, Song, & Zhu (2022) highlights that the type of organizer matter in driving performance. Medical crowdfunding campaigns organized by charities perform better than those organized by individuals as a result of the former's higher reputation and social capital (Ba et al., 2022). More closely related to our work is Wu, Zhang, & Xiao (2022) who look at the effect of the medical crowdfunding campaign narrative. Although they did not directly investigate the effect of the narrative on campaign performance, they show that the narrative quality and framing influence donors.

In sum, the literature on the factors affecting the fundraising performance of medical crowdfunding campaigns is still limited and has not exhaustively explored how the communication style used in the campaign drives it. Moreover, the challenge faced by patients engaged in medical crowdfunding goes beyond fundraising. Patients also have to manage the stress caused by the illness and seek out coping mechanisms. Medical crowdfunding campaigns help provide emotional support as mechanism for coping (Kim, Vaccaro, Karahalios, & Hong, 2017). We also explore how the communication style used in the medical crowdfunding campaign drives emotional support.

## Emotional Support and Patient Well-being

Emotional support is important for individual well-being and affects the quality of life (Reblin & Uchino, 2008). Emotional support is described as a behavior that assures an individual that he/she is loved regardless of their situation often through empathy, affection, expressed concern, physical presence, encouragement, reassurance, and prayers (Cobb, 1976; Dakof & Taylor, 1990). It helps individuals deal with some of the stressful events in their life and can help in overcoming tough challenges (Cobb, 1976). This is especially true for people who may be going through health challenges including chronic and terminal illnesses. Prior research has shown the value of emotional support to patients. For instance, high emotional support has been documented to be associated with lower patient mortality (Penninx et al., 1997; Thong et al., 2007). Emotional support has a significant impact on how patients cope with their illnesses including their adherence to medical treatment and recovery from illness (DiMatteo, 2004; Shyu, Tang, Tsai, Liang, & Chen, 2006; Strine et al., 2008).

Patients care for emotional support (Slevin et al., 1996) and they need it because it helps them manage the despair and uncertainties that may come with being ill. For patients who are involved in medical crowdfunding, emotional support may be especially valuable given that they are not only dealing with the stress from their illness, but also dealing with financial stress coming from not being able to afford or pay their medical costs. Further, emotional support from the internet crowd may be particularly useful because it not only fills the support need of the patient, especially when it may be ebbing from family and close friends, it also acts as a new source of emotional support when that of family and close friends may have become a little tedious.

## Communication and Medical Crowdfunding Performance

Research suggests that an individual's communication style can influence others (e.g. Charlton, Dearing, Berry, & Johnson, 2008). In order to identify the communication styles that attract funding and emotional support in medical crowdfunding, it is important to consider how organizers can attract and develop a relation with the Internet crowd. Unlike donors in entrepreneurial crowdfunding who are mostly driven by incentives, donors in the medical crowdfunding are often driven by altruism, empathy, social participation, and interactions (Gerber, Hui, & Kuo, 2012; Liu, Suh, & Wagner, 2017). Hence, communication styles that draws on the crowd's empathy, provokes altruism, informs them and allows for the development of a relation may boost the funding and emotional support levels of a medical crowdfunding campaign. The communication style can be in the framing of the medical crowdfunding campaign's narrative or in the level of feedback that the campaign organizer provides to the internet crowd.

### *Emotionally Framed Communication*

Framing refers to the way in which information (words, phrases, sentences, images, etc.) is presented in a message or communication (Ahmad, Ashari, & Samani, 2017). Prior research has shown that the way the content of a communication is framed can persuade individuals and shape their attitude and behavior (Rothman, Bartels, Wlaschin, & Salovey, 2006; Rothman & Salovey, 1997). The content of a communication can be framed such that it is cognitively or emotionally rich (Mayer & Tormala, 2010). While cognitively framed communications (e.g. communications framed in terms of gains and losses) trigger rational processing, emotionally framed communications trigger affective processing.

Communications rich with emotional content tend to be more successful in influencing affective attitudes than cognitive attitudes. For instance, Bagozzi & Moore (1994) in an experiment using public service ads (PSAs) about child abuse show that individuals who were exposed to the emotional PSAs were more empathetic. Affective attitudes like empathy and guilt are key drivers of helping behavior and charitable giving (Bagozzi & Moore, 1994; De Luca, Ferreira, & Botelho, 2016; Erlandsson,

Nilsson, & Västfjäll, 2018). This is true, especially when the helping behavior or giving is to a person who is experiencing a misfortune like in the case of medical crowdfunding (Bagozzi & Moore, 1994; Coke, Batson, & McDavis, 1978).

According to psychologists, communication styles that have the potential to evoke affective attitudes like empathy, and build rapport in individuals are often emotional (Dickert, Sagara, & Slovic, 2011; Dickert & Slovic, 2013). Emotional communication can trigger empathic concerns through different mechanisms like identified victim effect or in-group effect (Sudhir et al., 2016). Once triggered, helping and prosocial behavior result from empathic concerns. This helping and pro social behavior can be an instrumental support in the form of financial donation and/or emotional support in the form of prayers and encouragement. Hence, we expect that medical crowdfunding campaigns with more emotionally framed narratives will receive higher funding and emotional support.

H1. Higher emotional framing of the medical crowdfunding campaign narrative will lead to higher (a) funding, and (b) emotional support.

### *Feedback Communication Level*

High levels of feedback and frequent communication are necessary for relationships or connections to develop (Sias & Cahill, 1998). Research suggests that communications is more effective when it is frequent and consistent (Fischer & Reuber, 2014; Weiss, Lurie, & MacInnis, 2008). High levels of feedback and frequent communications can serve to reduce uncertainty (Weiss et al., 2008), and are more likely to receive responses from the intended audience (Fischer & Reuber, 2014; Weiss et al., 2008). Further, high levels of feedback and frequent communications allows the receiver to have a deeper understanding of what is being communicated and to value the information received more (Weiss et al., 2008).

In medical crowdfunding, high levels of feedback and frequent communications with the Internet crowd will keep them better informed about the medical crowdfunding campaign and patient's progress, create attachment to the patient's cause, and in turn foster confidence in the use of the donations already contributed to the patient's cause. Feedback communication through updates will create a sense of transparency and lead to increased donations (Mejia, Urrea, & Pedraza-Martinez, 2019). Hence, organizers who provide a high level of feedback and frequent communications will appear more transparent and earn crowd's trust that in turn can lead to more financial donations and emotional support. Hence, we hypothesize:

H2: Higher level of feedback communications provided during a medical crowdfunding campaign will lead to higher (a) funding, and (b) emotional support.

## **DATA AND METHODOLOGY**

To test our hypotheses, we extracted data from YouCaring. YouCaring was a crowdfunding platform that allowed individuals organize medical crowdfunding campaigns. Medical crowdfunding campaigns on YouCaring typically included information about the purpose of the campaign including for whom, the financial goal, and the organizer. YouCaring campaigns are typically not time bound and the organizer can withdraw funds from the campaign at any time during the campaign to help the patient. Our data consist of 306 on-going medical crowdfunding campaigns launched for cancer patients in 2016. Figure 1 shows a snapshot of a medical crowdfunding campaign page from YouCaring.

## Measures

### *Dependent Variables*

**Funding Level (*Funding*):** This is measured as the ratio of the amount donated to the crowdfunding campaign's goal. This measure has been used in the literature (e.g. Cornelius & Gokpinar, 2019; Fan-Osuala, Zantedeschi, & Jank, 2018) and is computed by dividing the amount donated by the campaigns fundraising goal. We also run our analyses with alternative measures of funding performance including using the number of backers (Josefy, Dean, Albert, & Fitza, 2017) and the average donation per donor to check the consistency of our results.

**Emotional support (*EmoSupport*):** This is measured as the count of encouragements and prayers received from individuals who may or may not have donated financially. Figure 2 shows examples of emotional support during a medical crowdfunding campaign. As a way to check the robustness of our result, we created a binary indicator for the level of emotional support based on the sample median. Campaigns with emotional support equal to or greater than the sample median were assigned the value 1 and those with emotional support less than the sample median were assigned the value 0.

### *Independent Variables*

**Emotional Framing (*EmoFrame*):** This was captured as a binary variable which takes on the value 1 if the medical crowdfunding campaign's narrative was highly emotional and 0 if it was not. To code this variable, we employed three graduate students who were not part of the research to read each of the medical crowdfunding campaign's narrative and classify the narrative as either very emotional or very informative (less emotional) using a two answer format (Dolnicar, Grün, & Leisch, 2011). The coding was based on the principle that highly informative narratives are designed to appeal to people's rationality and are less likely to arouse emotions while highly emotional narratives appeal to their affect and are less likely to arouse rational processing (Yoo & MacInnis, 2005). A campaign narrative was considered either highly emotional or not if at least two of the students coded it into that category.

**Level of Feedback (*Updates*):** This is measured as the count of the updates provided throughout the medical crowdfunding campaign. Updates as a measure for feedback and interaction have been used in the crowdfunding literature (e.g. Fan-Osuala, 2017; Wang et al., 2018).

### *Control Variables*

Following prior studies in crowdfunding, we include a number of control variables that have been shown to affect crowdfunding performance.

**Goal Amount (*Goal*):** We controlled for the amount that the patient is seeking to raise in the medical crowdfunding campaign measured as the logarithm of the dollar amount.

**Social Media shares (*Social*):** Prior studies have shown that the level of sharing affecting on social media affects the performance of crowdfunding campaigns (cite). This variable is measured as the natural logarithm of the number of Facebook shares.


**Images (*Image*):** Prior crowdfunding research has suggested that the presence of images is correlated with the performance of a crowdfunding campaign. We measure this variable with the count of images on the campaign webpage.

The summary statistics for the variables and correlation matrix is shown in Table 1.

## Estimation Approach

We estimate a linear regression (OLS) model for the funding level outcome and a Tobit model for the emotional support outcome. We use Tobit model because of the censored nature of the *EmoSupport* variable. *EmoSupport* is bounded on the lower range as some medical crowdfunding campaigns may


Figure 1. Sample medical crowdfunding campaign webpage on YouCaring



Log in | Get started

Create a Fundraiser | Browse | More | Search fundraisers

Home > Medical Expenses > This is MY MIRACLE, I know it. Help me make it come true.



### This is MY MIRACLE, I know it. Help me make it come true.

For: [redacted]  
New York, NY  
Organizer: [redacted] Family & Friends

\$213,396  
of \$250,000 goal. Raised by 1,958 donors  
ended 3 years ago

DONATE NOW

Every Share Can Raise \$37

Share on f

### The Story

Dear family and friends,

Today, on September 22, I sat down with my oncologist and we spoke through it ALL. We talked about my cancer, my treatments, my hopes, my fears, my innate ability to create my own unique path through this minefield of a disease, my mutations, my understanding of it all... and everything in between.

When I was first diagnosed, I was given three months to live. And here, after four and a half years of defying EVERY single odd, we are at a crossroad and there seems to be only ONE choice, a miracle I desperately need. It is a combination of two different drugs that have worked for other cancer patients with my EXACT HER2+ mutation- yet these other cancer patients are not "colorectal cancer" patients. The number of people with these exact mutations who have colorectal cancer is incredibly low, only 1-2% in the world! I know, I always have to go and try to be unique! At this time, there aren't enough of us to validate the costs for a whole clinical trial. The company, Genentech, that makes these two drugs has a compassionate care program, meaning they will fund individual trials based in

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### Fundraiser Updates (9)

Posted on October 26, 2016 by [redacted]'s Family & Friends

On October 25, I had my kidney stent replaced that was originally done in May. In May, my kidney was not absorbing fluid the way it was supposed to do to a bad side effect from the clinical trial we tried when we were trying to directly put chemo into my biggest tumor on my spine. That did not work out so well, but at the time was my only option. There was a chance they thought they wouldn't have to put a new one in, but my kidney still isn't absorbing fluid at the rate it needs to so he thought it would be safer to put a new one in because they're still a little blockage and this is the safest move. I'm a little sore today, but taking you easy before my miracle treatment number two tonight!

Read more...

Share this update: f

receive no emotional support. Equations (1) and (2) show the model specifications for the funding level and emotional support outcomes respectively. We report the results of our analyses in Table 2.

Figure 2. Sample showing donations and emotional support received on a medical crowdfunding campaign



Table 1. Descriptive statistics and correlation matrix

		Mean	Std. Dev	Min	Max	1	2	3	4	5	6	7
1	<i>Funding</i>	281	3959	0	69000	—						
2	<i>EmoSupport</i>	28.5	38.61	0	227	-0.027	—					
3	<i>EmoFrame</i>	0.5196	0.5004	0	1	0.061	<b>0.195</b>	—				
4	<i>Updates</i>	3.801	5.906	0	43	-0.038	<b>0.183</b>	<b>0.261</b>	—			
5	<i>Goal</i>	20290	30820	0	250000	-0.043	<b>0.378</b>	0.038	0.011	—		
6	<i>Social</i>	1.121	19.61	0	343	-0.004	-0.033	-0.06	-0.037	0.018	—	
7	<i>Image</i>	6.245	7.661	0	40	-0.022	<b>0.215</b>	<b>0.302</b>	<b>0.416</b>	<b>0.151</b>	-0.017	—

All emboldened values are significant at the 5 percent level

$$FundingLevel = \beta_0 + \beta_1 Emotional + \beta_2 Updates + Controls + \varepsilon \quad (1)$$

$$EmoSupport = \beta_0 + \beta_1 Emotional + \beta_2 Updates + Controls + \varepsilon \quad (2)$$

As a way to check for the robustness of our results, we specify and fit alternative models using the different conceptualizations of the dependent variables described in the Measures section. The results remained directionally consistent and significant. These results are reported in Table 2 as alternative analyses. We also specified and estimated equation 1 and 2 as a seemingly unrelated regressions (SUR) model as it is possible that their error terms might be correlated. The results remained directionally consistent and significant as with the results from our main analyses.



## RESULTS

The results of our analyses are reported in Table 2 where we obtained estimates using maximum likelihood scores. In Model 1, we observe that the estimate for *EmoFrame* and *Updates* are both positive and significant at the 1% level. This provides evidence supporting H1(a) and H2(a) and implies that more emotionally framed campaign narratives and higher levels of feedback communication is associated with higher funding levels.

In Model 2, we observe that the estimate for *EmoFrame* and *Updates* are both positive and significant at the 5% levels. This provides evidence supporting H1(b) and H2(b) and implies that more emotionally framed campaign narratives and higher levels of feedback communication is associated with higher levels of emotional support. Interestingly, we observe across Model 1 and Model 2 that the control variable *Goal* has contrasting effects on funding and emotional support. While it has a negative and significant effect on funding, it has a positive and significant effect on emotional support. The positive effect on emotional support may be because large funding goals signal dire situations and that the crowd is so moved to offer words of encouragement even when they may not be donating financially.

A look at the alternative models (Model 3-Model 5) show similar results as Model 1 and Model 2. However, we notice that the control variable *Goal* is positive when we use average donation and number of donors (Model 3 and Model 4) as alternative definition of funding level. This may be because setting a higher crowdfunding goal encourages people to donate more and may draw more donors as more donations may be required to meet the large goal.

## DISCUSSION

As medical crowdfunding continues to become commonplace due to rising healthcare costs, identifying and understanding the factors that help drive funding performance becomes important. Further, because

**Table 2. Results**

	Main Analyses		Alternative Analyses		
	Model 1 (OLS)	Model 2 (Tobit)	Model 3 (OLS)	Model 4 (OLS)	Model 5 (Logit)
Dependent Variable	Funding	EmoSupport	Average Funding	No. of Donors	MedEmoSupport
<i>EmoFrame</i>	0.6309*** (0.1623)	10.820** (4.354)	0.1596* (0.0864)	0.5512*** (0.15638)	0.1617*** (0.0580)
<i>Updates</i>	0.0374*** (0.0144)	0.7844** (0.384)	0.0148* (0.0077)	0.0335** (0.0136)	0.0114** (0.0052)
<i>Social</i>	-0.1866 (0.2292)	-0.0483 (0.1041)	0.0469 (0.1221)	-0.1742 (-0.2173)	-0.0011 (0.0014)
<i>Goal</i>	-0.2530*** (0.0529)	0.0005*** (0.0000)	0.0765*** (0.0282)	0.2456*** (0.0501)	0.0000** (0.0000)
<i>Image</i>	0.0045 (0.0113)	0.3943 (0.3038)	-0.0028 (0.0060)	0.0179* (0.0107)	0.0067 (0.0041)
Observations	306	306	306	306	306
Adjusted R <sup>2</sup>	0.13	-	0.04	0.19	-
Log-Likelihood	-	-1467.5	-	-	-
AIC	1051.6	2951.1	666.2	1019.0	422.39

Note: \*\*\*p<0.01; \*\*p<0.05; \*p<0.1, Standard errors in bracket

patients can receive emotional support while engaged in medical crowdfunding, understanding some of the factors that drive it is beneficial. In this study, we set out to see how the communication style used in a medical crowdfunding campaign affects funding and emotional support. Specifically, we asked if the emotional framing of the narrative of a medical crowdfunding campaign and the level of feedback communicated to the crowd affect the level of funding and emotional social support received. We analyzed a sample of medical crowdfunding campaigns launched by patients with cancer on YouCaring.com. Further, we used alternative definitions for funding level and model specifications to check the robustness of our results.

Our results reveal that medical crowdfunding campaigns with narratives that are more emotional were associated with higher funding levels in terms of the amount donated relative to the funding goal and also received more emotional support. This finding suggests that medical crowdfunding campaign organizers who want to raise a higher percentage of their funding goal are better off framing their campaign narrative to be more emotional than informational. Emotionally framed medical crowdfunding campaign evoke more empathic responses from the Internet crowd which in turn leads to increased donating behavior (Erlandsson et al., 2018). In addition, our finding suggests that by framing campaign narratives to be more emotional, patients will receive higher emotional support in terms of encouragement and prayers from the Internet crowd. Emotional narratives arouse emotions in individuals and can foster helping behavior (Bagozzi & Moore, 1994).

Further, our results reveal that medical crowdfunding campaigns where there is a high level of feedback communication to the Internet crowd are associated with higher funding levels and received more emotional support. Again, this finding suggests that medical crowdfunding campaign organizers who want to raise a higher percentage of their funding goal will be better off if they provided more feedback communication to the Internet crowd. The higher levels of feedback communication tend to keep the crowd informed, creates a sense of transparency (Mejia et al., 2019) and encourages them to donate more. In addition, our finding suggests that by providing higher levels of feedback communications, patients also draw more emotional support. This may be because a higher level of feedback communication is more likely to draw response from the intended audience (Fischer & Reuber, 2014; Weiss et al., 2008). For instance, if there is more feedback about the recovery process of a patient, donors will be more likely to respond to some of those feedbacks with encouragements and prayers than if there were no feedback communication about the recovery process at all.

## **Theoretical and Practical Contributions**

This study provides a couple of theoretical and practical insights. First, it adds to the growing literature on medical crowdfunding (e.g. Berliner & Kenworthy, 2017; Burtch & Chan, 2018; Snyder et al., 2016; Wu et al., 2022; Zhang et al., 2021). While scholarship in this area is still in its early stages, and have focused on understanding the usage (Berliner & Kenworthy, 2017; Vox et al., 2018), impacts (Burtch & Chan, 2018), potential consequences (Snyder, 2016; Snyder et al., 2016), and more recently determinants of medical crowdfunding performance (Ba et al., 2021; Zhang et al., 2021), we add to the stream examining the factors that contribute to a medical crowdfunding campaign's fundraising level. Precisely we show how the communication style in terms of the framing of the campaign narrative and regular feedback and communication affects funding level. In addition to funding level, we extend the outcomes of medical crowdfunding beyond fundraising by identifying emotional support as an additional outcome and benefit. Further, we show how the communication style used in the medical crowdfunding campaign affects it.

Second, we supplement the literature exploring framing effects in healthcare. The literature has focused on how framing is used as a health communication strategy to motivate health behavior (Gerend & Maner, 2011; Rothman et al., 2006) through the perception and adoption of health related messages. We take the perspective of the patient to see how the framing of the message conveyed to the Internet crowd about a medical condition affects their response to the patient in terms of financial donation and emotional support. Further, the framing of health related messages to the public are often

framed from a cognitive perspective (e.g. in terms of gains and losses) to trigger rational processing in the intended audience. Our work considers framing from an emotional perspective that triggers affective processing and response. We show that emotionally framed narratives persuade individuals to respond to medical crowdfunding campaigns by donating funds and giving emotional support.

Practically, our study shows how the organizer can improve the level of funding and emotional support received in a medical crowdfunding campaign by the subtle nuances in their communications. For instance, our findings suggest that the organizer can increase the level of funding and emotional support a medical crowdfunding campaign receives by providing a more emotional narrative rather than a more informational one. In addition, it suggests that the organizer provides more feedback communications to the Internet crowd while the medical crowdfunding campaign is still on going in order to increase the level of funding and emotional support received.

## **Limitations and Conclusion**

Our study is not without limitations. First, our study setting is from one of the medical crowdfunding platform and our sample comprises only medical crowdfunding campaigns for breast cancer patients. It is possible that our results do not generalize to all medical crowdfunding campaign platforms and the medical crowdfunding campaigns for other diseases. Future studies could validate our findings on other medical crowdfunding platforms and diseases to strengthen the external validity of our results. Second, we coded our emotional framing variable on a binary scale. By so doing, we may have lost useful information that could be gained by using a wider scale with more variation. Future studies can measure emotional framing on a much wider scale to see if there are nuances on emotional framing that we may have missed because of our measurement. In addition, future study can also employ sentiment analysis to capture more nuanced emotional framing. Finally, as medical crowdfunding continues to grow and people continue to use it to help with rising healthcare cost. There is a need to understand factors that affect the performance of medical crowdfunding campaigns and if there are contextual factors that matter. We shed a little light and hope that this paper will stimulate more effort in this line of enquiry.

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## ENDNOTE

- <sup>1</sup> GoFundMe.com acquired Youcaring in April 2018.