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Promoting mammography adherence in underserved women: The telephone coaching adherence study

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ABSTRACT

Background: Despite interventions to promote regular mammography, underserved women face barriers to mammography. This is evident in high no-show appointment rates in community-based clinics. Understanding why women fail to follow-through with appointments may help improve adherence.
Objectives: We conducted a focus group with women who were non-adherent to mammograms to evaluate psychosocial and structural barriers and design intervention messages. In phase two we conducted a small randomized controlled trial (RCT) to pilot test a brief telephone coaching adherence intervention (vs. control) to address barriers.
Method: Eligible women were non-adherent to their mammography screening appointment at a community-based setting. Psychosocial factors and perceptions of barriers were measured via a baseline survey and used to tailor the telephone coaching session. In the RCT, the primary outcome was whether women rescheduled and kept their appointment (yes vs. no). Descriptive statistics were used to summarize the results.
Results: Fifty-four women participated in the study (17 in phase 1 and 31 in phase 2); 89% were Black and 11% were Latina. Overall, prior to the intervention, women had low perceptions of risk ($m = 4.2$; $SD = 2.4$) and cancer worry ($m = 4.2$; $SD = 2.6$) and these characteristics informed the telephone coaching. After the intervention, most women (94.5%) rescheduled their missed appointment. More women in the intervention group kept their appointment (54%) than those in the usual care group (46%).
Conclusion: It appears feasible to implement a RCT in non-adherent underserved women. Addressing psychosocial and structural barriers in a brief telephone intervention may reduce non-adherence. Future studies that will test the efficacy of this approach are warranted.

1. Introduction

Screening mammography has proven to decrease breast cancer mortality [1–4], yet population-based research shows that adherence to screening mammography in the US is far from universal [5,6]. In recent national reports [7] approximately 70%

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of women report having had a mammogram in the past 2 years. Screening rates can be even lower in under-insured or uninsured minorities [8,9]. Some factors that have been found to increase mammography use include improved access to imaging (e.g. onsite mammography vans), free/low cost mammograms, home visits and peer educators/patient navigation [10]. Improvements in mammography adherence have ranged from 1% (e.g., letter or video interventions) to 33% (interventions with behavioral and cognitive strategies) [11,12]. Moreover, studies suggest that multiple strategies, such as tailored interventions combined with reminders (phone and/or letters) are generally more effective than single strategies for increasing mammography use in underserved women [10,13,14]. While there is no universal definition of "underserved" for the purposes of this investigation "underserved" was conceptualized as women without health insurance or those who have low-income and met eligibility criteria to be covered by publicly subsidized insurance [15].

Despite the wealth of information about interventions to improve mammography rates, many low-income women continue to suffer from low adherence to mammography screening guidelines. The impetus for this study was drawn from the applied and clinical experience from within a community-based screening facility, Georgetown University's Capital Breast Care Center (CBCC) that serves a large proportion of the District of Columbia's (DC) low-income female residents. For example, low-income women served by Medicaid, receive many of the aforementioned access interventions, such as transportation and reminder phone calls from patient navigators, in addition to monetary incentives to attend scheduled appointments. However, adherence to appointments still remains very low (50%) [16]. Thus, it is possible that a woman's self-efficacy, i.e. — her confidence in her ability to follow-through with her mammography appointments and her ability to overcome various barriers to screening, and other psychosocial or subjective and cultural norms may prevent some of the underserved women from having a mammogram [17,18].

Many studies have evaluated logistic barriers to screening in minority populations including: lack of health insurance, absence of social support, lack of child/family care, and lack of transportation and scheduling [19–27]. However, the relationship between psychosocial factors and following through mammography appointments among minority women is less understood [27–29]. In this paper, we take advantage of an ideal setup to describe potential psychosocial (e.g., perceived risk) and access barriers (i.e., transportation) for a group of underserved women who have access to several system level accommodations (i.e. free mammogram screening programs, free transportation to the screening appointments) to reduce barriers to screening but yet their adherence to appointments remains low. In this report we report on the feasibility of conducting a randomized control trial (RCT) within a community-based setting. The aims of this report are to: 1) describe psychosocial and access barriers to mammography among women who are non-adherent to mammography appointments and 2) describe a brief motivational telephone intervention randomized trial to promote adherence to mammography appointments. A better understanding of ways to facilitate adherence for underserved women will be important for the providers that serve this group.

2. Material and methods

2.1. Overview

A mixed method descriptive design was employed in this study. To guide our approach, we chose to adapt Social Cognitive Theory (SCT) as the conceptual framework [30]. The SCT posits that behavioral change comes from observational learning (i.e., modeling), use of reinforcement, improvement of behavioral capacities (knowledge, attitudes, and skills), the values a person puts on performing the behavior (outcome expectancies), and self-efficacy to perform the behavior. Our intervention and measures target these SCT constructs.

Approval was received from the Georgetown University Oncology Institutional Review Board. The setting was the Georgetown University Capital Breast Care Center (CBCC) that provides culturally sensitive comprehensive breast cancer services to women in the Washington, DC area regardless of their ability to pay. Fig. 1 depicts the study schema. The primary purpose of the qualitative phase was to identify psychosocial and structural barriers that could inform the development of brief messages for non-adherent women while assessing the feasibility of reaching non-adherent women. In the second phase, we conducted a RCT to pilot test a brief motivational telephone intervention "Telephone Coaching Adherence Project" (T-CAP). The section below describes the methods and results for each phase of the study.

2.2. Phase I

In the first phase, we collected formative data to identify access and psychosocial factors relevant for underserved Black and Latina women in our patient population in order to inform the data collection tool and develop the intervention script. Women who made appointments at a CBCC but failed to show up for their appointment over a period of 12 months, and who had not had a mammogram elsewhere were eligible. The non-adherence refers to women not adhering to the American Cancer Society annual mammography screening guidelines [31]. A detailed review of clinical records identified 90 women within one month who had been non-adherent. We were able to reach 25 women who consented by phone; 17 of them participated in two focus groups. Given the information in the literature about barriers to mammography screening in minority and underserved women, the focus group guide included questions to understand women's general awareness, feelings, experiences, and decisions about getting mammograms that were in line with our conceptual framework; Social Cognitive Theory (SCT).

Two female researchers trained in qualitative techniques obtained informed consent and moderated focus groups in English. Women shared their experience seeking mammography screening and provided suggestions to encourage other women to get their mammograms. Sessions were audiotaped and transcribed verbatim by an experienced transcriptionist.

Analysis followed established qualitative methods [32]. Two investigators independently read transcripts and extracted key comments associated with women's mammography beliefs, attitudes, and care seeking experiences. Data relevant to each category were examined using a constant comparison process. Categories were added to reflect as many nuances as possible in