Perceptions of the Pray.com app for supporting psychological well-being and faith among people living with and beyond cancer: Cross-sectional survey

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Abstract

Background: Approximately 30-40% of individuals diagnosed with cancer experience clinically significant psychological distress at some point along the cancer trajectory. However, access to psychological support services to manage the distress can be affected by barriers, such as availability, physical or functional limitations, cost, or stigma, that prevent people from receiving care. Faith and spirituality can be an important source of support for people with cancer, and resources used to enhance faith and spirituality practice may have additional benefits for improving psychological well-being. Digitally delivered faith-based practices (i.e., via mobile apps) have emerged as an accessible and on-demand alternative or supplement to in-person faith-based services that could serve as a supportive care tool for people with cancer. However, there is limited research exploring the use and potential benefits of such tools in cancer populations.

Objective: To quantify the perceived feasibility (acceptability, demand) of using faith-based practices delivered via mobile app (Pray.com) to support psychological well-being among people who have been diagnosed with cancer, and explore the personal experiences of individuals who use the app as they manage their diagnosis.

Methods: This cross-sectional mixed-methods study included an online survey and qualitative interviews. Participants were US-based Pray.com subscribers aged 18 or older who self-reported a cancer diagnosis. The survey assessed the acceptability and demand of using the Pray.com app to support psychological well-being and faith. A subsample participated in virtual interviews to explore their experiences using Pray.com. Quantitative data were analyzed using descriptive statistics and independent t-tests. Qualitative data were analyzed using thematic analysis.

Results: Of the 135 respondents (80% Female, 60% White) 98.5% identified faith as “very” or “extremely” important in their daily life, and reported using the app at least a few times per week (72%). A majority were diagnosed with cancer in the past 5 years (65.7%), reported a breast cancer diagnosis (40.7%), and that they were actively receiving curative treatment (64.5%). Most participants rated the app as helpful for managing mental health (81.5%) and cancer-related thoughts and emotions (74.1%). Over 91% reported they are likely to continue to use the app to support their psychological well-being and would recommend the app to others with cancer. Over 94% agreed there is a need for faith-based digital resources. Qualitative interviews (n=15) echoed these findings, suggesting high levels of acceptability, demand, and benefits to psychological well-being, while also highlighting how the app’s convenience and emotional and spiritual relevance contributed to these outcomes.

Conclusions: This study provides preliminary evidence that digitally delivered faith-based practices via mobile apps are an acceptable and potentially beneficial option to support the psychological well-being of those living with and beyond cancer. Findings suggest potential value in supportive care settings. Future research is warranted.

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INTRODUCTION

Cancer survivorship begins at the time of diagnosis and continues throughout an individual's life as they manage the physical and emotional impacts of their cancer and its treatments, referred to as 'living with and beyond cancer.[1] There are over 18 million people living with a cancer diagnosis in the US and that number is projected to be 26 million by 2040,[2] with approximately 40% of Americans receiving a cancer diagnosis during their lifetime.[3] Beyond the physical burden of the disease, the cancer experience often triggers significant psychological distress, including anxiety, depression, fear, and existential concerns.[4], [5] Studies indicate that 30-40% of those diagnosed with cancer experience clinically significant levels of psychological distress.[6] This chronic distress is associated with increased healthcare utilization and higher medical costs.[7]

Despite the prevalence of psychological needs and cost associated with cancer care, significant gaps remain with how psychosocial resources and services are offered. Multiple barriers prevent access to traditional psychological support, including geographical constraints, mobility limitations due to illness, scheduling difficulties, financial barriers, and stigma surrounding the use of such services.[8], [9] These barriers highlight the need to test alternative supportive interventions that are more accessible, scalable, and aligned with patients' values and preferences.

Faith and spirituality have increasingly been recognized as a significant source of coping for many individuals navigating cancer. Recent research indicates that 65-85% of cancer patients report spirituality or faith plays an important role in their coping process.[10], [11], [12], [13] Faith-based practices have been associated with improved psychological well-being, reduced depression and anxiety, enhanced quality of life, and greater resilience among those diagnosed with cancer. [12], [14], [15], [16] The mechanisms contributing to these benefits may include meaning-making, community support, comfort through ritual, and cognitive reframing of the experience.[17]

Digital health tools have emerged as promising approaches to overcome barriers to traditional supportive care in cancer. Mobile applications (apps) offer advantages of accessibility,

convenience, cost-effectiveness, and the ability to deliver personalized content.[18], [19] The COVID-19 pandemic further accelerated the adoption of digital health tools, as cancer care systems sought alternatives to in-person supportive services.[18] While numerous mental health apps exist, few specifically address the spiritual or faith-based dimensions of coping with cancer, despite their demonstrated importance for many patients.[18], [19]

The combination of faith-based practices and digital delivery represents a potentially valuable yet understudied approach to supporting the psychological well-being of those affected by cancer. Limited research has examined the feasibility and perceived benefits of digitally delivered spiritual resources specifically for cancer populations. This cross-sectional study begins to explore the user acceptability of and demand for digitally delivered faith-based practices and the benefits experienced by users who are managing a cancer diagnosis. Therefore, the purpose of this study was to quantify the perceived feasibility (acceptability, demand) of using the Pray.com app to support psychological well-being among those living with or beyond a cancer diagnosis. We also explored the experiences of patients using the Pray.com app as they manage a cancer diagnosis.

METHODS

Ethics Approval

This study was approved by an Institutional Review Board at the Biomedical Research Alliance of New York (BRANY; STUDY 25-033-1805). All participants provided electronic consent prior to participating in the survey. The deidentified datasets generated or analyzed during the study are available from the corresponding author upon reasonable request.

Study Design and Eligibility Criteria

This cross-sectional study incorporated a one-time online survey and, for a subsample of participants, a brief virtual qualitative interview. Participants were: 1) US-based subscribers to the mobile application, Pray.com, 2) adults (at least 18 years of age) who have been diagnosed with cancer, and 3) able to read and understand English. Cancer diagnoses and treatment status were self-reported and not confirmed by the study team. Participants were recruited between March 2025 to April 2025.

Procedures

Subscribers to the Pray.com app received an in-app invitation describing a survey that would assess perceptions of the app to support psychological well-being while managing a cancer diagnosis. Interested individuals completed an online screening survey to assess eligibility, and eligible participants were invited to complete the study survey. Participants were informed that results of this study may be used in reports, presentations, or publications, and that no identifying information would be linked to their responses. At the end of the survey, participants could opt-in to win one of 30 $25 Amazon e-gift cards and were able to express interest in participating in a brief qualitative interview to discuss their perceptions of the app. A subsample of 15 participants participated in a virtual qualitative interview with a research assistant and a $10 Amazon e-gift card provided for their time.

Measures

The survey was developed by the study team and was administered online using Iterate. The survey was 10-15 minutes in duration and participants were asked to complete 34 items assessing: 1) self-reported engagement with both the Pray.com app (e.g., frequency of use, reasons for using the app, preferred time of day) and in-person faith-based communities, 2) impact of a cancer diagnosis on psychological well-being and faith, 3) perceptions of Pray.com and other faith-based resources (in-person or digitally delivered) for supporting psychological well-being, and 4) feasibility (i.e., acceptability, demand; see Table 1 for feasibility items) of Pray.com for supporting psychological well-being in the context of cancer. At the end of the survey, participants provided information on demographic and cancer-specific characteristics.

Table 1. Feasibility survey items and sample means

		M(SD)
Acceptability		
Item 1	*Pray.com has helped support my mental health and well-being while I manage my cancer* (1=strongly disagree to 5=strongly agree)	4.15(.75)
Item 2	*Pray.com has helped me manage cancer-related thoughts and emotions* (1=strongly disagree to 5=strongly agree)	4.01(.80)

Item 3	*Please rate how relevant Pray.com's content is to your experiences managing a cancer diagnosis* (1=not at all relevant to 5=completely relevant)	3.82(1.06)
Item 4	*Pray.com is more convenient than attending in-person church, bible study, or related in-person activities* (1=strongly disagree to 5=strongly agree)	3.65(1.02)
Item 5	*How likely are you to continue to use Pray.com to support your mental health and wellbeing while you manage your cancer* (1=extremely unlikely to 5=extremely likely)	4.44(.75)
Demand		
Item 1	*Overall, how likely are you to recommend Pray.com to someone else with cancer* (1=extremely unlikely to 5=extremely likely)	4.40(.64)
Item 2	*There is a need for faith-based resources like Pray.com to support the mental health and well-being of people with cancer* (1=strongly disagree to 5=strongly agree)	4.46(.71)
Item 3	*Please rate how interested you might be in exploring faith-based content and engaging with an online community within the Pray.com app that is specifically tailored to the cancer experience* (1=not at all interested to 5=very interested)	3.73(1.20)

Note. N=135

Semi-Structured Interview

A subset of participants (n=15) completed a semi-structured qualitative interview via video conferencing that focused on exploring their experiences using the Pray.com app. The qualitative interview focused on topics similar to those in the survey (e.g., acceptability, demand, experiences with faith and managing cancer). See Supplemental Table 1 for interview items.

Statistical Analysis

Data were analyzed using IBM SPSS 31.0. Descriptive, frequency statistics, and mean values were calculated to characterize the sample and summarize the survey data from all available data. Missing survey responses were not imputed. Independent samples t-tests were used to examine mean differences on feasibility outcomes (i.e., acceptability, demand) by various demographic, clinical, and behavioral factors. Welch's t-tests were used when equal variances could not be assumed (i.e., Levene's test was significant). To control for multiple comparisons, the Benjamini-Hochberg procedure, or False Discovery Rate (FDR) procedure, was used to calculate

adjusted p-values (reported as q-value) for each comparison. The significance value was set at α=.05. To conduct the exploratory t-tests, binary variables were calculated for: age (young adults aged 18-39, older adults aged 40+), sex (male, female), race (white, all other races), time since diagnosis (diagnosis in past 0-12 months, diagnosis more than 12 months ago), treatment status (actively receiving curative treatment, not actively receiving curative treatment), frequency of app use (‘a few times per month’ or less, ‘a few times per week’ or more), and frequency of in-person church attendance (attend once per month or less, attend greater than once per month).

With regard to the qualitative data, interview transcripts were imported into NVivo (QSR International) for coding and analysis. Thematic analysis methods were used based on the inductive or deductive approach proposed by Braun and Clarke.[20] In brief, this involved first identifying top-level themes based on the main issues and questions covered in the interviews. Within these, emergent themes were identified inductively from the transcripts and labeled appropriately. An iterative process was used in which relevant extracts of interview data were allocated to these, with the coding being continually reviewed and revised until the analyst felt confident that it most accurately reflected the lived experiences of the research participants as reported in their interviews.

RESULTS

Demographic Characteristics

A total of 135 Pray.com subscribers diagnosed with cancer participated in the survey, and a subsample of 15 participated in the qualitative interview. The average age of the sample was 56 years (SD=12, range 25 to 93 years), with 11% of participants classified as young adults (i.e., age 18-39). Most respondents identified as female (80.0%). Over half of the sample identified as White or European American (60.0%), 27.4% identified as Black, African American, or Native African, and 8.9% identified as Hispanic. See Table 2 for a summary of demographics.

Most of the sample reported practicing a specific religion (60.7%), while 34.8% reported practicing faith without identifying with a specific religion. Nearly all respondents reported that faith is either ‘very’ or ‘extremely’ important in their daily life (98.5%). Many respondents reported attending in-

person church or religious services ‘regularly’ (39.3%) or ‘very frequently’ (23.0%), with 41.5% reporting weekly attendance at in-person services. Approximately 15.6% reported they ‘rarely’ or ‘never’ attend in-person services, and 8.9% reported having stopped in-person attendance. See Supplemental Table 2 for a summary of responses.

Table 2. Demographics and clinical characteristics of sample

	n(%)	M(SD)
Age (years)		56(12)
Range (years)		25-93
Sex		
Female	108(80.0)	
Male	26(19.3)	
Did not respond	1(0.7)	
Race		
White	81(60.0)	
Black or African American	37(27.4)	
Hispanic	12(8.9)	
Bi-racial or Multi-racial	3(2.2)	
Asian or Asian American	1(0.7)	
Jamaican or Dominican	1(0.7)	
Time since cancer diagnosis (months)		43(51)
Range (months)		1-304
Caregiver at home		
Yes	81(60)	
No	52(38.5)	
Prefer not to disclose	2(1.5)	
Cancer type*		
Breast cancer	56(41.5)	
Brain cancer	10(7.4)	
Cervical cancer	10(7.4)	
Colorectal cancer	9(6.7)	
Lung cancer	6(4.4)	
Prostate cancer	6(4.4)	
Hepatobiliary cancer	5(3.7)	
Lymphoma	5(3.7)	
Melanoma	5(3.7)	
Myeloma	5(3.7)	
Sarcoma	5(3.7)	
Basal cell skin cancer	4(3.0)	
Kidney cancer	4(3.0)	
Leukemia	4(3.0)	
Ovarian cancer	4(3.0)	
Other	21(15.6)	

Prefer not to disclose	1(0.7)
Cancer stage	
Stage 0	21(15.6)
Stage 1	19(14.1)
Stage 2	19(14.1)
Stage 3	20(14.8)
Stage 4	28(20.7)
I don't know	20(14.8)
Other	5(3.7)
Prefer not to disclose	2(1.5)
Cancer treatment status	
Active, receiving curative treatment	68(50.4)
Active, surgery only	19(14.1)
Waiting to start	6(4.4)
Completed	31(23.0)
Prefer not to disclose	8(5.9)
Receiving end-of-life palliative care/hospice care	
Yes	10(7.4)
No	121(89.6)
Prefer not to disclose	4(3.0)

Note. *n=18 reported more than one diagnosis, therefore n exceeds sample size

Clinical Characteristics

The amount of time since receiving a cancer diagnosis ranged from less than one month to 25 years, with an average of 3.6 years since diagnosis (SD=51 months). The majority of patients (65.7%) were diagnosed in the past 5 years, with 26.7% of those diagnosed in the past 12 months. Breast cancer was the most frequently reported diagnosis (40.7%), and 13.3% of the sample reported more than one cancer diagnosis. Most patients (58.5%) reported a Stage 0-3 diagnosis, while 21.5% reported a Stage 4 diagnosis. The majority of respondents reported that they were actively receiving curative treatment (64.5%), while 23% reported having completed treatment, and 4.4% were waiting to start treatment. A subsample of patients (7.4%) reported that they were currently receiving end of life palliative care or hospice care. Most respondents reported that they had a caregiver (60%). See Table 2 for clinical characteristics.

Half of the respondents (50.3%) reported being 'completely' or 'mostly' satisfied with the amount of psychological support they have received from their cancer team since being diagnosed with cancer, and 61.4% reported being 'completely' or 'mostly' satisfied with the amount of spiritual support received from their cancer team. Approximately 51.8% of respondents reported that

someone on their cancer care team had referred them to psychological support (e.g., psychologist, psychiatrist, or counsellor), 36.3% of respondents reported being referred to spiritual support (e.g., chaplain services, or other spiritual advisor), and 34.1% reported a referral to an integrative health program (e.g., yoga, meditation, mindfulness-based practices, tai chi). Approximately 46.0% of respondents reported referral to a support group or another peer support program. Interestingly, among the patients who reported that they did not receive a referral for these services, almost half (range 43.7% to 50%) indicated that they would be interested in receiving a referral.

Impact of Cancer on Faith-Based Practices

Approximately 90% of the sample reported that faith-based practices were ‘very much helpful’ (27.4%) or ‘extremely helpful’ (62.2%) for managing cancer-related thoughts and emotions. More than half (59.3%) reported that their faith became stronger after a cancer diagnosis, 29.6% reported that their faith had stayed the same, and 9.6% indicated that their faith has weakened since receiving a cancer diagnosis. Two-thirds of the sample reported the importance of connecting with a faith community (66.6%), with most agreeing being a part of a faith community helped support their mental health and well-being (73.3%), and helped manage cancer related thoughts and emotions (77.0%). See Supplemental Tables 2 and 3.

Overall, 91.8% of respondents reported using faith-based practices outside of church to support their mental health and well-being either ‘always’ (65.9%) or ‘often’ (25.9%). Although approximately half of the sample reported that their in-person attendance at church has not changed since using digitally delivered faith-based practice (54.8%), about 23.0% of the sample reported that they have attended in-person less often since starting to use the app. A majority of the sample also reported that digitally delivered faith-based practices are ‘just as helpful’ (40.7%), ‘more helpful’ (18.5%), or ‘much more helpful’ (32.6%) than traditional practices. See Supplemental Table 2.

Pray.com App Engagement and Usage Patterns

Approximately 60% of respondents self-reported that they had been using the app for one year or more, while the remaining 40% had been using the app for less than one year. In the last 30

days, most reported using the app either ‘daily’ (39.3%) or ‘a few times a week’ (32.6%). Over half reported a preference for using the app in the morning (55.6%). A summary of self-reported usage statistics are presented in Table 3. Given that the responses to the survey were anonymous, actual app use data could not be used to confirm these responses. The top three reasons for starting to use the app were: ‘to grow my faith’ (73.3%), ‘increase sense of meaning and purpose’ (41.5%), and ‘reduce anxiety’ (39.3%). Many also endorsed using the app to ‘reduce stress’ (35.6%) and ‘improve overall health and well-being’ (33.3%).

Table 3. Self-reported Pray.com usage statistics

	n(%)
How long have you been using Pray.com?	
More than 2 years	23(17.0)
1 to 2 years	25(18.5)
About a year	33(24.4)
More than 6 months	5(3.7)
5 to 6 months	10(7.4)
3 to 4 months	13(9.6)
1 to 2 months	14(10.4)
Less than 1 month	12(8.9)
In the last month, how often did you use Pray.com?	
Daily	53(39.3)
A few times a week	44(32.6)
A few times a month	22(16.3)
Once a month	4(3.0)
Less than once a month	7(5.2)
I have not used Pray.com in last 30 days	5(3.7)
What time of day do you typically use Pray.com?*	
Morning	75(55.6)
Before I start my day	19(14.1)
Afternoon	17(12.6)
When I finish my day	11(8.1)
Evening	31(23.0)
Before bed	37(27.4)
Randomly	38(28.1)
Other	3(2.1)

Note. *More than one response allowed

Feasibility

Acceptability. Most respondents reported that they agreed the app has helped support their mental health and well-being (81.5%) and helped manage cancer-related thoughts and emotions

(74.1%; see Table 1 for mean acceptability ratings). More than half of respondents agreed the app is relevant to managing a cancer diagnosis (62.2%) and that it is more convenient than attending in-person faith related activities (55.6%). Most respondents reported they are likely to continue to use the app to support their mental health and well-being (91.1%). Since starting to use the app, participants indicated retrospective self-reported improvements (i.e., 'better' or 'much better') in anxiety (73.3%), sadness (72.5%), anger (60.0%), fear (77.7%), loneliness (60.7%), regret (55.5%), grief (62.9%), and guilt (55.5%). Respondents also reported improvements in gratitude (84.4%), meaning and purpose (76.2%), and hope (85.9%) since starting to use the app (see Supplemental Table 5 for a summary of reported improvements).

Results of independent samples t-tests indicated that women reported significantly greater endorsements of Pray.com helping with mental health and well-being while managing their cancer, relative to men, $t(48.39)=2.79$, $p=.007$, $q=.049$, $d=0.51$. Women also reported significantly higher ratings of relevance of the Pray.com app's content for managing a cancer diagnosis, $t(132)=3.22$, $p=.002$, $q=.022$, $d=.70$, and that they were significantly more likely to continue to use Pray.com to support their mental health and well-being while managing their cancer, compared to men, $t(132)=2.82$, $p=.006$, $q=.048$, $d=0.62$. When comparing high and low frequency app users, high frequency users reported significantly higher scores that positively endorsed that the app has helped support their mental health and well-being while managing a cancer diagnosis, $t(132)=3.94$, $p<.001$, $q=.014$, $d=0.76$, and that the app helped manage cancer-related thoughts and emotions, $t(133)=4.43$, $p<.001$, $q=.014$, $d=.85$. High frequency users also rated the relevance of the app's content significantly higher, $t(133)=3.61$, $p<.001$, $q=.014$, $d=.69$, and reported significantly greater scores on the likelihood of continuing use, compared to low frequency users, $t(46.89)=2.96$, $p=.005$, $q=.047$, $d=071$. Finally, participants who reported infrequent attendance at in-person church services reported significantly higher scores on the item assessing the convenience of using the Pray.com app relative to in-person church services, when compared to those who reported higher frequency attendance at in-person services, $t(130)=-3.63$, $p<.001$, $q=.014$, $d=-0.68$. There were no other significant differences detected on acceptability by age, race, time since diagnosis, or

treatment status (see Tables 4, 5, and 6 for t-test results).

Demand. Most respondents reported that they would recommend the app to someone else with cancer (91.1%; see Table 1 for mean demand ratings). Nearly all respondents agreed there is a need for faith-based resources like Pray.com to support the mental health and well-being of people with cancer (94.8%) and are interested in exploring faith-based content in the app that is specifically tailored to the cancer experience (63.7%). Results of the independent samples t-tests indicated no significant differences on demand by age, race, time since diagnosis, treatment status, or frequency of in-person church attendance (see Tables 4, 5, and 6 for t-test results).

Table 4. Results of independent samples t-tests comparing mean feasibility scores by demographic variables

	Age			**Sex**			**Race**		
	Young Adults n=15	**Older Adults** n=120		**Female** n=108	**Male** n=26		**White** n=81	**All other races** n=54	
	M(SD)	M(SD)	q-value[a]	M(SD)	M(SD)	q-value[a]	M(SD)	M(SD)	q-value[a]
Acceptability									
Item 1	4.21(.58)	4.14(.77)	.834	**4.21(.77)**	**3.84(.55)**	**.049***	4.09(.68)	4.24(.85)	.488
Item 2	4.00(.66)	4.01(.82)	.991	4.07(.82)	3.69(.62)	.126	3.93(.82)	4.13(.75)	.389
Item 3	3.40(1.18)	3.88(1.04)	.339	**3.95(1.03)**	**3.23(1.03)**	**.022***	3.79(1.12)	3.87(.99)	.816
Item 4	3.27(1.03)	3.70(1.01)	.347	3.68(1.02)	3.50(1.03)	.599	3.66(.95)	3.63(1.12)	.922
Item 5	4.40(.51)	4.45(.78)	.888	**4.53(.68)**	**4.08(.94)**	**.048***	4.44(.78)	4.44(.72)	.999
Demand									
Item 1	4.21(.58)	4.42(.65)	.488	4.45(.67)	4.19(.49)	.142	4.40(.65)	4.40(.63)	.990
Item 2	4.53(.52)	4.45(.73)	.816	4.51(.66)	4.23(.86)	.255	4.41(.77)	4.54(.61)	.494
Item 3	3.53(1.06)	3.76(1.22)	.679	3.76(1.24)	3.62(1.10)	.761	3.63(1.27)	3.89(1.09)	.463

Notes. [a]q-value represents an adjusted p-value derived using FDR procedure to adjust for multiple comparisons

Table 5. Results of independent samples t-tests comparing mean feasibility scores by clinical characteristics

	Time Since Diagnosis			Treatment Status		
	Within last 12 months n=36	**More than 12 months** n=87		**Active Treatment** n=87	**Other** n=37	
	M(SD)	M(SD)	q-value[a]	M(SD)	M(SD)	q-value[a]
Acceptability						
Item 1	3.91(.82)	4.23(.71)	.114	4.21(.75)	4.19(.71)	.984
Item 2	3.89(.67)	4.02(.85)	.595	4.06(.83)	4.11(.70)	.834
Item 3	3.69(1.09)	3.87(1.08)	.595	3.98(1.07)	3.73(.93)	.463
Item 4	3.69(.95)	3.57(1.05)	.715	3.74(1.02)	3.46(.99)	.392
Item 5	4.31(.79)	4.49(.73)	.463	4.52(.73)	4.41(.69)	.599
Demand						
Item 1	4.31(.67)	4.43(.59)	.504	4.51(.57)	4.31(.75)	.345
Item 2	4.33(.54)	4.49(.78)	.488	4.49(.66)	4.54(.61)	.834
Item 3	3.50(1.32)	3.86(1.11)	.347	3.97(1.10)	3.38(1.30)	.068

Notes. [a]q-value represents an adjusted p-value derived using FDR procedure to adjust for multiple comparisons

Table 6. Results of independent samples t-tests comparing mean feasibility scores by frequency of app use and frequency of attendance at in-person church services

	Frequency of App Use			Frequency of in-person church attendance		
	High use n=97	**Low use** n=38		**More than once per month** n=77	**Once per month or less** n=56	
	M(SD)	M(SD)	q-value[a]	M(SD)	M(SD)	q-value[a]
Acceptability						
Item 1	**4.30(.70)**	**3.76(.75)**	**.014***	4.21(.79)	4.07(.71)	.494
Item 2	**4.19(.76)**	**3.55(.72)**	**.014***	4.04(.82)	3.96(.79)	.761
Item 3	**4.02(1.05)**	**3.32(.93)**	**.014***	3.90(1.02)	3.73(1.14)	.595
Item 4	3.71(1.00)	3.50(1.06)	.494	**3.36(1.02)**	**4.04(.89)**	**.014***
Item 5	**4.59(.57)**	**4.08(1.00)**	**.047***	4.34(.85)	4.59(.57)	.161
Demand						
Item 1	4.49(.58)	4.18(.73)	.073	4.35(.67)	4.47(.60)	.488
Item 2	4.55(.63)	4.24(.85)	.112	4.40(.83)	4.55(.50)	.463
Item 3	3.81(1.17)	3.53(1.29)	.463	3.71(1.18)	3.79(1.25)	.834

Notes. [a]q-value represents an adjusted p-value derived using FDR procedure to adjust for multiple comparisons

Qualitative Interviews

Acceptability

Perceived appropriateness for psychological well-being. When asked what aspects of Pray.com were most relevant to helping support mental health and well-being, almost half (46.6%) of the interviewees said that the app had helped their mental health by promoting a positive mindset and helping them overcome negative thoughts, or more generally by providing inspiration or motivation. Others (13.3%) mentioned that, for them, Pray.com had helped reduce severe anxiety or depression. Half (53.3%) mentioned ways in which the app was felt to be comforting, reassuring or calming, with many of these stressing that this had helped them deal with the experience of having cancer. Finally, about one fourth (26.6%) of participants mentioned specific types of content or speakers that have a positive impact on their mental health, including content on healing, the sleep stories, the way that the voices sound, or how characters were portrayed in the stories. Others mentioned that the ease of use (i.e., accessibility, user-friendliness of the app) helped their mental health.

Perceived appropriateness for spiritual life. When asked what aspects of Pray.com were most relevant to helping with spiritual life, about one fourth (26.6%) of participants indicated that the convenience and accessibility of the app expanded their familiarity with the scriptures or different spiritual perspectives. Another one forth mentioned that their spirituality had been enhanced since the app enabled them to listen to religious content even when the physical impacts of cancer prevented them from attending church or from reading the Bible.

Perceived relevance to the cancer experience. About half (53.3%) of participants specifically reported that they feel the app is very relevant to their experience, with several giving examples of how Pray.com had helped them maintain spiritual practices or fall asleep while suffering from cancer-related symptoms or recovering from treatment.

Satisfaction. All 15 participants interviewed reported positive experiences using the Pray.com app. When the interview participants were asked what aspects they liked most about

the app, their responses fell broadly into two main categories: general and specific features of the app.

With respect to the general features, almost half of the participants (46.6%) mentioned that they most liked the convenience of the app and the ready accessibility it offers to a range of religious content or speakers. Similarly, seven of our interviewees reported that they loved how relatable and relevant the app is to themselves and their circumstances. Many mentioned that they feel Pray.com provides content that is just right for them at the moment they access it. Many participants (40%) said they love the fact that the app is easy to share with other people, such as friends who are going through challenging life experiences, or family members who can also hear the content when they are listening. Four participants (26.6%) mentioned that they particularly like the sense of community and support provided by Pray.com, either because they are isolated due to their cancer experience and can interact with others through the app, or because they can request prayers from other Pray.com members. Three participants (20%) also mentioned that they like the educational aspects of Pray.com, which offered them greater access to religious learning and knowledge than they had previously.

With respect to specific features that participants liked, many responses overlapped with responses to the survey question asking which parts of the app participants were most interested in. Responses to these questions have therefore been combined in the analysis. Two participants (13.3%) reported that they most liked the prompts and reminders which remind them to pray regularly, or the ability the app provides to send reminders. Many interviewees mentioned specific types of content as their favorite aspects of Pray.com. Four (26.6%) said bedtime bible stories, bible stories, or excerpts more generally. Two (13.3%) said they most liked content that felt relevant to their current needs, such as health related content. Others specified that they liked or were most interested in the podcasts, sermons, or meditations. Other notable features endorsed by participants were the interesting range of speakers, options to change the narrators' voices, the special effects used in videos, and the worship music. Finally,

one said that what they like best is the option of an ad-free paid-for version to avoid distractions.

Dislikes. When asked what they like least about the Pray.com app, nine participants reported that there is nothing they have come across that they don't like about the app. Of the six participants that reported features that they did not like, five (83.3%) referred to difficulties in navigating the app. These included, for example, finding it difficult to search for particular content or speakers, or to locate specific content once they had navigated away. Two others mentioned that they disliked or had no interest in the TV/video dramatizations and two said that they disliked being asked to pay for a subscription and the limited features in the free version.

Intent to continue using Pray.com. When discussing what factors would influence their decision to continue using the Pray.com app, one third (33.3%) indicated that they would continue to use it because it has become so much a part of their daily routine. Two participants (16.7%) also said that, for them, having a variety of content and high-quality speakers would influence their decision to continue using the app. Three participants (20.0%) mentioned that cost-related factors would influence their decision to continue using the app. Of those three participants, one said they would continue to use it if the subscription price remained affordable, while the other two said that having access to free features would influence their intention to continue using the app.

When asked what might prevent them from using the app in future, 20% of participants said that nothing would, but a third (33.3%) mentioned that cost might prevent them or others from doing so. Three (20.0%) referred to ways in which the content or functions of the app might influence their decision to continue using it. Of these, one said they dislike the dramatizations of Bible stories and may stop using the app if this format continues; one said they would stop using it if any political content was introduced, and another mentioned how much they like the continuous play feature and said that if this were ever removed, they might stop using the app. Finally, two (16.7%) of those participants said they would be put off by too many questions in the registration process, or by too many emails from Pray.com.

Demand

Recommending Pray.com. All 15 interviewees indicated that they would be comfortable recommending the use of Pray.com to another person who has been diagnosed with cancer; indeed, most interviewees mentioned that they had already recommended the app to others and felt it would be a very useful tool for those going through a cancer-related experience. Several participants (33.3%) also stressed that Pray.com could be a valuable tool for the caregivers of people with cancer, with some of these suggesting that a specific section of the app should be specifically tailored to the particular needs of this group. One mentioned that the notifications helped reinforce their spirituality by reminding them to pray regularly, one referred to the spiritual impact of specific content such as the sermons or prayers, and another explained that listening to Pray.com first thing in the morning gives them a strong spiritual start to the day. Another reported that using Pray.com had better prepared them for the experience of cancer by improving their relationship with God.

User Preferences

The majority of participants (66.6%) mentioned that they use Pray.com at bedtime to relax, distract them from pain, or help them to sleep. While two (16.7%) participants mentioned they prefer using Pray.com in the mornings to start off their day with a spiritual practice, four others (26.7%) reported using the app both first thing in the morning and in the evening as regular daily prayer practice or to listen to podcasts or other content. Another four interviewees (26.7%) noted that they use the app anytime throughout the day, to help focus their mind or provide comfort when needed.

Preferred locations for using the app largely reflect the times of day at which it is being used, with many (40.0%) saying they mainly use Pray.com at home and in bed at night. However, a wide range of locations were reported by the interviewees. Though most commonly used at home, some mentioned using Pray.com at work, while driving their car, on a walk, and even while flying. Some gave particular reasons for using Pray.com in these settings, such as

calming their anxiety or enabling them to maintain spiritual practices throughout their day.

The main reason participants gave for selecting specific content on Pray.com fell into three main categories. A third (33.3%) mentioned that they most often listened to recently posted prayers, podcasts, or any content that grabs their interest while scrolling through the app. Three (20%) participants said they deliberately seek out content that meets their current needs (e.g., to calm anxiety). Two (13.3%) mentioned that they selected content based on the title. When asked whether different durations of content affected their choices, a third (33.3%) of participants said that they do select content based on duration, with most of these specifying that they prefer durations of around 15 to 30 minutes maximum. Three (20.0%) said that their preferred duration varied depending on time of day, where they were using the app, or depending on their level of interest in that content. The main reasons for starting but not finishing a practice were external distractions or disturbances (26.6%), dislike of the style of the presentation such as the narrator's voice or the use of animated content (26.6%), or lack of interest in the content (13.3%).

Suggested Improvements

Suggested improvements fell into four main categories: navigation and search features, customization options, content related, and other features. Two (13.3%) participants suggested improved navigation tools to make it easier to search for particular content. Two (13.3%) said that they would like the ability not only to search for relevant content, but to customize the app so that it would automatically suggest content or speakers aligned with their specified needs or preferences. Other participants suggested that for themselves personally, Pray.com would be improved if it included content related specifically to cancer or healing (13.3%), more musical content (6.6%), video content (6.6%), or just a wider range of diverse content (6.6%). Finally, one suggested including an artificial intelligence function within the app that could be used to expand on the participant's religious learning, by answering specific questions they might have or expanding on the meaning or context of particular content on request.

When asked if there were any other features that they wished were available in the app or would be more helpful for them, a third (33.3%) of interviewees suggested the inclusion of forums or other live support focused on particular needs or circumstances, such as anxiety, grief, or specific types of cancer. Additionally, several participants identified ways in which they felt the app could be improved to make it more suited to other people experiencing cancer. These included a feature allowing cancer patients to identify and connect with local support groups or view their resources (6.6%), a range of inspirational resources but not specific to illness or healing (6.6%), and content targeted to the needs of patients experiencing different forms of cancer (6.6%).

We also asked the participants how important it is to them to have content on the app delivered by a person who has had cancer themselves, and the majority (66.6%) agreed that this would be valuable or very important to them, because it is more relatable or inspiring to hear from someone with personal experience. Only two (13.3%,) participants expressed the view that it wouldn't matter to them whether or not the person delivering the content has had cancer. One (6.6%) stressed that it would be important for a person speaking about their cancer experience to be vetted in advance by Pray.com.

DISCUSSION

The purpose of this study was to quantify the perceived feasibility (i.e., acceptability, demand) of using the Pray.com app to support psychological well-being among people living with or beyond cancer. We also explored the personal experiences of patients using the Pray.com app as they manage their diagnosis. Overall, survey responses suggest that adults with cancer who subscribe to the Pray.com app are satisfied with the app and perceive the app to be a helpful, relevant, and an accessible tool for supporting their well-being as they manage their diagnosis. Most participants also endorsed intentions to continue using the app and that they would recommend the app to others with cancer. The perceptions of participants who shared their experiences using the app in qualitative interviews were largely consistent with the

survey results and suggest high levels of acceptability, demand, and benefits to psychological well-being, while also highlighting how the app's convenience and emotional and spiritual relevance contributed to these outcomes. Both survey and interview findings emphasize the importance of convenience and personalization for the acceptability of the app with this population, which is consistent with other preliminary work showing high levels of satisfaction with digital tools that are tailored to emotional and spiritual needs of people living with cancer. [21]

To better understand how specific subgroups of patients perceive the app, we compared mean responses on the feasibility items by demographics, clinical factors, and user behaviors. These analyses revealed that women reported the app as more helpful and relevant, and that they were more likely to continue to use the app than men. This is consistent with research in cancer settings showing that women tend to include their beliefs in the coping process and this may act as a buffer against psychological distress.[22] There were no differences in ratings between young adults and older adults, or between people who identify as White or any other race. There were also no differences in ratings when comparing people who are in an active treatment phase and those who are not currently receiving treatment, or when comparing people who had received a cancer diagnosis within the last 12 months and those who received their diagnosis more than 12 months ago. These results indicate that this app could be considered feasible across diverse groups of people with cancer, with moderate to high average ratings across all feasibility outcomes.

It is also important to highlight that app use frequency was also an important factor in perceived acceptability. The results of our survey indicated that people who routinely used the app on a daily or weekly basis generally reported the app as more acceptable (e.g., more helpful, relevant, and convenient) than those who used the app less frequently. These patterns were consistent with the qualitative narratives describing the perceived importance of routine morning or bedtime use and the ability to engage in routine faith-based practice at their

convenience. These findings align with the literature on the efficacy of digital interventions for cancer survivorship that indicate regular use is critical for improved outcomes and sustained engagement over time.[23] Therefore, daily use may be an important aspect of perceived benefit, and should be considered as a recommendation for future work aiming to test the efficacy of such interventions. These findings also highlight the importance of understanding individual differences in user behaviors as they could be used for tailoring content and improving engagement strategies to better meet the needs of users.

Almost all respondents reported there is a need for resources like the Pray.com app to support the mental health and well-being of people with cancer, with half of the sample reporting digitally delivered faith-based practices were either “more helpful” or “much more helpful” than traditional faith-based practices. Interviews emphasized that app features, such as sleep stories, healing prayers, and reminders, were vital for emotional support. These comments are supported by other work showing that access to multimodal content and features (e.g., companion audio, varied narrations, ability to set reminders) is significantly associated with increased engagement and perceived relevance of content in a sample of cancer patients.[21] Interviews also highlighted that the app allowed for continued practice despite fatigue or physical limitations, providing additional evidence that digitally delivered content addresses physical or functional barriers and may offer benefits comparable to in-person spiritual care.[21] These findings are consistent with literature showing app-based interventions are successfully filling gaps in access to care, particularly for those facing geographical, physical, or immunological barriers,[24], [25] and with previous research indicating that faith-based practices can serve as important coping mechanisms during serious illness.[12] Our study adds to this knowledge by demonstrating that digital delivery of faith-based practices are not only feasible but welcomed by those diagnosed with cancer, and could potentially fill an unmet need in cancer supportive care.

Clinical Implications

These findings have some potential implications for clinical practice and program design, particularly for expanding faith-based offerings in supportive care in oncology. First, this work supports the integration of discussions about faith and spirituality into routine cancer care, as the overwhelming majority of respondents reported the need for faith-based resources to support the psychological well-being of people with cancer. In addition, half of our participants reported that they had not received a referral to spiritual support from their cancer care team, and approximately half of the people who had not received a referral for spiritual support indicated that they would be interested in a referral, highlighting a demand for such services. Although these findings are consistent with the literature showing that access to hospital chaplains or remote spiritual care is limited,[26] we see the potential for accessible faith-based content delivered via mobile technology to address this gap in supportive care. Second, although retrospective in nature, the fact that many participants reported improvements on various psychological outcomes since they started to use the Pray.com app suggests that use of the app might serve as a cost-effective, convenient, value-aligned psychological support tool to be used outside of traditional clinical settings or as an adjunct to traditional psychological support services.

Limitations and Future Directions

This study is not without limitations. First, the cross-sectional design limits causal interpretation about the true effects of app usage on the psychological outcomes. More rigorous testing of the app's efficacy for improving the psychological well-being of people diagnosed with cancer is required. Second, there are some notable limitations regarding the sample selected for this study. For example, this sample was relatively homogeneous with respect to sex (i.e., predominantly female) and ratings of importance of faith in daily life, potentially skewing some of the results to be more positive than would be observed in a more representative sample. It is also important to highlight that only a self-selected sample of current subscribers of the Pray.com app were invited to participate, likely resulting in various forms of reporting bias (e.g.,

social desirability bias, recall bias, demand characteristics, etc.). We also relied on self-reporting of medical history, and were not able to confirm the presence of a cancer diagnosis via chart review or physician endorsement. Therefore, the generalizability of these results should be interpreted with these issues in mind. Third, this exploratory study did not incorporate validated measures of psychological outcomes, and therefore we were not able to categorize the sample based on clinical cutoffs for psychological outcomes (such as depression and anxiety) or to compare the sample to clinical norms for people diagnosed with cancer.

Future research extending this work would benefit from purposive sampling to achieve greater heterogeneity, the use of longitudinal designs incorporating randomization, and the use of validated instruments to assess cancer-related psychological outcomes more rigorously across the cancer trajectory. A specific focus on recruiting individuals who have never used digital modalities for faith-based practices, who are unable to or infrequently attend in-person services as a result of physical or functional limitations associated with their cancer, or those who report increases in spiritual distress or religious struggle after a cancer diagnosis may provide some important insights into specific use-cases where digitally delivered faith-based practices may be most beneficial. Finally, exploring the feasibility of implementing digitally delivered faith-based practices, such as those provided by the Pray.com app, into established psychosocial supportive care programs or chaplaincy services could potentially fill the demand for accessible spiritual support, while also supporting psychological well-being.

Conclusion

These findings contribute to the growing literature on integrative approaches to cancer supportive care that acknowledge faith and prayer practices as potential resources for supporting psychological health and well-being, while also leveraging digital tools to enhance accessibility and engagement. This study provides preliminary evidence that digitally delivered faith-based practices via mobile apps are feasible and potentially beneficial for supporting the psychological well-being of those living with and beyond a cancer diagnosis. As healthcare

systems increasingly recognize the importance of addressing spiritual needs in comprehensive cancer care, digital faith-based resources may represent a reliable, scalable, and stigma free approach to extending support beyond traditional healthcare settings.

Data Availability

The datasets generated or analyzed during this study are available from the corresponding author on reasonable request.

Conflicts of Interest

Author BL is a paid scientist at Pray.com but is not paid for the results of the research, only to conduct the research. Author JH discloses they have equity stake in Pray.com but equity is not dependent upon the results of the research. Authors JJ and LJ declare they have no financial interests or incentives from the growth of Pray.com.

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Supplementary Files

Multimedia Appendixes

Supplemental tables referred to in manuscript.
URL: http://asset.jmir.pub/assets/8d0da575ff97b3ce4df9d52fb26dfa5c.docx