

Career disruption and limitation of financial earnings due to cancer

Supplemental Materials

Study Design

This descriptive qualitative study utilized purposive sampling for maximum variation, inductive coding based on grounded theory principles, and thematic network analysis to draw conclusions.

Data Collection

Sampling. Our sampling method sought participants purposively to achieve maximum variation based on gender, cancer type/stage, marital status, income level and career trajectory. Patient and Investigator Voices Organizing Together (PIVOT) is a patient research advocacy initiative at The University of Kansas Cancer Center (KUCC), the first author has collaborated with PIVOT to recruit patients who met the inclusion/exclusion criteria. Interested participants were contacted by the first Author to obtain their consent to participate and scheduled their interviews according to participants availability.

Eligibility. To be eligible to participate, participant must be a cancer survivor or a cancer co-survivor, adults 18 years or older (age \geq 18), be either employed or a student at the time of their cancer diagnosis, have completed their cancer treatment, and be in remission.

Justification: Variation by gender. To understand our sample's variation by gender, we relied primarily on participants' pronouns, was an imperfect method. Our theoretical basis for seeking gender variation was the persistence in society of "traditional" gender roles, in which women, on average, have been burdened with disproportionate shares of household and caregiving responsibilities. Because of how this burden can affect careers and shape perspectives on career paths, we felt it was important to seek the perspectives of how cancer disrupted their career.

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Justification: Variation by cancer type/stage. Advance stage cancer patient and a rare cancer patient often experience extreme financial burden. Patients diagnosed with advance stage cancer also undergo extreme treatment which leads to comorbidities that leads to work impairment (temporary or permanent). Allowing us to understand if the employers have provided flexibility or had implemented policies that would help cancer patients.

Justification: Variation by marital status. Our theoretical basis for seeking variation in marital status was that patients who were married at the time of diagnosis had access to insurance through their spouse. Additionally, spouse had a source of income through which additional treatment expenses were covered and had a support system through spouse and other family members.

Interviewing. The first author used a semi-structured interview guide and conducted interviews via Zoom from March 18, 2022, through May 5, 2022. The guide was developed in collaboration with all co-authors, who also integrated feedback from the patient advocacy group (PIVOT). All interviews were one-on-one and recorded using Zoom. The audio files were sent to a professional service for verbatim transcription. The final transcript was received on June 15, 2022.

Interviews were conducted by DPM (first author), who was mentored by DH, and EC, both of whom are seasoned qualitative researchers. DPM has worked closely with all the co-authors and cancer survivors to design the interview guides and has conducted a pilot qualitative study under their guidance before undertaking this research study.

The camera was turned on during the Zoom interview. Participants joined the Zoom call at the scheduled time. The interviewer confirmed the participant details and started recording after obtaining verbal consent to record the session.

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Privacy and confidentiality. We maintained a list of code names corresponding to participants names, and those code names will be associated with demographic information, interview transcripts, and field notes. The file containing code names will be kept on the secure KUMC server and accessible using a password known only to the study team. Demographic information will only be reported in the aggregate

Data Analysis

The first author completed initial inductive coding, using principles of grounded theory, by assigning data to broad “parent” codes. Then, he completed detailed coding, wherein data within parent codes were assigned to “child” codes. Parent and child codes can also be thought of as categories and sub-categories. Analysis was concurrent with data collection, meaning, this process occurred even as interviews were ongoing. This allowed for use of the constant-comparative method in which emerging results shape probing questions that may be asked in later interviews. Rather than introducing bias, instead this process is consistent with the same theoretical basis underpinning our sampling method: maximum variation. Constant comparison ensured we were asking the questions necessary to achieve maximum response variation, leading to the ultimate analytical goal: code saturation. Code saturation means all possible codes relevant to the research question have been uncovered. The coding process continued until no new codes emerged.

The first author consulted with co-authors after coding the first seven transcripts to ensure rigor and mitigate bias. They discussed the codebook, offered professional and clinical perspectives, and aided in the constant-comparative process. The first author coded the next four transcripts, consulting again with co-authors after the eleventh. Then, they made minor revisions to the codebook (ensuring more emphasis on career and income-related questions), and the first

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author reviewed all previous coding. He proceeded with coding, reaching code saturation during the 16th interview. Assembling the thematic network began after completing the coding of all 20 transcripts.

A thematic network most often consists of basic (smaller) themes, which are then grouped into larger organizing (secondary) themes. Those are finally grouped into the largest level of global (primary) themes. Global themes serve as the study's conclusions. To move from child and parent codes to a thematic network, the first author assessed whether child codes should stand alone or if any needed to be merged. The final list of child codes became the basic themes. The parent codes were assessed next, and their final list became secondary themes. Last, the first author determined how the parent codes fit together and relate to one another, grouping them into primary themes. This is a reflective, sensemaking process.