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Cancer Perceptions of South African Mothers and Daughters: Implications for Health Promotion Programs

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Abstract

Cancer is one of the leading causes of death worldwide. A major reason why women do not obtain cancer screening procedures relates to the high levels of fear associated with cancer. In this study, we explored South African mothers' and daughters' reaction to the word "cancer" specifically. The study sample included 157 randomly selected mother and adolescent daughter pairs from an urban community in Cape Town, South Africa. Mothers and their adolescent daughters had very similar responses to the term "cancer." We found that most South African mothers and daughters had a fear-based attitude towards the illness. When we asked mothers what they immediately thought of upon hearing "cancer", a majority of women (69%) thought of death and another 43% thought of suffering and the detrimental consequences of the illness. Similarly, 50% of the daughters also thought of death and 42% thought of the detrimental aspects of cancer. Fatalistic attitudes and negative emotional reactions have important implications in cancer prevention and need to be addressed within a public health context.

Cancer continues to evoke powerful emotional responses that can play a critical role in shaping the decision to obtain a cancer screen. Undoubtedly, the family provides an important context for the early dissemination of health beliefs and behaviors (Ross, Mirowsky et al. 1990; Spoth, Redmond et al. 1997; Kressin, Clark et al. 2002). Within the family, the relationship between mother and daughter is a unique portal for the dissemination of various types of health information (Mosavel, Simon et al. 2006). Despite far-reaching advances in cancer treatment, as well as the most recent discovery of the HPV vaccine for cervical cancer, emotional reactions to cancer still influences, to some extent, how people respond, at least initially, to cancer. Death and suffering continue to be the major narratives that accompany adult beliefs and attitudes about cancer. The basis for much of cancer screening and early detection behavior is formed by attitudes and perceptions of cancer, alongside access to care. In particular, cancer affects Black South Africans at an alarmingly high and disproportionate rate, highlighting the continued health disparities remnant of the old apartheid system (Parkin 2002). In this study, we explore the narratives of South African mothers as well as their adolescent daughters about the term cancer. This

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study is significant in that it highlights the strong correlation between mother and daughter associations, and meaning-making, of cancer.

Conceptual Framework

There are various theoretical frameworks from many different fields that can be utilized to understand narratives about cancer. For this study, we use the lay illness perception framework, a model well known in medical anthropology. According to this model, the ways in which the average person experience or coexist with a particular illness will have a major impact on their own health behavior and outcomes. In this framework, the role of culture and other socio-contextual factors are particularly important (Leventhal 1965; Bishop 1991; Skelton 1991; Hagger 2003). Individual representations of health and illness may vary between as well as within cultures (Bishop 1991) and therefore it is critical to fully understand the community and cultural factors that might influence their interpretations of that illness. Furthermore, lay illness perception impacts information-seeking by individuals and also helps in coping with the disease (Skelton 1991). Individuals attempt to create meaning from their illness experience; therefore their implicit theory of disease influences their preventative actions (Leventhal 1965).

There are other theories that emphasize the importance of cognitive processes such as the health belief model and Andersen's health behavior model (Andersen 1968; Andersen 1995; Finfgeld, Wongvatunya et al. 2003). The health belief model (Finfgeld, Wongvatunya et al. 2003) highlights the importance of cognitive decision making processes and although this model also underscores the importance of beliefs and emotions as well as environmental factors it does not highlight socio-cultural factors to the same extent as the lay illness framework. The lay illness model recognizes how experiences about illness obtained from various sources can inform individual perceptions of illness as well as their health seeking behavior.

On the other hand, the Andersen’s behavioral model has primarily been used to explain access to medical care. Over the years this model has evolved from having a primary focus on health care access on the individual level to incorporating various structural and community factors that may impede or facilitate access to care. While this model has proven useful in explaining the use of health services, the use of the lay illness model seems appropriate to explain how individuals develop narratives about cancer that either predisposes or impede them from seeking early detection services.

Factors that Impact Cancer Attitudes

Fear and Worry

Cancer fatalism is defined as the belief that cancer equals death and that death is inevitable when the disease is present (Powe and Johnson 1995). For many individuals, the word “cancer” brings about images of suffering and hopelessness, and they often view the illness as a death sentence.

Cancer patients often experience anxiety as a response to the threat of the illness. Recurring intrusive thoughts of death and cancer serve as key features of this anxiety. It is suggested in one study that the levels of anxiety increases with the progression of the disease (Noyes 1990). Additionally, cancer treatment can also cause both positive and negative emotional reactions. Although anxiety increases drastically before surgery and lowers afterwards, the idea of chemotherapy and radiotherapy may cause some patients extreme distress because of the notorious side effects these treatments are known to cause (House 2000).

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Cultural attitudes towards cancer appear to be fairly similar for many low-income communities worldwide. In research conducted both within the United States, as well as internationally, it is suggested that negative attitudes towards cancer often serve as a barrier to screening (Burnett 1995; Brain 1999; Consedine 2004; Hay 2005). Researchers have found that one of the reasons women may not get screened for breast cancer is because they have a fear of discovering a cancerous lump (Phillips 2001; Hay 2005). Furthermore, a fear of cancer has been associated with poorer screening practices. As indicated in another study, conducted in Hispanic and Black communities, a fear of discovering a medical problem serves as one of the major obstacles to screening, as some feel it is better to not know (Consedine 2004). Economic disparities also influence cancer attitudes and the level of anxiety. Researchers in the United States suggest that cancer worry is greater in minority groups, like African-Americans and Hispanics, than in Caucasians (Phillips 2001). One can conclude based on the results from some of these studies that fear of breast cancer seems to make Hispanic women more hesitant of getting a mammogram compared to African-American women and Caucasian women (Stein 1991).

Methods

Setting and Design

The setting for our research was Masidaal,[1] an urban communityabout 34 km north from the city center of Cape Town, South Africa (Adonis 2000). Masidaal is a community of about 50,000 to 90,000 residents and the community is divided into at least six neighborhoods. We focused on four high schools in Masidaal. One of the few, if not only, sources of up-to-date, reliable information for identifying and selecting representative numbers of adolescent girls and their mothers for participation in research were school records in Masidaal. An interesting aspect about Masidaal, especially in the South African context, is that it has both so-called Coloreds[2] and Blacks living in the same community. Accordingly, the high schools reflect this ethnic diversity.

The long-term goal of our research is to develop a cervical cancer intervention targeting both mothers and daughters, utilizing the adolescent girl as the information channel. We conducted semi-structured interviews and explored the mother-daughter relationship and attitudes and norms towards health related advice, particularly cervical cancer advice. For this paper, we report on a section of the interview that focused on the cancer attitudes of mothers and daughters. We received institutional review board approval from our institution as well as from the Department of Education in the Western Cape to conduct this research.

Study Participants

All participants resided in Masidaal and study participation was limited to mother-daughter pairs. Daughters were in grades 8, 9, or 10 and their mothers 30–60 years of age. The age criterion for mothers was based on the South African cervical cancer policy that makes provisions for three free Pap smears for women 30 years or older. The age range for daughters was at the request of the Department of Education in South Africa. Due to the known challenges encountered in our previous work, we over-sampled by 100%. We conducted proportional random sampling and the schools provided us with class lists. Our consent procedure included conducting informational meetings for daughters at the school. Informational meetings were conducted in any or all of three languages (Xhosa, Afrikaans,

[1]Not the community's real name.

[2]Although the Population Registration Act of 1950, which authorized registration by race, was repealed in 1991, the majority of South Africans continue to self-identify by race. Our use of these racial categories reflects the historical background of participants, their continued attempts at self-identification, and the remaining legacy of apartheid.

English) depending on who attended. Girls who expressed an initial interest were provided with an informational letter from the school principal and the study team. We conducted home visits to all homes where mothers did not respond to the informational letter. Of the 348 randomly selected learners, 241 (69%) attended the informational meetings and at least half of the mothers and daughters responded that they were interested in the study. Of the 241, 157 (65%) mother and daughter dyads participated. Three percent of girls who attended the informational meetings declined participation and 23% of mothers declined participation after their daughter expressed initial interest.

Instrument

We developed a semi-structured instrument with approximately 40% open-ended responses. The instrument had three primary sections that overlapped in both the mother and daughter surveys. In these sections, we focused on the mother-daughter relationship, cancer knowledge, and daughter's health advice. We pilot tested the instrument twice. All study materials were in three languages: English, Afrikaans and Xhosa.

Data Analysis

Mothers and daughters were interviewed separately. All interviews were audio taped and transcribed. Thirty percent of all interviews were back translated and verified for accuracy. We used a thematic analysis approach and manually coded the open-ended questions. The process of coding the open-ended questions consisted of a series of steps that lead to the formation of mutually exclusive categories. We identified all the open-ended responses. Two coders read the responses and independently decided on the emerging theme or category that the response captures. Next, the two coders and PI (first author) discussed their themes, including their rationale for deciding on one theme versus another. Through discussion and evaluation of the rationale, the coders mutually agreed on a theme that best described the response. Despite creating mutually exclusive categories, some questions were double coded in order to capture the duality of the response. The consensus rate for the open-ended questions was approximately 98% and discrepancies were handled by having a third coder review the response and decide on the appropriate category without prior knowledge of the two coders' choices. In all cases there were two similar codes.

Results

Interviews with mothers lasted almost two hours (median=120 minutes, SD=21.2) while daughter interviews lasted one hour (median=60 minutes, SD=14). Our randomly selected sample included 314 participants; 157 mothers and 157 daughters. The average age of the mothers was 40 years old (SD=6.5) and the highest level of formal education was grade 9 (SD=2.4). Slightly more than half (51.3%) identified as Black and 43% identified as Colored. Sixty percent of mothers reported that they had a husband or boyfriend living in the home. More than two-thirds of mothers (77%) said they were unable to or could only meet some of the basic needs of their family. The average age of daughters in this study was 15 (SD=1.8) and most of them were in grade 9 (SD=.8). When daughters were asked if their mothers ever talked to them about cancer, 66% said no.

Mothers' cancer associations

We analyzed the mothers' open-ended responses to the question, "When you hear the word cancer, what do you think of?" The themes for these responses were: death/fear/worry, detrimental consequences/negative outcomes, treatment options, speculation about the causes/types of cancer, and prevention.

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Death—The theme of death, which constituted 69% of the mothers', responses included feelings of fear, worry, and anxiety when hearing the word "cancer." Responses coded for this theme included mothers thinking of cancer as a dangerous illness. Furthermore, this theme includes the mothers' narration of family or community experiences that demonstrates how she has come to make the association between cancer and death.

Upon hearing the word "cancer," a majority of mothers conveyed a fear of pain and inevitable death. One mother said, "Death… threatens on your life because they [hospital staff] can do nothing for you. Your life is finished. Medicine just relieves pain but seriously, there is nothing that they can do."

A response from another mother illustrates how her perception that cancer equals death is based on her experience with her neighbor who had cancer. She said: "Death – death is at your doorstep when you have cancer. I believe in that [because] I had experienced with my neighbor and I know what it is. I see how she suffered; I doctored her. I had no knowledge about it. I learn by myself while she was sick. I doctored her every day. I saw the pain that she have. I believe that there is a cure when they see it [cancer] immediately but once cancer has spread in your body, then…the books of life is closed on you. So I will actually say death are with you."

Similarly, a different participant also described the suffering of a neighbor with cancer. She commented, "I just heard of the name [cancer]. I don't know what it is. It's origin…this woman here by me in the street, she does have cancer. Her legs were so red when she struggles to come out by the gate…I wanted to know why she struggles to walk. But when she pulled up her pants, I saw her legs. It was all red. Then I ask her what's wrong with her legs. Then she told me she does have cancer in her legs. That's why her legs look like that. I couldn't understand her…she says that she put wet cloth around her legs. Her legs are so warm. Boiling hot because when the wet cloth is around her legs, then steam come out of the wet cloth. That is why I say I don't understand cancer."

The mention of "cancer" immediately caused emotional distress in some mothers and they become worried about developing the illness. One woman stated, "I'm becoming very hurt even by the name. I'm becoming nervous. [It is a] disease which is inside which you cannot see it with your naked eye. I just wonder if it's becoming a wound which is inside. My nerves [are] becoming very high … about this wound."

According to some mothers, the possibility of getting cancer instilled fear and anxiety for reasons other than death. Not only do these mothers worry about death and the physical pain cancer created, but some were also concerned for the well-being of their families. One mother said: The first thing that comes to mind is what am I going to do now? What about my children? How long I'm going to live? Is it true you going to live three or six months, they gave you? "

Detrimental consequences—In this theme, which included 43% of responses, mothers primarily focused on the pathology of cancer and various treatment procedures when they heard the word cancer. Several mothers described the "lumps" and "wounds" associated with cancer. Some mothers focused on the loss of autonomy an individual with cancer experiences as demonstrated through responses such as: "I heard about throat cancer. It was someone who was sick she cannot even swallow food."

Treatment Options—In this theme, which included 24% of the mothers' responses, some mothers discussed how an individual may be cured if her/his cancer is diagnosed in a timely manner. Respondents articulated the significance of early detection and thought that

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treatment can be effective if started within early onset of the illness. One mother said, “What I know about cancer is that if found early enough it can be treated and you can be cured. But if found too late you die.” Another mother said, “I mean you can go and do the check-up of the cancer of the womb or breast while you have time. Then if it is found early enough, it can be cured; then if it’s late, you cannot. What I’ve heard is that it kills if you don’t treat it, that’s what I know.”

Some mothers believed that cancer can be cured if one follows the proper course of action. This is exemplified through responses such as: “I don’t think cancer is a death sentence anymore. Cancer can be treated if you look after yourself, if you take your medication, [and] if you look after your body. I had cancer and I recovered. Not actually the full-grown cancer before my husband get cancer I had cancer on my womb. It was cut off and I got better and it was so many years ago.” Similarly, another mother described how her friend who had cancer recovered because she followed her treatment and procedures. She said, “I know [about] cancer because I once had a friend who was bleeding too much because of the cervical cancer she had. She bleeds in such a scary way. I think that cancer is one of the dangerous diseases if someone does not take care of her/him. But because of doctors’ help, she’s still alright. Cancer is a killing disease if someone did not take care of herself while it’s still early.”

Speculation about the causes of cancer—The definition of this theme, which included 11% of the mothers’ responses, is based upon mothers who discussed the various causes of cancer. Some mothers referred to different types of cancer that individuals can develop. Additionally, some mothers stated that cancer can be caused by hereditary factors. A significant number of mothers were also worried that they would get cancer or that their children would get cancer because cancer ran in their families

One respondent discussed how cancer was prevalent in her grandmothers and was fearful because of this. She said, “[I think of] many things because we are a cancer family. My grandmothers…died of cancer, so I saw how they look so it becomes fear when you hear.” Emphasizing the perception of the hereditary nature of cancer, one woman worried that she might develop cancer because her father died from the disease. She said, “You going to die…I had a father who died of cancer and for me it was how can I say it is, there is not a cure for it…so when I hear of cancer…I think I’m going to die.”

Prevention—In this theme, which included 11% of the responses, mothers felt that cancer is preventable if an individual follows a healthy lifestyle and goes for routine doctor’s visits. They stressed how important it is for an individual to take care of her/himself and stressed the significance of screening. One mother said, “… how you take care of yourself. [You must] regularly go for thorough checkups…and behave yourself when you have breast cancer or so. I have two or three friends who know they have womb cancer but don’t go for treatment.” Some mothers thought that poor preventative behavior and lack of proper health contributes to the development of cancer. One mother commented, “I feel sad. The person was not concerned about her health or body. It is important to go and see a doctor and to take care of your health or body.”

Daughter’s cancer associations

We analyzed the responses to the open-ended question, “Tell me what are the thoughts or things that come immediately to your mind when you hear the word cancer?” The thematic categories created to code these responses were: death, detrimental consequences/negative outcomes, speculation about the causes and types of cancer, no knowledge about cancer, and treatment.

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Death—This theme (50% of responses) was defined as daughters associating the word "cancer" with death and dying. Daughters indicated that they believed that cancer is an incurable illness. Additionally, some daughters included personal family experiences and other stories relating to cancer and death. These daughters' attitude towards cancer was illustrated through comments such as, "Cancer is a disease that kills. If someone has cancer she can't stay long. She can die anytime." The word "cancer" evoked feelings of helplessness as exemplified by one respondent who said, "I feel very bad because cancer when you have cancer, it's like, it's almost like AIDS. There's no cure for it. Lots of people die of cancer. That's why feel very bad when I heard the word 'cancer.'" Related to this, another daughter said, "[I think] that person does not have long to live…I feel sorry for people who have cancer. That person will die. He or she wouldn't be able to enjoy his or her life."

Fear of developing cancer was also evident in the daughters' responses. One girl said, "… that someone is going to die. I am very scared of that. Cancer is very dangerous... so I am scared I can get it." Similarly, another daughter said, "Immediately I think that I can get it."

"Cancer" caused emotional distress in some daughters. In one response, a daughter explained how her family member died from the disease. She said, "I get scared when they talk about cancer. My aunt lost a lot of weight and she died because of cancer. That's why I don't like the illness cancer; when they talk about cancer in the group, I walk out."

Detrimental consequences—In this theme (42% of the responses), the daughters discussed the negative images associated with cancer. Upon hearing "cancer," some daughters thought of the anguish a person with cancer experiences, as one daughter said, "Pains that doesn't stop. Sleepless nights of frustration, loneliness, because you [are] always in pains and death will follow." Some daughters also commented on the side effects of cancer treatment. One daughter said, "When someone speaks about cancer, they say like, your hair falls out. You need chemotherapy and all that stuff. Like my grandmother had breast cancer." Comments such as, "Suffering, not seeing, dying, laying in hospital, lay in bed, breast cancer, your hair is falling out," demonstrated how daughters associate cancer with suffering and pain.

Many daughters also described cancer as an internal wound spreading throughout the body. This is illustrated through responses, such as, "I heard it's a very severe wound which is filled with white blood corpuscles and its killing. And I'm so scared of it." Another daughter said: "When I hear about cancer I'm thinking about something that's growing inside you or something that's spreading over your body inside you and something that's damaging your body part and that just ruining your life. It stays and can't be removed."

Speculation about the causes of cancer—In this theme (22% of responses), daughters believed that cancer is hereditary and/or that is can be caused by poor lifestyle choices, such as drinking and smoking. One daughter said, "You get cancer from smoking. Sometimes cancer is in the family. It is a family sickness. When you have a bleeding in your body, it can cause cancer." A majority of daughters focused on the behavioral aspects that they believed would increase the likelihood of developing cancer compared to hereditary factors. They believed that smoking, drinking, and drugs can lead to cancer. One girl said, "Someone who's going to die or who's not going to stay long. I think it's a disease that occurs [in] people that use drugs or alcohol."

Some daughters were concerned for other people who are at risk of getting cancer and believed that lifestyle choices greatly impacted the risk of developing cancer. One daughter said: "I just wish people could stop drinking and smoking. I just think that her/ his life is not

going to be long. Because he/she can get sick by a lung cancer because of smoking. I just wish they could stop smoking."

Treatment Options—In this theme (10% of responses), the daughters thought of what treatment options are available for the individual with cancer. They contemplated about what medication they should take and other treatment plans. Some daughters felt that cancer is curable if the individual follows the proper treatment procedure and if the illness is diagnosed in time. One daughter said, "They must take their tablets. They can die of cancer when they do not drink their tablets that the doctor gave them." Correspondingly, another daughter mentioned the various causes of cancer, but also stressed the importance of seeing a doctor in time. She said: "Very life threatening disease. [It will] kill you if you not quick enough to cure it. Cancer [is caused by] smoking, dust and sun. You can cure [cancer] by going to clinic or hospital before it is too late; before it grows in your body."

No knowledge about cancer—This theme (13% of responses) includes daughters who have never heard of cancer and have not really thought of anything when hearing the word. This is illustrated through responses such as, "Nothing comes to my mind because I know nothing about cancer." Another daughter who did not feel knowledgeable enough to respond to the question commented, "I know nothing about cancer so I'm not going to say anything about it."

Discussion

Cancer is a leading cause of death for many marginalized women in the developing world, as well as in the United States and other industrialized countries (CDC 2007;WHO 2008). Few researchers, if any, have examined the perceptions of mothers and their adolescent daughters about cancer. In this descriptive study conducted in Cape Town, South Africa, we asked mother-daughter pairs their reactions or associations of the word "cancer." The narratives of mothers and daughters about cancer were similar despite the fact that 60% of girls said that their mothers never talked to them about cancer. Therefore suggesting that girls are susceptible to the unspoken messages received from their mothers about cancer or it could suggest that girls and their mothers receive stimuli from outside sources. These outside sources could include their community experiences with cancer as well as mass media influences. Mothers and daughters primarily associated cancer with death and other detrimental effects. Based on other research in the US, UK, as well as in developing countries, including South Africa, death seems to be universal theme for many in their cognitive map of cancer (Powe 1995;Dein 2004;Walter 2006).

According to the data, the main source of these negative images is from experiences with members in the community who have cancer. The image of cancer as an illness that affects the community was clearly indicated in both mother and daughter perceptions of cancer. They often see the devastating effects of cancer as it affects members of their community. They develop images and meanings of cancer, cancer treatment, and cancer recovery based on their perceptions of what happens to others in the community. It would seem as if the illness perspective of several participants are closely linked to what they have seen represented in the community. This finding corresponds with the belief that illness perception is not only based on past health experiences, but is also heavily based on community and cultural beliefs (Lannin 1998; Jain 2006). Individual perceptions of health are often influenced by community input, which further impacts health behavior. For example, it is found in a study of rural community members in Agra, India that individuals are likely to seek help first from other community members about illness and where to go for treatment before visiting a hospital or clinic (Jain 2006).

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Furthermore, it is suggested by the narratives that daughters and mothers are in need of more information about cancer and that they are especially interested in lifestyle choices that can enhance their chances of living a healthy life. Both mothers and daughters engaged in considerable speculation about the causes of cancer. Interestingly, several of the mothers referred to the importance of personal responsibility and accountability for healthy lifestyle choices. While this view is encouraging, health promotion programs need to continue to emphasize the importance of early detection and screening. However, none of the daughters' responses could be categorized under prevention. This is especially disconcerting given that these daughters, if sexually active, will soon need to engage in preventive screening behavior, especially Pap smears. Furthermore, there were several narratives from daughters that indicated that they had no knowledge about cancer.

Implications for Health Promotion

The impact of cancer prevention and education program on the perceptions of individuals must be carefully considered. Previously, many researchers assumed that creating high levels of fear in individuals by exposing them to graphic images of negative health consequences would motivate them to take preventative measures (Leventhal 1965; Womeodu 1996; Consedine 2004). However, results from multiple studies show that individuals attempt to escape these fear-generated messages by entering a state of denial. Therefore, intense levels of fear did not motivate the subjects to take preventative measures, but instead inhibited them. On the other hand, it is indicated by the findings of a study about risk perceptions and family history that knowledge about chronic hereditary illness may help individuals avoid threats that further exacerbate a hereditary illness (Walter 2004). However, in some situations, the acknowledgement of a family illness may contribute to a fatalistic attitude towards a disease and thereby discourages individuals to take preventative measures. These individuals believe that they will develop the illness regardless of modifying their lifestyles, so they often disregard prevention and treatment measures. Therefore, negative risk perception may be detrimental to an individual's health.

Despite daughters reporting that 60% of their mothers did not talk to them about cancer at all, this data indicates that there are strong similarities between mothers' and daughters' associations of cancer. It appears as if these mothers and daughters already see many negative images related to cancer or what they believe to be cancer in their community, which fuels their negative perceptions. Cancer prevention programs must focus on these images and on the importance of engaging in early detection. Many of these cancer images in the community may be examples of cancer that has been detected at the third or fourth stage of progression.

Health promotion programs need to focus more on educating the family unit. In a study of adolescent daughters of mothers diagnosed with breast cancer, researchers found that the daughters experienced anxiety and worry regarding the changing of family dynamics and family roles. These daughters were also apprehensive about the well-being of their mothers and the loss of the mother-daughter relationship (Spira 2000). In another study of daughters of mothers with breast cancer, researchers found that the daughters were more fearful, hostile, and withdrawn (Compas 1994). These girls also feared developing breast cancer themselves and some even felt the psychosomatic affects of experiencing pain under their arms and breasts. Some researchers argue that mothers do not often discuss their cancer with their daughters because they want to protect them and avoid becoming a burden (Spira 2000). However, the lack of communication regarding breast cancer exacerbated the daughters' worry and anxiety instead of alleviating it. Moreover, it is indicated through this study finding that a lack of information can cause heightened anxiety, negative speculation, and unnecessary fear.

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Future research

More research is needed on why many women in marginalized groups have these fatalistic attitudes towards cancer. Some explanation can be gleaned from Leventhal who attributes this response to defense mechanisms (Leventhal 1965). This fear is defined by six characteristics: (1) external influence, (2) magnitude of danger, (3) environmental cues, (4) reassurance against the danger, (5) changes introduced to minimize impact with the danger, and (6) reduction in the levels of fear. Further research must also be conducted on how the cancer perceptions of mothers and daughters influence each other. More information is needed on how lack of information about cancer or community experiences with cancer influences individual perceptions and cancer screening behavior.

This study has several limitations. This was a randomly selected sample of mothers and daughters in an urban, economically marginalized community that has Western, African, and Eastern influences. Results cannot be generalized to mother and daughter pairs in middle class or more Western environments. We did not collect any data about personal experiences with cancer; therefore, we do not know if any of the women in the study have ever been diagnosed with cancer. Similarly, we did not collect any data on the number of mothers and daughters in this study who knew someone with cancer. It is reasonable to assume that these mothers and daughters would have had stronger perceptions of the effects of cancer. Furthermore, this is a descriptive study that used qualitative data and therefore no direct correlations or paired data assumptions can be made about specific mother-daughter pairs.

Conclusion

In this study, we examined the perceptions of adolescent daughters and their mothers about cancer. It is shown by the findings how, at an early age, the primary themes of death and negative consequences as it is associated with cancer already permeates the minds of adolescents. These findings emphasize the importance of early education with adolescents about cancer, but more importantly it suggests an opportunity for mutual learning between mother and daughter.

Disinformation about cancer can have detrimental effects in terms of early detection and treatment behavior since it solidifies a negative perception of the potential of cancer prevention and control. Furthermore, these negative images, often based on limited information, become part of the community psyche and can potentially impact responsiveness and openness to cancer prevention. While we were restricted by the descriptive nature of the study and lack of outcome data regarding screening behaviors, what we did demonstrate is that beliefs about cancer are localized within the family and community context. Researchers need to utilize the family and community as important assets in dispelling myths about cancer and educating about, as well as providing support on, cancer prevention and control.

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