Facilitators and obstacles to couples’ intimacy after hematopoietic stem cell transplantation: A qualitative study

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ABSTRACT

Objective: To identify perceived factors related to intimacy following HSCT.

Design: Qualitative descriptive design.

Participants: Patients diagnosed with hematological cancer, 6 months into their HSCT recovery, and their partners.

Methods: Semi-structured interviews were conducted with 18 participants (nine patients and their partners). A thematic analysis was carried out.

Findings: Couples reported various obstacles to intimacy, such as emotional obstacles (i.e. negative emotions, emotional mismatch), the length of the disease, its treatments and side effects, and the patient’s physical condition. Couples also reported facilitators to intimacy, such as using emotional facilitators (e.g. showing empathy), fostering open communication or sharing common experience of the disease.

Conclusion: This study highlights specific factors that influence couples’ intimacy in the context of HSCT.

Implications for Psychosocial Providers: Couples’ intervention delivered in cancer care should be adapted by focusing on specific factors that maintain or enhance couples’ intimacy.

Introduction

Hematopoietic stem cell transplantation (HSCT), also known as bone marrow transplant, is a procedure that has become an essential treatment in hematological malignancies such as leukemia and lymphoma. Presently, around 50,000 patients worldwide undergo HSCT annually, and the frequency of the procedure continues to increase.1,2 However, HSCT is a complex procedure that can be life-threatening. It introduces many side
effects, such as physical, psychological, and social limitations often poorly understood by patients, and increases the risk of secondary cancer.\textsuperscript{3–6} For example, HSCT patients may experience graft versus host disease (GVHD), long-term fatigue, or anxiety/depression.\textsuperscript{5} To address these consequences, some studies highlighted the protective role of family members’ social support during and after the treatment.\textsuperscript{7,8}

Cancer, and chronic diseases more generally, are considered a stressful event affecting both patients and their family members.\textsuperscript{9,10} Caregivers’ roles during HSCT are often regarded as key to recovery,\textsuperscript{11,12} and the presence of caregivers during treatment improves patient survival.\textsuperscript{13} These studies underscore that caregivers reassure and give hope to the patients,\textsuperscript{11–14} in line with patients’ expectations to be supported and to speak freely about their fears and expectations.\textsuperscript{14,15} However, caregivers, who are usually spouses,\textsuperscript{16} must assume significant caregiving responsibilities during treatment and for many years post-HSCT.\textsuperscript{11} This was highlighted as a risk factor for burden, lack of social or emotional support, anxiety, and depression.\textsuperscript{11,17} To help patients and spouses cope, maintaining a sense of normalcy and sustaining the quality of the relationship are therefore important goals for both parties.\textsuperscript{18}

However, few studies have explored couples’ experiences of HSCT. The literature has primarily focused on quality of life, sexuality, and marital satisfaction but has neglected the topic of intimacy.\textsuperscript{11,19–21} For example, prior- and post-HSCT, patients may present sexual problems (e.g., reduced libido, diminished sexual satisfaction), as well as elevated levels of pain and fatigue.\textsuperscript{19,22} Studies have also found that partners may present higher levels of distress than patients and may experience difficulties adapting to role changes.\textsuperscript{11} In these studies, intimacy is often investigated as it relates to sexual difficulties only. However, intimacy is a multidimensional concept, and its definition is not always clear or consistent between studies. Some components often used to refer to this term include closeness, self-disclosure and sharing, sexuality, reciprocity, emotional support, and interdependence.\textsuperscript{23,24} In the present study, we choose to define intimacy according to these components. In general, and in the context of HSCT, we also define intimacy as an individual and interactional construct, a momentary process in which the degree of connectedness between two partners can change over time.\textsuperscript{25}

As aforementioned, HSCT can be a challenging experience for couples, with a strong impact on their relationship (e.g., change in responsibilities, sexuality). The identification of changes in intimacy between partners could help both patients and their partners adjust to HSCT and assist professionals in addressing their respective needs and expectations. This was the case in breast, colorectal, and prostate cancer, where specific couple-focused interventions enhancing intimacy were created.\textsuperscript{26–32} Thus, our objective is
to explore couples’ experiences of HSCT and its impact on their intimate relationships. More specifically, we aim to: (1) identify the factors each partner perceives to be related to intimacy following HSCT, and (2) determine whether these perceptions differ between patients and partners. To achieve this aim, a descriptive qualitative method will be used.

The present research was conducted in France. In this country, approximately 45,000 people annually receive a diagnosis of hematological malignancies and less than 10% of them will undergo HSCT.\textsuperscript{1,33} No data related to HSCT survivorship are reported. However, depending on the hematological malignancy and the patients’ sex, survivorship is estimated between 21\% and 90\%.\textsuperscript{34} When patients undergo HSCT, they are hospitalized for approximately 4 months and can receive visits from their relatives. All the cancer care hospitals or oncology departments in France have psychologists present. Psychologists adopt a patient-centered approach, offering non-routine psychological support to patients and occasionally to family members. More rarely, depending on their training, psychologists offer couples therapy.

**Methods**

The authors followed the guidelines of O’Brien et al.\textsuperscript{35} for reporting qualitative research.

**Participants**

Research took place at Percy Military Hospital (France). Every patient attending the hospital between January and May 2015 was invited to participate in the study. To meet the inclusion criteria, patients had to be diagnosed with hematologic cancer, be 6 months into their HSCT recovery, be engaged in a same-sex or different-sex relationship for at least one year and still be together 3 months after transplantation, aged 18 or older, fluent in French, and able to give informed consent. Partners also had to be at least 18 years old, fluent in French, and able to give informed consent. The study’s timeframe criterion (6 months post-HSCT) was selected to limit the impact of the acute period, during which emotional distress is highest. Exclusion criteria for patients and partners were the presence of learning disabilities or mental disorders.

**Procedure**

Following local research approval, participants received a document explaining the study. The research team met each volunteer couple to
explain the research purpose, procedure, and confidentiality protocol in detail. Written consent was obtained prior to participation. Subsequently, interviews were scheduled and conducted at participants’ homes or at the hospital. In both cases, interviews were conducted in a quiet and comfortable setting. Couples were interviewed individually the same day. Individual interviews were undertaken as they can capture both patients’ and partners’ individual subjective experience. Individual interviews enable each participant to speak freely and give their own perspective of the experience lived. Recruitment ceased when we reached data saturation (i.e., no new information emerged from the interview).

Semi-structured interviews were conducted by LL using an interview topic guide based on findings reported in the literature (Table 1). The interview guide was reviewed by the research team and pilot tested with an initial couple. The aim of the interviews was to investigate individual communication patterns and relationship intimacy.

**Data analysis**

All interviews were digitally audio-recorded and transcribed verbatim. We gave a fictitious name to each participant and selected the same initial for both members of a couple. Interview duration ranged from 22 to 100 minutes (average of 47 minutes).

A thematic analysis following an inductive approach was used to identify patterned meaning across the dataset. This method and exploratory approach allowed us to make valid inferences from verbal content to describe a specific and little-known phenomenon. Following this method, the information was organized by major themes to descriptively summarize all the views collected. The analysis was conducted independently by two researchers (LL & KL) following Braun and Clarke’s method: (1) reading and re-reading the interviews to ensure familiarity with the material; (2) generating initial codes by coding interesting features line by line; (3) searching themes by gathering data from individual subjects; (4) reviewing themes; (5) defining, naming and writing a detailed analysis of each theme. Differences in findings were discussed with AU.

**Table 1.** Interview guide.

| Question                                                                 | Permissions |
|-------------------------------------------------------------------------|-------------|
| 1/ To begin, how do you feel today? How does your spouse feel today?     | HSCT: hematopoietic stem cell transplantation. |
| 2/ Have you noticed some changes in your relationship since the HSCT? What was challenging or positive in your relationship post-HSCT? |             |
| 3/ Do you feel like you can talk about anything with your spouse? Do you talk about the illness or HSCT with someone else? |             |
| 4/ Are you still making plans together?                                  |             |
until consensus was reached. Afterward, the results were discussed with the scientific team and the data were coded with QDA Miner 4 Software (Provalis Research). The analysis resulted in an initial agreement of 81% (Krippendorff’s alpha score).

The first author (LL) conducted the interviews and transcribed them verbatim. The data were analyzed by LL and KL (health psychologists and researchers) under the supervision of AU, a health psychology researcher trained in thematic analysis who specializes in qualitative research. Additionally, LL and KL participated in two training sessions in thematic analysis. KL is a researcher specialized in qualitative research and trained in thematic analysis, interpretative phenomenological analysis, and lexical analysis.

Methodological rigor was ensured using the principles described by Tobin and Begley to establish trustworthiness, goodness, and authenticity. Furthermore, the researchers used methods of bracketing (i.e., to recognize and set aside a priori knowledge and assumptions during research). These methods included: (a) writing memos during data collection and analysis, and (b) discussing the research with an outside researcher in psychology. Using these methods allowed LL and KL to bring into awareness their preconceptions and to reflect on their engagement with the research.

## Results

### Participant characteristics

Of the 19 couples invited, nine patients and their spouses took part in this study (participation rate = 47%). Data saturation was reached when no new information (codes) emerged during the analysis of the interviews conducted with the last two participants (the ninth couple).

The participants’ ages ranged from 29 to 66 years old (patients’ mean age = 51 ± 11.8 years; spouses’ mean age = 50 ± 11.4 years). Couples had been living together for 22 years on average and were all married. The most common diagnoses were acute myeloid leukemia (4 patients) and acute lymphoblastic leukemia (3 patients). Six of the nine patients were men, and HSCT duration was 2.5 ± 1.6 years on average (8.5 months to 5.5 years). Complete participant characteristics are presented in Tables 2 and 3.

### Results of the thematic analysis

Across the 18 interviews, five themes emerged from the analysis (Table 4): (1) facilitators to couples’ intimacy, (2) obstacles to couples’ intimacy, (3)
Table 2. Characteristics of the participants.

| Couple | Fictive name | Patient / partner | Sex | Age | Number of children | Duration of the relationship (in years) | Socio-professional category | Patient's disease | Days since HSCT | Current status of the disease |
|--------|--------------|--------------------|-----|-----|--------------------|------------------------------------------|----------------------------|------------------|----------------|--------------------------------|
| 1      | Adrian       | Patient            | Male| 42  | 1                  | 6                                        | Unemployed                 | Myeloma          | 536             | Remission                      |
|        | Abigail      | Partner            | Female| 49 |                     |                                          | Executive and intellectual profession |                 |                 |                                |
| 2      | Bastian      | Patient            | Male| 66  | 0                  | 25                                       | Retired                    | AML              | 938             | Chemotherapy                   |
|        | Bianca       | Partner            | Female| 61|                     |                                          | Retired                    |                 |                 |                                |
| 3      | John         | Patient            | Male| 66  | 1                  | 41                                       | Retired                    | AML              | 248             | Chemotherapy                   |
|        | Jessica      | Partner            | Female| 61|                     |                                          | Intermediate profession    |                 |                 |                                |
| 4      | Marie        | Patient            | Female| 29| 0                  | 3                                        | Employed                   | AML              | 478             | Chemotherapy                   |
|        | Marc         | Partner            | Male| 30  |                    |                                          | Employed                   |                 |                 |                                |
| 5      | Oliver       | Patient            | Male| 51  | 3                  | 17                                       | Workers                    | AML              | 1995            | Chemotherapy                   |
|        | Olivia       | Partner            | Female| 44|                     |                                          | Employed                   |                 |                 |                                |
| 6      | Paul         | Patient            | Male| 43  | 2                  | 13                                       | Executive and intellectual profession | Lymphoma         | 860             | Remission                      |
|        | Paulina      | Partner            | Female| 38|                     |                                          | Employed                   |                 |                 |                                |
| 7      | Rachel       | Patient            | Female| 52| 1                  | 25                                       | Executive and intellectual profession | ALL              | 484             | Chemotherapy                   |
|        | Ryan         | Partner            | Male| 60  |                    |                                          | Employed                   |                 |                 |                                |
| 8      | Tatiana      | Patient            | Female| 57| 5                  | 35                                       | Unemployed                 | ALL              | 948             | Chemotherapy                   |
|        | Ted          | Partner            | Male| 61  |                    |                                          | Executive and intellectual profession |                 |                 |                                |
| 9      | Victor       | Patient            | Male| 53  | 2                  | 31                                       | Unemployed                 | ALL              | 1701            | Chemotherapy                   |
|        | Victoria     | Partner            | Female| 51|                     |                                          | Intermediate profession    |                 |                 |                                |

Legend: HSCT = Hematopoietic stem cell transplantation; ALL = Acute lymphoblastic leukemia; AML = Acute myeloid leukemia.
treatments and disease, (4) relationships with others, and (5) the couple relationship. However, to describe these factors in detail, we have decided to focus on the two most salient ones, which are linked to our aims and related to relationship intimacy: the facilitators and obstacles to couples’ intimacy. All the participants reported facilitators or obstacles to couple intimacy.

**Obstacles to couples’ intimacy**

Six subthemes emerged from the participants who reported obstacles to couples’ intimacy.

**Emotional obstacles.** This subtheme was reported by all the participants. First, negative emotions were expressed. Fears and worries were the most cited by couples (16 participants): patients were scared to leave their family behind or to contract another disease, while partners were anxious or sad about the prospect of losing their spouse, managing the disease, and navigating the treatment. For example, Olivia (Partner, aged 44) said, “When he closes his eyes like that, he’s all skinny and it tears my heart out. It weighs me down and several times I have done it, I look at him while he sleeps and

| Table 3. Participants sociodemographic and medical characteristics (n = 18). |
|---------------------------------------------------------------|
| Characteristics | N Patients (n = 9) | N spouses (n = 9) |
|---------------------------------------------------------------|
| Sex | Male | 6 | 3 |
| Female | 3 | 6 |
| Mean age in years (SD) | 51.00 (11.83) | 50.56 (11.41) |
| Mean duration of the relationship in years (SD) | 21.78 (13.00) |
| Family composition | With children | 7 |
| Without children | 2 |
| Education | Middle school | 1 | 2 |
| High school | 3 | 4 |
| College or university | 5 | 3 |
| Socio-professional category | Employed | 4 | 6 |
| Unemployed | 3 | 0 |
| Retired | 2 | 3 |
| Disease | ALL | 3 | – |
| AML | 4 | – |
| Myeloma | 1 | – |
| Lymphoma | 1 | – |
| Years since HSCT | Less than 1 | 1 | – |
| 1 – 2 | 3 | – |
| 3 – 5 | 3 | – |
| 5 and greater | 2 | – |
| Current status of disease | Chemotherapy | 2 | – |
| Remission | 7 | – |

ALL: acute lymphoblastic leukemia; AML: acute myeloid leukemia; SD = standard deviation.
that's when I think about death.” Furthermore, six participants reported guilt. On the one hand, partners felt guilty when they were engaging in activities without their loved ones. On the other hand, patients felt guilty for making their partners live with the disease. The last negative emotions reported were anger and irritability (n = 7). These feelings were linked to the consequences of the disease.

Second, 15 participants reported a lack of emotional communication. Although we chose to classify this subtheme as an obstacle, it is important to note that it was more important for the participants to know or perceive how their spouse was feeling emotionally. Some couples had always functioned this way and were simply continuing their established patterns. For other couples, the lack of emotional communication could have served
as an obstacle, as it did for Bianca (Partner, aged 61): “So I asked him to tell me what he was thinking. He didn’t say anything” and for her partner Bastian (Patient, aged 66): “Well, let’s say we try to talk, but sometimes it takes a while.”

Finally, three partners experienced an emotional mismatch in their relationship. They found it difficult to completely understand what their spouse was experiencing or to express their feelings and be understood, which produced communication difficulties. For instance, Ryan (Partner, aged 60) said, “I don’t know, she’s on antidepressants and everything, but I have a hard time knowing exactly what she’s feeling.”

**Interruption of activities.** An interruption of activities was noted by almost all the participants (n = 17). Long-term projects were the most impacted by the disease and its treatments. These projects were set aside to prioritize short-term projects. The more the patient was affected by the treatment, the more they gave up on activities. For instance, Olivia (Partner, aged 44) said about her husband, “He doesn’t ride bikes with the girls anymore, we don’t go to movies, we don’t do that anymore.”

**Length of the disease/treatment/side effects.** This subtheme, reported by six patients and seven partners, emerged because of the long, extreme nature of HSCT and the side effects it produces. Even after a patient completes their treatment, they may remain in the healthcare process in the sense that they continue to take various drugs and may be re-hospitalized due to their fragility and medical appointments in the post-HSCT years. While some patients became accustomed to this process, others were fatigued by it. For instance, Jessica (Partner, aged 61) said, “It’s exhausting, the problem is that you feel like you never get to see the end of it.” This appeared to be one of the most definitive and challenging obstacles for couples post-HSCT.

**Patient’s physical condition.** Six patients and six partners cited the patient’s physical condition as an obstacle to intimacy. First, they all discussed the impact of the treatments, particularly weight loss, fatigue, and GVHD, which can be visible and persistent. As Olivia (Partner, aged 44) explained, “He loses weight, there are spots that appear on the face, on the body.”

Second, two patients and five partners discussed the patients’ physical changes. This posed a huge obstacle to their intimate relationship. For example, Abigail said (Partner, aged 49), “The way he walked and everything, he looked like a little old man. You’d think it was the grandfather, not the father. And it was horrible. […] And that image … so then, how do you take it away? It’s not possible.” In comparison, patients talked more
about the difficulties of being seen and of looking at oneself, as reported by Rachel (Patient, aged 52): “I didn’t want anyone to see me.”

Finally, we noticed two more subthemes related to patients’ physical condition: the fear of hurting the spouse (reported by two patients and one partner) and the loss of desire (reported by two partners). The Partners were afraid of hurting their spouse due to patients’ physical vulnerability and weight. They seemed to see their spouse as a hurt and sick body, a perception that led to a diminution in their intimate relationship. This subtheme was also linked to partners’ loss of desire, as reported by Abigail (Partner, aged 49): “He’s not the same man at all, so inevitably, the attraction, the seduction, it’s not there anymore. Not at all. […] However, I still want contact, but affectionate contact, not physical contact, not sexual contact.”

Conflicts, tensions. Five patients and five partners reported various tensions and conflicts. This subtheme was often related to the ways in which partners cared for patients during the recovery process. Partners also reported blaming their spouse for being dependent on them or for not being involved enough in their own care process (i.e., nutrition, leaving the home). For instance, Olivia (Partner, aged 44) said: “But he hasn’t been out in months. It’s worrying, with a small appetite, that’s the kind of thing I get angry about.”

Partners’ loss of hope. Three partners reported a loss of hope regarding the length of the disease and its consequences, which created distance within the couple and decreased intimacy. For instance, Bianca (Partner, aged 61) said about her husband, “He’s so negative […], he listens to himself too much, he thinks that … he’s not going to make it, that something’s gonna fall on him again.”

Facilitators to couples’ intimacy
Six subthemes emerged from the participants who reported facilitators to couples’ intimacy.

Communication. Communication between the spouses was reported by all the participants as facilitating intimacy. First, eight couples reported feeling that they could discuss any subject with their partner and did not need to keep any secrets; we will refer to this as open communication. For instance, Oliver (Patient, aged 51) said, “We talk a lot. There’s not a single subject, so she talks to me, I listen to her, I talk to her, she listens to me.” This subtheme seemed to be influenced by the communication habits partners developed prior to HSCT. However, one couple reported
not having open communication; the patient said he was protecting his 
wife from his feelings and from concerns about cancer and HSCT.

Second, 11 participants stated that they fostered emotional commu-
nication with their spouse. Patients tended to express their feelings more 
than partners, especially when they felt uncomfortable or had strong 
emotions, as Rachel (Patient, aged 52) explained: “I’d actually start crying, 
and then I’d have to talk to him…”

**Emotional facilitators.** This subtheme was reported by all the participants. 
First, couples reported that support or encouragement from their partner 
was essential to their recovery. Partners attempted to maintain the patients’ 
family functioning, to help them adapt to their new conditions, and to find 
a new sense of balance. They also motivated the patients by encouraging 
them to perform various activities (e.g., sports, social activities).

Second, partners reassured the patients about the disease and its prog-
nosis. For example, John (Patient, aged 66) said, “My wife is an extraor-
dinary woman […] Without her I would not be where I am today. She’s 
the one who keeps me going.”

Finally, couples reported an abundance of empathy in their interactions. 
On the one hand, partners were affected by their spouse’s condition and 
reported significant sadness, as described by Olivia (Partner, aged 44): 
“When I see him sad, I can’t … it breaks my heart.” On the other hand, 
patients reported feeling guilty for imposing the disease on their loved 
ones and found it harder to live for them, while partners feel the pain 
experienced by their spouse. For example, Oliver (Patient, aged 51) said, 
“It’s harder for her, I’m sure. I was just following the ups and downs.”

**Common experience of the disease.** Both patients and partners insisted that it 
was necessary to live this experience together (five patients and partners). 
They emphasized the importance of working as a couple from the point of 
diagnosis to recovery, as they fight cancer and attend medical consultations 
together. As Bastian (Patient, aged 66) and Jessica (Partner, aged 61) said, 
“We found out the problem together, we’re living it together”; “I think it’s 
important to be there together, especially in this kind of disease.” Partners 
also felt like they had an important caregiving role at home post-HSCT. 
As Ted (Partner, aged 61) mentioned: “We feel a little bit co-responsible.”

**Priority given to the couple.** Two patients and three partners reported that 
giving priority to their relationship helped them adjust to their new life 
and facilitate their intimacy. They tried to take advantage of this experience 
by spending more time with their loved ones, making the most of every 
moment, enjoying activities together, and sharing intimate moments or
short-term projects. They also faced problems or difficulties uniquely, trying as much as possible to put things into perspective and find a compromise, as Marie (Patient, aged 29) observed: “We think more about the meaning of things. We say we're good and that's really nothing. We put things into perspective.”

**Increase of loving behaviors.** Three couples reported that this experience increased their daily loving behaviors. Partners strongly felt the need to protect their loved ones or to show them how valuable they are. For instance, Marc (Partner, aged 30) explained, “I think I’m a little bit more tender, anyway I’m trying, but it’s true that at the beginning it was more tenderness in fact, just taking her in my arms, holding her hand …”

**Using humor.** Three participants reported that using humor protected them and helped them cope together with the disease: “I also try to do a lot of humor because he had a lot of humor. He still has a lot of humor and I love it.” (Bianca; Partner, aged 61). In this subtheme, intimacy is related to the emotional support provided by humor and the closeness partners can feel as a result.

**Discussion**

The findings of this qualitative study offer intriguing and unique insights into the obstacles and facilitators to intimacy for couples facing cancer and HSCT. Even if a couple enjoys open communication, emotions, conflicts, and tensions are known to influence intimacy. Our results highlight specific factors that influence couples’ intimacy in the context of HSCT. On the one hand, prioritizing the relationship, having a shared experience of the disease, and using humor can be seen as key facilitators to the intimacy of couples facing a serious illness. On the other hand, a patient’s physical condition, the length of their disease/treatments, the interruption of activities, and a loss of hope can be seen as specific obstacles to intimacy.

According to Reis and Shaver’s model, intimacy is described as a transactional and interpersonal process in which the self-disclosure and responsiveness of both spouses are essential. Communicating about personal desires, expressing emotion, and having an empathic response can thus result in higher levels of intimacy between partners. Our results are consistent with these findings. More specifically, participants underscored the importance of maintaining the same level of emotional communication as they had prior to their cancer diagnosis, rather than ‘necessarily having an emotional communication.’ Maintaining components of the relationship...
after diagnosis is emphasized in the literature as important for couples.\textsuperscript{46} Lack of communication or sharing of emotions, in line with the use of protective buffering,\textsuperscript{47} can be seen as a method of protecting the partner from distress but can also decrease intimacy.\textsuperscript{48} This was observed in one of the couples we interviewed. By contrast, couples' conflicts may decrease intimacy at any given moment, but a resolution through communication can result in increased intimacy.\textsuperscript{49} In our research, conflicts were only highlighted as an obstacle to intimacy. This result may be related to the fact that participants described specific events without being conscious of the impact it might have on their relationship, during or after the event. These facilitators to intimacy can thus be seen as similar to the general population and not associated with the illness.\textsuperscript{44,46}

More specifically, our findings suggest that several factors can be seen as clear obstacles to couples' intimacy when facing cancer or undergoing HSCT. The length of the disease, its treatments or side effects, the patient's physical condition, and the interruption of activities were highlighted as potential obstacles to couples' intimacy. These factors are directly linked to the disease and are commonly observed as consequences of cancer treatments.\textsuperscript{43,50} While these obstacles also may be observed for other cancer sites, we believe that the length of the disease can have a specific impact, as hematological care is different from solid tumor care.\textsuperscript{51} However, this potential difference needs to be assessed in a quantitative study. Furthermore, in some cases, partners' loss of hope for the patient's recovery creates distance within the couple and decreases intimacy. This can be seen as an adaptative strategy used to face the illness and the possible death of a loved one\textsuperscript{52} and may be associated with the social support received or provided.\textsuperscript{53} Further research on hope and intimacy should be conducted to explore these hypotheses. Negative emotions, such as sadness or anger, and tensions/conflicts were previously highlighted.

In our study, facilitators to couples' intimacy were also identified: prioritizing the relationship, increasing loving behaviors, and having a common experience of the disease. All of these were related to the couple relationship, strengthening the relationship, or putting the spouse first. Defining the disease as a common experience, a “we-disease,” and giving priority to the relationship was previously found to be an essential feature of couple proximity, helping partners cope with cancer.\textsuperscript{54} Indeed, several models have highlighted that a severe illness is often shared within the family or couple.\textsuperscript{9,10} A couple's adjustment is therefore an important dimension to consider when maintaining or enhancing intimacy during cancer care.

Furthermore, specific subthemes were identified for partners: a loss of hope (obstacle) and a sense of support and reassurance (facilitators). No subthemes were specific to patients. Regarding the results, we can assume that patients are focused on their care, invested in their recovery, or
exhausted, while partners tend to invest their efforts into maintaining the relationship, creating a sense of normalcy, and supporting patients.

According to Berg and Upchurch's model, these facilitators and obstacles can differ according to the stages of the illness (e.g., treatment phase, remission) and life span developmental differences. However, our study was not designed to explore these potential differences. Furthermore, two themes emerged from the analysis related to the relationship with others (theme 4) and within the couple (theme 5). We can wonder how these themes are related to the facilitators and obstacles to intimacy identified. To our knowledge, no study has been conducted on intimacy and support provided by close others. Regarding the support provided within the couple, it may impact intimacy positively or negatively according to its reciprocity and the value accorded to equity by the couple. A quantitative study measuring these factors could explore in a more comprehensive way the links between several factors and intimacy.

**Limitations**

First, the couples included in the study seemed to have low levels of distress, which might have impacted the results. This limitation is generally observed in studies interviewing dyads, as they require couples to have a certain level of closeness and openness to consent to joint participation. Participants’ characteristics also may have influenced the results. Patients included were mostly male, engaged in a long-term relationship, and receiving chemotherapy. Unfortunately, due to French legislation, we were not allowed to collect information on those who refused to participate in the study or on participants’ characteristics regarding race, ethnicity, and sexual orientation. Thus, we cannot say whether the characteristics of the included participants are similar to those who refused. Furthermore, although the inclusion criteria were broader, only married heterosexual couples took part in our study. Second, the semi-structured format of the interviews may have influenced the participants’ discourse. To reduce this bias, couples were encouraged to express themselves freely, and spontaneous discourse was favored. Finally, the cross-sectional and descriptive design of the research does not allow us to capture intimate relationship dynamics. Intimacy can be conceived as dynamic, changing as relationships evolve over time, and can be impacted by life events, such as cancer.

**Practice and research implications**

Research on the intimacy of couples with cancer or a severe illness is rare. Thus, it would be interesting to conduct a longitudinal mixed
methods study to gain a more holistic understanding of couples’ intimacy after cancer diagnosis. Questionnaires could assess relationship intimacy, sexuality, communication, and emotions at different times, as well as collect medical and demographic characteristics. For the qualitative part of the study, participants could be asked to keep a diary of their interactions with their partner. This method allows participants to share what they wish with more autonomy, and it would provide more consistent insight into the couples’ lived experiences. Then, an analysis of the qualitative data with the quantitative results could help identify how several factors measured quantitatively may impact the facilitators and obstacles to intimacy. Furthermore, to include couples with high levels of distress or with severe relationship difficulties, patients and partners should be included in the study with or without their spouse. This could create a space in which participants feel freer to express themselves. Finally, future studies should explore intimacy among same sex couples as well as examine the impact of culture on intimacy in cancer care, as few studies have considered sexual orientation or culture.9

In practice, intimacy deficits are identified as one of the most damaging problems in couples’ relationships and are one of the most common reasons for seeking couple therapy.57 Specific attention to couples’ intimacy should thus be provided after cancer diagnosis or HSCT. Interventions should focus on enhancing the couple relationship and its intimacy by encouraging couples to perceive the cancer as a we-disease (“our illness”), to maintain or favor communication and emotional sharing, and to think about how to maintain a sense of normalcy (e.g., continue couples’ activities). These suggestions are in line with the facilitators and obstacles to couple intimacy identified in our study. Such an intervention could be developed based on the Relationship Intimacy Model of Cancer Adaptation.55 Furthermore, a group intervention could be designed based on social learning theory, which states that we learn through observing others,58 and on multi-family therapy.59 First, couples could be met individually to assess their relationship, needs, and difficulties. Then, they could be invited to join the group, which could follow an unstructured format in which any member of the group could raise an issue related to cancer and their relationship.

**Conclusion**

The current study highlights several obstacles and facilitators to couples’ intimacy. Some of these factors can be seen as specific to couples facing a serious illness. However, many factors must be explored to gain a more comprehensive understanding of couples’ experiences and the impact of cancer on their relationship. In practice, clinicians must implement couples’
interventions during cancer care by focusing on specific strategies for maintaining or enhancing couples’ intimacy.

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