

Original Research

Received 23 May 2026

Revised 18 July 2026

Accepted 01 Aug 2026

Natural Resources for Human
Health 2026, Vol. 6 (13s): 1258–1270

KEYWORDS:

Value co-creation; patient
experience; oncology care; patient
engagement.

Exploring Value Co-Creation Processes and Patient Experience in Oncology Care: A Qualitative Study in Indonesia Tertiary Hospital

Agus Suryanto¹, Chriswardani Suryawati², Zahroh Shaluhiah³,
Septo Pawelas Arso²

¹Doctoral Student of the Public Health Programme, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia; ORCID id (0009-0008-8598-2328)

²Department of Health Policy Administration, Faculty of Public Health, Diponegoro University, Semarang, Indonesia; ORCID id (0000-0001-6617-6672); ORCID id (0000-0002-3191-9840)

³Department of Health Promotion, Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia; ORCID id (0000-0003-2663-7918)

ABSTRACT: Cancer remains a major global health challenge that imposes significant clinical, psychological, and socioeconomic burdens on patients and their families. Within the value-based healthcare framework, value co-creation highlights the active role of patients in generating value through interactions with healthcare professionals and health systems. However, evidence regarding how value co-creation influences patient experience in oncology care, particularly within low- and middle-income healthcare settings, remains limited. This study aimed to explore how value co-creation influences patient experience in oncology care. This study used a qualitative case study design. The study was conducted from November 2025 to February 2026 in the oncology unit of a tertiary referral hospital in Indonesia. Data were collected through in-depth interviews using interview guidelines with 35 participants, including physicians, nurses, hospital management staff, cancer patients, and family caregivers selected through purposive sampling. Atlas.ti was used for thematic analysis of the data. This project has been granted ethical approval under license number 218/EA/KEPK-FKM/2025. Three interrelated themes emerged from the analysis: value co-creation in oncology care, patient behavior in treatment, and organizational culture. Value co-creation involved communication, multidisciplinary collaboration, patient engagement, family support, social support, and spiritual support. Patient behavior reflected treatment adherence and decision-making processes, while organizational culture influenced service delivery and workforce coordination. Patient experience was identified as the overall outcome shaped by interactions between relational practices, patient engagement, and organizational context. Value co-creation plays an important role in shaping patient experience in oncology care through dynamic interactions among healthcare providers, patients, families, and organizational systems. Strengthening collaborative relationships, promoting patient engagement, and fostering supportive organizational cultures may contribute to improving patient experiences and achieving more patient-centered oncology care.

1. INTRODUCTION

Cancer remains a major global health challenge, imposing substantial clinical, psychological, social, and economic burdens on patients and their families. Advances in diagnostic and therapeutic technologies have improved survival rates; however, treatment success is no longer defined solely by clinical outcomes. Increasingly, patient experience is recognized as an important indicator of healthcare quality and a key dimension of value-based healthcare [1]. Consequently, improving how patients experience care has become an essential objective in the delivery of oncology care (2,3).

Patients are now widely acknowledged as important contributors to healthcare quality, providing perspectives that traditional monitoring systems and clinical indicators often fail to capture [4]. Patient experience is therefore understood as a multidimensional concept that encompasses relational, emotional, and contextual aspects of care rather than merely patient satisfaction [5]. Despite the growing emphasis on patient-centered care, its implementation in many healthcare settings remains largely procedural and provider-driven, focusing on compliance with service standards rather than on the relational processes that shape how patients perceive value [3].

To address this limitation, service management literature has introduced the concept of value co-creation. This perspective emphasizes that patients are not passive recipients of care but active participants who collaboratively create value through interactions with healthcare professionals, families, and organizational systems [3]. Rooted in the Service-Dominant Logic framework, value is considered an outcome that emerges from social interaction and resource integration rather than a unidirectional service output. Previous studies have demonstrated that patient engagement, shared decision-making, and collaborative communication contribute to perceived service value, patient satisfaction, and treatment adherence [6].

Oncology care represents a particularly complex healthcare context due to prolonged treatment trajectories, emotional vulnerability, high information needs, and reliance on multidisciplinary teams [7]. Patients often experience uncertainty, fear, and psychological distress during treatment, making communication quality, emotional support, and shared decision-making essential components of meaningful care [8]. However, most previous studies examining communication and engagement in oncology have relied on quantitative approaches, which provide limited insight into how value is co-created through everyday interactions between patients and healthcare professionals [9].

Furthermore, research on value co-creation in healthcare has predominantly focused on Western healthcare systems and general medical contexts, while evidence from oncology care and from low- and middle-income countries remains limited (3,6). Differences in healthcare infrastructure, organizational culture, and resource availability may shape patient-provider interactions and influence how value is co-created in healthcare services [10]. In addition, qualitative evidence that captures patients' lived experiences and interactional processes within oncology care remains scarce, particularly in resource-constrained healthcare settings [9]. Understanding these contextual dynamics is therefore essential for strengthening patient-centered oncology care.

This study aims to explore how value co-creation occurs within oncology care and how these processes shape patient experience at Dr. Kariadi General Hospital, which is part of the Ministry of Health of the Republic of Indonesia. Using a qualitative approach, this study examines perspectives from patients, healthcare professionals, and family caregivers to generate insights into relational and organizational processes within oncology care. By providing qualitative evidence from an Indonesian tertiary hospital, the study contributes to the growing literature on value co-creation in healthcare and offers contextual insights for improving patient-centered oncology care in resource-constrained settings.

2. METHODS

2.1 Research Type

This study employed a qualitative descriptive design with a case study approach to explore how value co-creation processes shape patient experience within oncology care. The study aimed to gain an in-depth understanding of relational and organizational processes occurring within oncology services. Epistemologically, this study was grounded in a constructivist paradigm, which assumes that patient experiences and healthcare interactions are socially constructed through communication and shared meaning among healthcare professionals, patients, and family caregivers.

2.2 Population and Participants

The units of analysis in this study included healthcare providers and service users involved in oncology care processes at Dr. Kariadi General Hospital belonging to the Ministry of Health of the Republic of Indonesia. Participants were recruited using purposive sampling to capture perspectives from multiple stakeholders involved in value co-creation in healthcare services. Selection was based on participants' involvement and relevance to the research objectives. Healthcare professionals were selected according to their active role in oncology care delivery, while patients and family caregivers were recruited among individuals receiving or accompanying treatment in the oncology unit. A total of 35 participants were included in the study, consisting of physicians ($n=5$), nurses ($n=5$), hospital management staff ($n=5$), cancer patients ($n=10$), and family caregivers ($n=10$). The number of participants was determined according to the principle of data saturation, where no additional themes or information emerged from subsequent interviews. Participant diversity in gender, age, educational background, and stakeholder roles was expected to enrich perspectives and enhance the rigor of the findings.

2.3 Research Location

This study was conducted at the oncology unit of Dr. Kariadi General Hospital, which is part of the Ministry of Health of the Republic of Indonesia.

2.4 Instrumentation or Tools

The primary instrument used in this study was a semi-structured interview guide developed based on value co-creation theory and patient experience literature. The interview guide explored experiences related to oncology care delivery, perceived healthcare value, and overall patient experiences during cancer treatment.

2.5 Data Collection Procedures

Data were collected through in-depth semi-structured interviews. Potential participants were approached during hospital visits, through workplace communication, or by telephone contact. Interviews were conducted face-to-face in a private setting after patients completed their oncology care visits to ensure participant comfort and confidentiality. Each interview lasted approximately 20–40 minutes and was conducted in Bahasa Indonesia. With participants' consent, interviews were audio-recorded and supplemented with field notes to capture contextual observations. Interview recordings were transcribed verbatim and translated into English using a backward translation process to maintain linguistic consistency and preserve the meaning of participants' statements.

2.6 Data Analysis

Data were analyzed thematically using ATLAS.ti software following the six-phase framework proposed by Braun and Clarke [11]. The analysis process included repeated reading of transcripts for familiarization, generating initial codes, grouping related codes into categories, reviewing and refining themes, and developing thematic narratives related to value co-creation and patient experience in oncology care. Efforts were made to ensure the trustworthiness of the results through member validation with several participants to verify the researcher's interpretations of their experiences.

2.7 Ethical Approval

The Ethics Committee of Diponegoro University accepted this study (Approval Number: 218/EA/KEPK-FKM/2025). All procedures followed the ethical principles of the Declaration of Helsinki. Participants were informed about the study objectives, confidentiality procedures, and their right to withdraw at any stage of the study. Written informed consent was obtained from all participants before data collection, and all interview data were anonymized to ensure participant confidentiality.

3. RESULTS AND DISCUSSION

3.1 Characteristic of Participants

The study involved 35 participants, whose characteristics are summarized in Table 1., where no new information or themes emerged from subsequent interviews. The selection aimed to represent both healthcare providers and service users involved in the co-creation of healthcare value. Participants consisted of physicians ($n=5$), nurses ($n=5$), hospital management staff ($n=5$), cancer patients ($n=10$), and family caregivers ($n=10$).

Table 1. The Characteristics of Respondents

Stakeholder Group	Participants (Informant Codes)	Gender Distribution (M/F)	Age (Mean $\pm$ SD)	Education Level
Physicians	5 (D1–D5)	4 / 1	46.8 $\pm$ 6.5	Master’s–Doctoral degree (oncology subspecialists)
Hospital Management	5 (M1–M5)	1 / 4	47.6 $\pm$ 6.4	Bachelor’s–Doctoral degree (hospital management and clinical leadership)
Nurses	5 (P1–P5)	0 / 5	38.4 $\pm$ 2.7	Diploma–Bachelor’s degree in nursing

Table 1 shows that the respondents with the study included 15 male and 20 female participants, with ages ranging from 18 to 58 years. Among healthcare professionals, physicians had a mean age of 46.8 ± 6.5 years and were predominantly male (4/1), with educational backgrounds ranging from Master’s to Doctoral degrees in oncology subspecialties. Hospital management staff had a mean age of 47.6 ± 6.4 years and were predominantly female (1/4), with educational backgrounds ranging from Bachelor’s to Doctoral degrees related to hospital management and clinical leadership. Nurses had a mean age of 38.4 ± 2.7 years and were entirely female, with Diploma to Bachelor’s degrees in nursing. Among service users, cancer patients had a mean age of 42.8 ± 11.0 years and were predominantly female (3/7), with educational backgrounds ranging from junior secondary school to Bachelor’s degree level. Family caregivers had a mean age of 40.5 ± 10.5 years and were predominantly male (7/3), with educational backgrounds ranging from secondary school to Bachelor’s degree. The diversity of participant characteristics across stakeholder groups provided a broad range of perspectives regarding oncology care processes and enriched understanding of value co-creation and patient experience within the healthcare setting.

In-depth interviews were conducted with 35 participants until data saturation was reached, where no additional themes or information emerged from subsequent interviews. The thematic analysis yielded three interrelated themes: value co-creation, patient behavior, and organizational culture. These themes collectively shaped patient experience within oncology care settings through dynamic interactions among healthcare professionals, patients, family caregivers, and organizational systems. Patient experience did not emerge solely from clinical outcomes but developed through relational interactions, behavioral engagement, and structural conditions within the healthcare system [2]. A visualization of the themes and subthemes derived from the analysis is presented in Figure 1, illustrating value co-creation as the central integrative mechanism linking organizational context and patient behavior to patient experience outcomes.

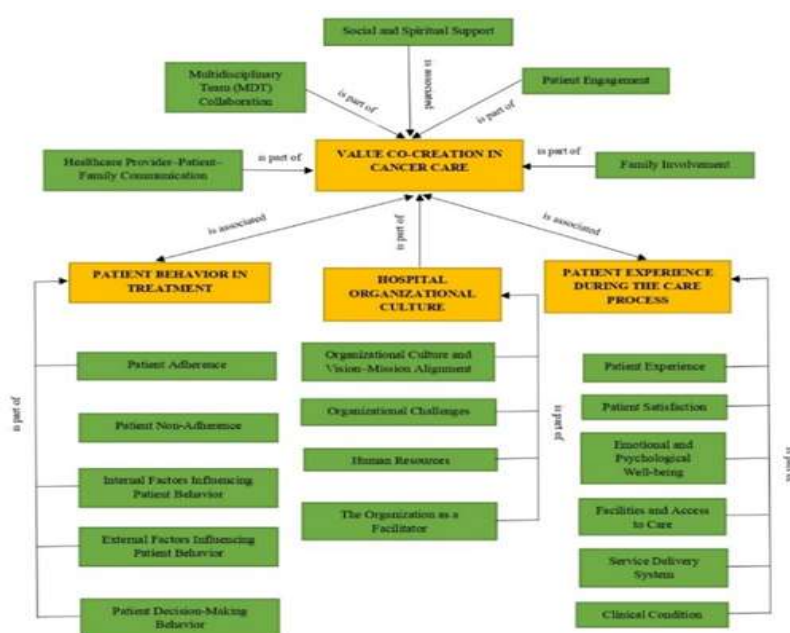


Figure 1. Conceptual model of value co-creation in oncology care.

Each theme in this study comprises three to four subthemes, which were analyzed based on the participants' transcript data. The following is a detailed description of the research findings organized by each theme.

3.2. Value Co-Creation as a Relational Process in Oncology Care

The first theme identified in this study was value co-creation as a relational process in oncology care. Four subthemes emerged from the analysis: communication between healthcare professionals-patients-family, multidisciplinary team collaboration, patient engagement, and family, social, and spiritual support.

Table 2. Summary of Value Co-Creation Perspectives Across Informant Groups

Subtheme	Physicians (D)	Hospital Management (M)	Nurses (P)	Patients (PS)	Family Caregivers (KP)
Communication	Emphasize empathetic, patient-centered communication to build trust and adherence	Recognize communication as a quality indicator but lack continuity systems	Function as communication mediators ensuring understanding and consistency	Value clear and compassionate information for trust and comfort	Support communication and rely on accessible channels during patient vulnerability
MDT Collaboration	View MDT as essential but inconsistently implemented	Provide MDT structure but with limited integration	Operationalize MDT but face coordination challenges	Aware of multiple providers but not team processes	Trust MDT but remain passive in collaboration
Patient Engagement	Engagement varies depending on patient condition and context	Consider engagement important but lack formal mechanisms	Enhance engagement through communication and support	Show mixed roles (active vs passive)	Involvement varies; often defer or support decisions
Family, Social, and Spiritual Support	Consider support critical for adherence and resilience	Acknowledge importance but not systemically integrated	Actively involve family in care support	Depend on family and spirituality for coping	Serve as primary caregivers and adherence supporters

Communication Between Healthcare Professionals-Patients-Family

Participants consistently identified communication as an essential component of collaborative oncology care. Physicians emphasized communication for providing information and supporting adherence, while patients and family caregivers highlighted its role in creating trust and emotional comfort. One participant (PS6) explained:

"When the doctor explained everything honestly and calmly, I felt more prepared. Even though it was scary, I trusted the team and decided to continue the treatment." (PS6)

Nurses also described their role in reinforcing physicians' explanations and ensuring patient understanding through repeated clarification. Family caregivers stated that communication assisted them in understanding treatment procedures and supporting patients during emotionally difficult situations.

Multidisciplinary Team (MDT) Collaboration

Participants described multidisciplinary collaboration as important for delivering comprehensive cancer treatment. Healthcare professionals emphasized that cancer care required contributions from different disciplines. A physician (D2) stated:

“Cancer treatment cannot be managed by one profession alone. Every discipline contributes to achieving the best outcome for the patient.” (D2)

However, several participants indicated that coordination between professionals varied across situations. Nurses reported that MDT collaboration functioned adequately in routine cases but sometimes became difficult during urgent or complex situations. Patients generally recognized the involvement of several healthcare providers but showed limited understanding regarding the MDT process itself.

Patient Engagement

Patient engagement varied among participants. Some patients actively participated in treatment discussions and requested additional information. One participant (PS8) stated:

“After the nurse explained again about the chemotherapy and the side effects, I understood better. That made me more confident to continue.” (PS8)

Other participants preferred relying entirely on physicians when making treatment decisions, particularly during emotionally stressful situations. Healthcare professionals also described that consultation time and patient understanding influenced participation levels.

Family, Social, and Spiritual Support

Participants frequently emphasized the importance of family support throughout treatment. One family caregiver (KP8) explained:

“We always accompany her during chemotherapy. If she feels weak or afraid, we encourage her and remind her to take her medicine.” (KP8)

Several participants also described receiving spiritual encouragement during treatment. One participant (PS6) stated:

“The doctor not only talked about the treatment but also encouraged me spiritually. It gave me strength to keep fighting.” (PS6)

Participants considered family, social, and spiritual support important in helping them cope with long-term treatment.

3.3. Patient Behavior in Treatment

The second theme identified was patient behavior in treatment. Four subthemes emerged: treatment adherence, non-adherence and emotional reactions, internal and external influences, and decision-making behavior.

Table 3. Summary of Patient Behavior Across Informant Groups

Subtheme	Physicians (D)	Hospital Management (M)	Nurses (P)	Patients (PS)	Family Caregivers (KP)
Treatment Adherence	View adherence as an outcome of trust and recovery motivation	Consider adherence a quality indicator but lack monitoring systems	Reinforce adherence through education and interaction	Follow treatment driven by recovery goals	Support adherence through reminders and daily assistance
Non-Adherence and Emotional Response	Link non-adherence to fear, anxiety, and symptom changes	Lack structured behavioral strategies to address non-adherence	Identify emotional distress and misunderstanding as triggers	Experience fear, shock, and initial denial	Provide emotional support to reduce resistance
Internal & External Influences	Emphasize patient heterogeneity (clinical,	Highlight structural constraints affecting behavior	Stress role of knowledge and patient education	Influenced by illness perception, hope, and information needs	Shape behavior through support and interpretation

	psychological, social)				
Decision-Making Behavior	Range from compliance to informed participation	Patient involvement remains informal	Facilitate participation through communication	Mixed: active involvement vs passive reliance	Variable role: support or defer decisions

Treatment Adherence

Participants generally described high levels of treatment adherence. A physician (D2) stated:

"Patients usually follow the schedule because they want to get better." (D2)

Family members reported regularly reminding patients regarding medications and treatment schedules.

Non-Adherence and Emotional Reactions

Participants described fear, uncertainty, and emotional distress immediately after diagnosis. One participant (PS4) explained:

"When I was told I had cancer, I felt shocked and afraid. I thought it meant the end." (PS4)

Several healthcare providers explained that emotional responses occasionally delayed treatment initiation.

Internal and External Influences on Patient Behavior

Participants reported that treatment behavior was affected by both personal and environmental factors. One participant (PS3) stated:

"I just want to get better and go back to my normal life." (PS3)

Participants also mentioned that administrative procedures and waiting times influenced their treatment experiences.

Patient Decision-Making Behavior

Participants demonstrated different approaches to treatment decisions. One participant (PS6) stated:

"I asked about other treatment options, including herbal medicine." (PS6)

Another participant (PS7) stated:

"I just follow what the doctor decides. I want to recover." (PS7)

Family members also described participating in treatment discussions, especially when patients experienced emotional distress.

3.4. Organizational Culture as a Structural Enabler

The third theme identified was organizational culture as a structural enabler. Three subthemes emerged: organizational culture and vision alignment, organizational challenges, and human resources and organizational facilitation.

Table 4. Summary of Organizational Culture

Subtheme	Physicians (D)	Hospital Management (M)	Nurses (P)	Patients (PS)	Family Caregivers (KP)
Organizational Culture and Vision–Mission Alignment	Recognize need for integrated MDT care but lack shared understanding	Define oncology as strategic priority but limited cultural institutionalization	Support multidisciplinary care but require alignment mechanisms	Experience integrated care without awareness of organizational vision	Perceive coordination but not involved in alignment

Organizational Challenges	Identify clinical constraints (facilities, drugs, coordination)	Highlight systemic pressures (patient load, HR shortage, JKN complexity)	Report operational inefficiencies (limited time, coordination gaps)	Experience access barriers (waiting time, administration)	Face limited consultation and service navigation difficulties
Human Resources and Organizational Facilitation	Emphasize need for staffing, incentives, and adaptive communication	Provide systems and policies but uneven HR support	Act as key coordinators and patient support providers	Benefit from care but experience inconsistency	Function as informal care facilitators

Organizational Culture and Vision–Mission Alignment

Participants described oncology services as a strategic institutional priority. One management participant (M2) stated:

“Oncology care is one of our leading programs and continues to be developed in an integrated manner according to the hospital’s vision.” (M2)

Healthcare providers described comprehensive and integrated treatment as essential.

Organizational Challenges

Participants reported multiple operational challenges. One management participant (M3) explained:

“The number of oncology specialists is not proportional to the patient load.” (M3)

Another participant (M1) stated:

“JKN financing involves complex administrative pathways and efficiency demands.” (M1)

Patients also described difficulties related to waiting times and service procedures.

Human Resources and Organizational Facilitation

Participants emphasized the importance of continuous education and staff development. A nurse (P3) stated:

“Continuous education is essential because cancer treatment is rapidly evolving.” (P3)

A physician (D4) explained:

“Cancer patients are emotionally vulnerable, so we approach them in a personal and family-like manner.” (D4)

3.5. Patient Experience as the Outcome of Co-Creation

The final theme identified was patient experience as the outcome of co-creation. Participants described feelings of comfort and reassurance after receiving clear explanations.

Table 5. Summary of Patient Experience

Dimension	Findings
Emotional response	Fear at diagnosis → gradual adaptation
Trust	Central determinant of satisfaction
Satisfaction	Influenced by communication and competence
Structural factors	Waiting time, cost, access limitations

One participant (PS2) stated:

"After the doctor explained everything clearly, I felt calmer and more confident to continue the treatment." (PS2)

Trust was frequently identified as influencing satisfaction. One participant (PS7) explained:

"I follow the treatment because I trust the medical team." (PS7)

Participants also described structural factors such as waiting times and financial limitations affecting their experiences. A physician (D4) stated:

"Economic factors affect not only the treatment process but also the results." (D4)

3.6 Discussion

This study explored how value co-creation shapes patient experience within oncology care in an Indonesian tertiary hospital. The findings indicate that patient experience is not determined solely by clinical outcomes but emerges through interactions among relational processes, patient behavior, and organizational conditions. Three interconnected dimensions were identified: value co-creation as a relational process, patient behavior as a mediating mechanism, and organizational culture as a structural enabler [12]. These findings support the Service-Dominant Logic (SDL) perspective, which proposes that value is co-created through interactions and resource integration among multiple actors rather than delivered unilaterally by providers [13].

Value Co-Creation as a Relational Process in Oncology Care

Communication emerged as a central mechanism through which value co-creation occurred. Beyond transmitting clinical information, communication facilitated trust, emotional reassurance, and shared understanding between healthcare providers, patients, and caregivers. While physicians primarily emphasized its informational role, patients and caregivers frequently perceived communication as a source of confidence and emotional support [14]. These findings suggest that communication functions not only as a means of exchanging information but also as a mechanism that reduces uncertainty and strengthens relational trust. Within oncology settings characterized by prolonged treatment trajectories and emotional vulnerability, communication may create value by enabling patients to feel understood, supported, and actively involved in their care [15]. This interpretation extends previous evidence linking communication with treatment adherence and patient satisfaction by emphasizing its broader relational and emotional functions [16].

The important mediating role of nurses further supports previous evidence suggesting that nurses frequently translate complex medical information into language that is more understandable and emotionally accessible for patients (9,17). From the SDL perspective, communication may therefore function as an operant resource through which value is generated through reciprocal interactions among healthcare actors [18]. However, communication continuity systems, including post-discharge follow-up and structured feedback mechanisms, remained limited. This finding suggests that interpersonal communication alone may be insufficient to sustain value creation without broader organizational support [19].

Multidisciplinary team (MDT) collaboration also represented an important mechanism supporting value co-creation. Participants recognized the importance of integrating expertise from multiple professionals in managing the complexity of oncology care [20]. Consistent with previous studies, MDT collaboration contributed to improved coordination and more comprehensive treatment planning [21]. However, patients demonstrated limited awareness of MDT processes and frequently perceived care as physician-centered.

Unlike previous studies reporting stronger patient awareness and involvement in multidisciplinary care processes, participants in this study frequently perceived oncology care as physician-centered. This discrepancy may reflect contextual factors within Indonesian healthcare settings, where hierarchical professional relationships and traditional models of care may still influence patient-provider interactions [22]. Limited consultation time and restricted opportunities for patient participation may also contribute to lower visibility of collaborative decision-making processes. This suggests a need for greater transparency and stronger patient involvement in collaborative care processes [6].

Patient engagement similarly emerged as an important component of value co-creation. Levels of engagement varied according to emotional readiness, trust, and health literacy. Consistent with previous literature, engagement appeared to function as a

dynamic process rather than a fixed patient characteristic [18]. Organizational barriers such as limited consultation time further restricted opportunities for active participation and shared decision-making [23].

Family, social, and spiritual support extended value co-creation beyond formal healthcare interactions. Family caregivers played active roles in emotional support and treatment adherence, while spirituality strengthened resilience and coping abilities among patients [24]. These findings align with previous studies emphasizing the importance of social and spiritual resources within oncology care [25]. Within the SDL framework, value therefore extends beyond clinical interactions and emerges within broader social contexts involving multiple actors and support systems [18].

Patient Behavior as a Mediating Mechanism in Oncology Care

Patient behavior emerged as an important mechanism linking value co-creation processes with patient experience. Treatment adherence was influenced by trust, motivation, and ongoing support [26]. Consistent with previous findings, adherence appeared not merely as a clinical outcome but also as a relational outcome generated through communication and interactions between patients and healthcare providers [27].

Non-adherence primarily occurred during the early stages of diagnosis and was associated with fear, anxiety, and uncertainty. Similar studies have shown that emotional distress frequently contributes to delayed treatment initiation or temporary treatment refusal [21]. However, most participants resumed treatment after receiving additional information and emotional support, suggesting that non-adherence was often temporary rather than permanent.

Behavioral responses were influenced by both internal and external factors. Psychological factors, including hope, illness perceptions, and spirituality, interacted with organizational factors such as waiting times and administrative procedures [3]. Decision-making patterns also varied, with some patients actively participating while others relied more heavily on physicians or family members. These findings reinforce evidence suggesting that decision-making within oncology care often functions as a shared and relational process rather than an exclusively individual decision [13].

Organizational Culture as a Structural Enabler of Value Co-Creation

Organizational culture functioned as an important contextual factor influencing value co-creation processes. Although oncology care was recognized as a strategic institutional priority, challenges remained at the operational level. Similar findings suggest that organizational visions do not always translate effectively into daily clinical practice [3].

Structural constraints, including workforce shortages, high patient volumes, limited consultation time, and administrative complexity, reduced opportunities for meaningful interactions and patient-centered care [4]. Human resources, particularly nurses, played critical roles in communication, coordination, and patient support. These findings support previous literature emphasizing the importance of professional development and communication training in strengthening patient-centered oncology services [17]. From an SDL perspective, organizational culture provides the contextual environment within which actors integrate resources and engage in collaborative processes [13]. Consequently, organizational barriers may weaken opportunities for effective value co-creation.

Rather than functioning independently, these dimensions appeared to interact dynamically throughout oncology care processes. Communication promoted trust and emotional reassurance, which subsequently influenced patient engagement and treatment adherence. Family and social support further strengthened motivation and coping capacity, while multidisciplinary collaboration facilitated coordinated care delivery. Organizational conditions either enabled or constrained these interactions by shaping opportunities for communication and participation. Therefore, patient experience may be understood not as an isolated outcome of clinical encounters but as an evolving process arising from interconnected relational, behavioral, and organizational mechanisms.

Patient Experience as the Outcome of Co-Creation Processes

Patient experience emerged as the cumulative outcome of interactions among relational, behavioral, and organizational dimensions. Experiences evolved over time and reflected emotional reassurance, trust, accessibility, and perceptions of fairness. Trust emerged as one of the strongest determinants of positive experiences, consistent with previous studies linking trust with satisfaction and continuity of care (3,13). However, satisfaction alone did not always ensure continued treatment engagement, as some patients discontinued care after perceiving clinical improvement. In addition, structural factors such as financial

constraints, waiting times, and accessibility influenced perceptions of care quality, particularly within resource-constrained healthcare systems [9].

Overall, this study extends understanding of value co-creation in oncology care by demonstrating that patient experience develops through dynamic interactions among multiple actors operating at interpersonal and organizational levels. Practical implications include strengthening communication training for oncology professionals, developing structured post-discharge follow-up systems, improving patient education programs, and implementing organizational policies that facilitate multidisciplinary collaboration and patient participation.

This study also contributes to the Service-Dominant Logic framework by demonstrating that value co-creation in oncology care extends beyond direct interactions between patients and healthcare providers. Findings suggest that value emerges through dynamic interactions among interpersonal relationships, behavioral responses, and organizational structures. While previous SDL studies have predominantly focused on patient-provider interactions, the present findings highlight the importance of organizational culture as a contextual mechanism shaping opportunities for resource integration and collaborative value creation.

Limitations and Cautions

This study is subject to certain limitations, notably that the data analysis was conducted by a single researcher, which may have led to an interpretation that reflects a singular perspective on the phenomenon under investigation. Nevertheless, the data processing phase, including the transcription of interviews, was supported by several research assistants. This collaborative effort contributed to enhancing the transparency and credibility of the data.

Recommendations for Future Research

Future research is expected to employ more complex data analysis methods, such as mixed-method approaches, and adopt alternative methodological frameworks, including longitudinal designs. In addition, subsequent studies are anticipated to develop innovative interventions to explore contextual variations in value co-creation processes and their impact on patient experience.

4. CONCLUSION

This study explored how value co-creation occurs within oncology care and how it shapes patient experience in a tertiary hospital setting. The findings indicate that value co-creation in oncology care is formed through relational communication between healthcare professionals, patients, and families, multidisciplinary team collaboration, patient engagement, and family, social, and spiritual support. These relational processes interact with patient behavioral responses, including adherence, non-adherence, and treatment decision-making, which function as mediating mechanisms influencing experiential outcomes such as trust, satisfaction, emotional well-being, and perceived fairness of care. At the same time, structural factors including workforce capacity, administrative procedures, and service accessibility were found to influence how consistently collaborative care practices could be implemented. In conclusion, value co-creation represents an important relational infrastructure for improving patient experience in oncology care. Strengthening collaborative communication and patient engagement can enhance treatment participation and emotional resilience, while supportive organizational structures are necessary to sustain these relational practices. These findings contribute to the development of patient-centered oncology care in resource-constrained healthcare systems and highlight the importance of aligning interpersonal practices with organizational and policy support to improve the overall quality of cancer care.

ACKNOWLEDGEMENTS

Gratitude was extended to the leadership of the Doctoral Study Program in Public Health, Faculty of Public Health, Diponegoro University, who allowed the investigators to complete this study.

AUTHOR CONTRIBUTIONS

A.S: Conceptualization, Methodology, Investigation, Data curation, Formal analysis, Writing – original draft.

C.S: Conceptualization, Supervision, Writing – review & editing.

Z.S: Validation, Supervision, Writing – review & editing.

S.P.A: Validation, Writing – review & editing.

CONFLICT OF INTEREST

The authors declared that there were no conflicts of interest to disclose.

ETHICS STATEMENT

The study does not involve human participants; therefore, ethical approval is not required.

DATA AVAILABILITY STATEMENT

The dataset upon which this study's findings rest may be requested from the corresponding author, subject to reasonable justification. Owing to confidentiality and privacy obligations, especially regarding commercially sensitive procurement details and the consent terms agreed with participants, the raw data cannot be released publicly. Nevertheless, aggregated and anonymized data may be provided for academic verification, contingent upon approval from the pertinent parties and the corresponding author.

REFERENCES

- [1] C. M. Bastemeijer, H. Boosman, H. van Ewijk, L. M. de Jong-Verweij, L. Voogt, and J. Hazelzet, "Patient experiences: a systematic review of quality improvement interventions in a hospital setting," *Patient Relat. Outcome Meas.*, vol. Volume 10, pp. 157–169, 2019, doi: 10.2147/prom.s201737.
- [2] C. Doyle, L. Lennox, and D. Bell, "A systematic review of evidence on the links between patient experience and clinical safety and effectiveness," *BMJ Open*, vol. 3, no. 1, 2013, doi: 10.1136/bmjopen-2012-001570.
- [3] Y. Peng, T. Wu, Z. Chen, and Z. Deng, "Value Cocreation in Health Care: Systematic Review," *J. Med. Internet Res.*, vol. 24, no. 3, 2022, doi: 10.2196/33061.
- [4] T. Guan, X. Chen, J. Li, and Y. Zhang, "Factors influencing patient experience in hospital wards: a systematic review," *BMC Nurs.*, vol. 23, no. 1, pp. 1–16, 2024, doi: 10.1186/s12912-024-02054-0.
- [5] M. Godovykh and A. Pizam, "Measuring patient experience in healthcare," *Int. J. Hosp. Manag.*, vol. 112, no. November 2022, p. 103405, 2023, doi: 10.1016/j.ijhm.2022.103405.
- [6] G. Russo, A. M. Tartaglione, and Y. Cavacece, "Empowering patients to co-create a sustainable healthcare value," *Sustain.*, vol. 11, no. 5, 2019, doi: 10.3390/su11051315.
- [7] E. J. Shim, J. E. Park, M. Yi, D. Jung, K. M. Lee, and B. J. Hahm, "Tailoring communications to the evolving needs of patients throughout the cancer care trajectory: A qualitative exploration with breast cancer patients," *BMC Womens. Health*, vol. 16, no. 1, pp. 1–8, 2016, doi: 10.1186/s12905-016-0347-x.
- [8] C. Cincidda, S. F. M. Pizzoli, G. Ongaro, S. Oliveri, and G. Pravettoni, "Caregiving and shared decision making in breast and prostate cancer patients: a systematic review," *Curr. Oncol.*, vol. 30, no. 1, pp. 803–823, 2023, doi: 10.3390/curroncol30010061.
- [9] E. Peruzzo, C. Seghieri, M. Vainieri, and S. De Rosis, "Improving the healthcare user experience: an optimization model grounded in patient-centredness," *BMC Health Serv. Res.*, vol. 25, no. 1, 2025, doi: 10.1186/s12913-024-11960-7.
- [10] M. V. Ciasullo, S. Cosimato, R. Palumbo, and A. Storlazzi, "Value co-creation in the health service ecosystems: the enabling role of institutional arrangements," *Int. Bus. Res.*, vol. 10, no. 12, p. 222, 2017, doi: 10.5539/ibr.v10n12p222.
- [11] V. Braun and V. Clarke, "A critical review of the reporting of reflexive thematic analysis in health promotion international," *Health Promot. Int.*, vol. 39, no. 3, pp. 1–12, 2024, doi: 10.1093/heapro/daae049.
- [12] T. S. Danaher, P. J. Danaher, J. C. Sweeney, and J. R. McColl-Kennedy, "Dynamic customer value cocreation in healthcare," *J. Serv. Res.*, vol. 27, no. 2, pp. 177–193, 2024, doi: 10.1177/10946705231161758.
- [13] S. L. Vargo and R. F. Lusch, "Evolving to a new dominant logic for marketing," *Serv. Log. Mark. Dialog. Debate, Dir.*,

vol. 68, no. 1, pp. 3–28, 2014.

- [14] L. F. van de Water *et al.*, “Communicating treatment risks and benefits to cancer patients: a systematic review of communication methods,” *Qual. Life Res.*, vol. 29, no. 7, pp. 1747–1766, 2020, doi: 10.1007/s11136-020-02503-8.
- [15] R. M. Epstein and Richard L. Street, “Patient-centered communication in cancer care: promoting healing and reducing suffering,” National Cancer Institute, Bethesda, MD, 2007.
- [16] P. Justin, V. Fournier, A. Naeyaert, L. Laroussi-Libeault, and C. Duprez, “Exploring communication dynamics between patients and healthcare providers in oncology : a systematic review,” *Heal. Expect.*, 2025, doi: 10.1111/hex.70519.
- [17] A. Tolotti *et al.*, “Patient engagement in oncology practice : a qualitative study on patients ’ and nurses ’ perspectives,” *Int. J. Environ. Res. Public Heal.*, vol. 19, pp. 1–17, 2022.
- [18] B. K. L. Carman *et al.*, “Patient And Family Engagement :A Framework For Understanding The Elements And Developing Interventions And Policies,” *Health Aff.*, vol. 2, no. February, pp. 223–231, 2013.
- [19] P. Burch, A. Walter, S. Stewart, and P. Bower, “Patient reported measures of continuity of care and health outcomes: a systematic review,” *BMC Prim. Care*, vol. 25, no. 1, pp. 1–10, 2024, doi: 10.1186/s12875-024-02545-8.
- [20] L. D. Bosserman *et al.*, “Integrating academic and community cancer care and research through multidisciplinary oncology pathways for value-based care: A review and the city of hope experience,” *J. Clin. Med.*, vol. 10, no. 2, pp. 1–38, 2021, doi: 10.3390/jcm10020188.
- [21] A. Pitman, M. Consultant, L. Psychiatrist, and S. Clinical, “Depression and anxiety in patients with cancer,” *BMJ Open*, pp. 1–11, 2018, doi: 10.1136/bmj.k1415.
- [22] D. Martina *et al.*, “Advance care planning for patients with cancer and family caregivers in Indonesia: a qualitative study,” *BMC Palliat. Care*, vol. 21, no. 1, pp. 1–12, 2022, doi: 10.1186/s12904-022-01086-0.
- [23] C. Rochette, A. S. Michallet, S. Malartre-sapienza, and S. Rodier, “Telephone follow-up of oncology patients : the contribution of the nurse specialist for a Service-Dominant Logic in hospital,” *BMC Health Serv. Res.*, vol. 8, pp. 1–13, 2021.
- [24] B. R. Ferrell, T. Borneman, M. Koczywas, and P. Galchutt, “Research synthesis related to oncology family caregiver spirituality in palliative care,” *J. Palliat. Med.*, vol. 28, no. 1, pp. 77–85, 2025, doi: 10.1089/jpm.2024.0209.
- [25] K. T. Washington *et al.*, “Family caregivers’ perspectives on communication with cancer care providers,” *J Psychosoc Onco*, vol. 37, no. 6, pp. 777–790, 2020, doi: 10.1080/07347332.2019.1624674.Family.
- [26] S. Mai, L. Chang, R. H. Xu, S. Su, and D. Wang, “Doctor interaction behavior, patient participation in value co-creation and patient satisfaction: cross-sectional survey in a tertiary-level hospital from Guangzhou, China,” *Sci. Rep.*, vol. 14, no. 1, pp. 1–11, 2024, doi: 10.1038/s41598-024-73660-w.
- [27] A. Naeyaert, V. Fournier, and L. C. M. Gandolphe, “Emotion regulation interventions for cancer patients and their relatives,” *Cancer Med.*, vol. 15, pp. 1–25, 2026, doi: 10.1002/cam4.71514.