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Ironic Medications: A Narrative-Based Psycho-Educational Intervention to Explore Patient–Provider Communication in Adolescents With Haematological Cancer

Marta Stoppa[1] | Elena Pagani Bagliacca[1,2] | Selena Russo[3] | Giulia Rampoldi[1,3] | Maria Grazia Strepparava[3,4] | Adriana Cristina Balduzzi[3,5] | Andrea Biondi[3,5] | Marco Spinelli[5]

[1]Fondazione Monza e Brianza Per Il Bambino e La Sua Mamma, Monza, MB, Italy | [2]Fondazione IRCCS Istituto Nazionale Dei Tumori, Milan, Italy | [3]School of Medicine and Surgery, University of Milano-Bicocca, Monza, MB, Italy | [4]Department of Mental Health, Fondazione IRCCS San Gerardo Dei Tintori, Monza, MB, Italy | [5]U.O. Ematologia Pediatrica, Fondazione IRCCS San Gerardo Dei Tintori, Monza, MB, Italy

Correspondence: Selena Russo (selena.russo@unimib.it)

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ABSTRACT

Background: Adolescents with haematological malignancies face significant emotional and relational challenges, often accompanied by difficulties in communicating their needs within the healthcare context. To address these issues, a narrative-based psycho-educational intervention based on the creation and prescription of *Ironic Medications* was developed. These fictional remedies were designed to express emotions, experiences and needs in a playful yet meaningful way while exploring differences in how adolescents and healthcare staff perceive communication and relational needs.

Procedure: The intervention unfolded in two phases: (1) weekly group sessions in which adolescents explored irony and storytelling while developing *Ironic Medications* addressing relational and communicative needs; and (2) a presentation of the medications to hospital staff followed by a metacognitive exercise exploring alignment in perceived needs. Quantitative surveys assessed the perceived usefulness of the medications and differences between adolescents' and healthcare professionals' perspectives.

Results: Adolescents rated *Ironic Medications* as equally valuable for relational and communication needs, whereas staff mainly recognised their intragroup function, overlooking their intergroup communicative potential. Misalignments emerged at multiple levels: staff's self-prescriptions and predictions of adolescents' choices did not align with adolescents' actual prescriptions, with greater discrepancies among physicians than nurses. Adolescents prioritised normality (Normalvit) and relational support (Conversan), while staff emphasised confidence-building (Xpecta) and temporal relief (Temporil). Nurses showed greater alignment with adolescents but reported lower comfort in receiving *Ironic Medications*.

Conclusions: The intervention revealed perspective-taking gaps between adolescents and staff. Ironic Medications fostered self-reflection, empathy and relational skills, suggesting a promising narrative-based tool to support patient–provider communication in adolescent oncology care.

Abbreviations: *M*, mean; MSPSS, Multidimensional Scale of Perceived Social Support; *SD*, standard deviation; SO, significant others.

1 | Introduction

Adolescents with haematological malignancies face complex psychosocial challenges, including anxiety, depression, emotional distress, concerns about their future, changes in body image, social isolation and a sense of alienation from their peers [1–3]. The psychosocial impact of cancer treatment in adolescents can be profound, potentially hindering treatment adherence and clinical outcomes, as well as affecting overall well-being and quality of life [4–7]. Adolescents with haematological malignancies may experience additional challenges compared to some other oncological populations due to the prolonged duration of active treatment, the burden of maintenance therapies requiring sustained adherence, the persistent uncertainty related to relapse risk and the possible need for haematopoietic stem cell transplantation [2, 6, 8]. In addition to these challenges, communication between adolescents and healthcare professionals may be further complicated by differences in how needs and priorities are perceived. Misalignments between adolescents' and healthcare professionals' perceptions of relational and communication needs may hinder mutual understanding and contribute to unmet psychosocial needs in adolescent oncology care, thereby limiting the effectiveness of supportive interventions [9, 10]. This highlights the importance of tools that can facilitate perspective-taking and dialogue within the clinical relationship.

Recognising these multifaceted challenges faced by adolescents with cancer, various psycho-educational interventions have been developed to provide support [11–13]. These interventions often include psychological counselling, educational sessions and social support components aimed at improving coping strategies, reducing distress and enhancing social skills [14]. Notably, peer- and group-based interventions have demonstrated particular effectiveness in this demographic [15, 16]. Psycho-educational interventions that integrate psychological support, education and peer interaction hold promise in improving quality of life and facilitating successful transitions through treatment and into survivorship. Despite the documented benefits of existing interventions, expanding and adapting these programmes to address the evolving and specific needs of adolescents with haematological malignancies remains a critical and often unmet need [8]. Furthermore, communication and relational dynamics between adolescents and healthcare professionals in clinical settings remain relatively underexplored and are rarely addressed in psycho-educational interventions [17–20].

In response to these challenges, we developed *Ironic Medications*, a narrative-based psycho-educational group intervention designed to help adolescents express emotional, relational, and communicative needs through the creation of fictional 'prescriptions'. By using irony and storytelling, the intervention aims to provide adolescents with a safe and playful framework to reflect on their experiences and communicate their needs within the healthcare context.

The present study explores the use of ironic narrative prescriptions as a psycho-educational tool in adolescent oncology and aims to (i) describe the *Ironic Medications* intervention, outlining its objectives and methodology and (ii) examine differences between adolescents' and healthcare staff's perceptions of relational and communication needs. By comparing these perspectives, the study aims to identify areas of alignment and misalignment in patient–provider communication, ultimately informing the development of narrative-based tools that may support more effective communication and mutual understanding in adolescent oncology care.

2 | Methods

This study adopted an exploratory mixed-methods design combining a narrative-based psycho-educational group intervention with quantitative surveys aimed at assessing the perceived usefulness of the Ironic Medications and examining differences between adolescents' and healthcare staff's perspectives.

2.1 | The Intervention: Objectives, Theoretical Framework and Implementation

The intervention was designed to address the psychosocial needs of adolescents with haematological malignancies by enhancing their emotional expression, fostering peer support and improving communication with healthcare providers. It aimed to promote patient agency by involving adolescents in a creative and participatory process where they co-constructed symbolic representations of their experiences and needs. Participants were guided by the question: 'What do we want to communicate? What do we want to tell them?'

The intervention was grounded in a narrative-based psycho-educational approach, leveraging storytelling as a means to facilitate emotional processing, perspective-taking and social connection [21, 22]. Narrative techniques have been widely recognised for their role in helping individuals articulate personal experiences, process distressing emotions and reframe their perspectives [23–25]. Additionally, the use of irony introduced a cognitive distancing effect, allowing participants to externalise emotions in a playful yet meaningful way [26–28]. By combining these elements, the intervention aimed to empower adolescents to gain a renewed sense of agency in their care experiences. In addition to its theoretical grounding, the intervention also emerged through a participatory co-creation process with the adolescents. Before the intervention, adolescents were actively engaged in creating and sharing humorous memes about their hospital experiences, using irony to express challenging, frustrating and emotionally complex aspects of daily life in the clinical setting. During preliminary group discussions, these expressive practices were collaboratively explored and expanded to identify meaningful ways to give voice to adolescents' experiences. Through this process, the relationship with healthcare professionals emerged as a central theme, often characterised by perceived difficulties in communication and mutual understanding. The idea of fictional medications developed as a symbolic and ironic inversion of adolescents' everyday experience of receiving treatments and clinical advice, allowing them to 'prescribe' relational and communicative needs to healthcare staff. Importantly, the intervention was not pre-defined by the facilitators but evolved through an iterative, participatory design process grounded in listening, dialogue and shared

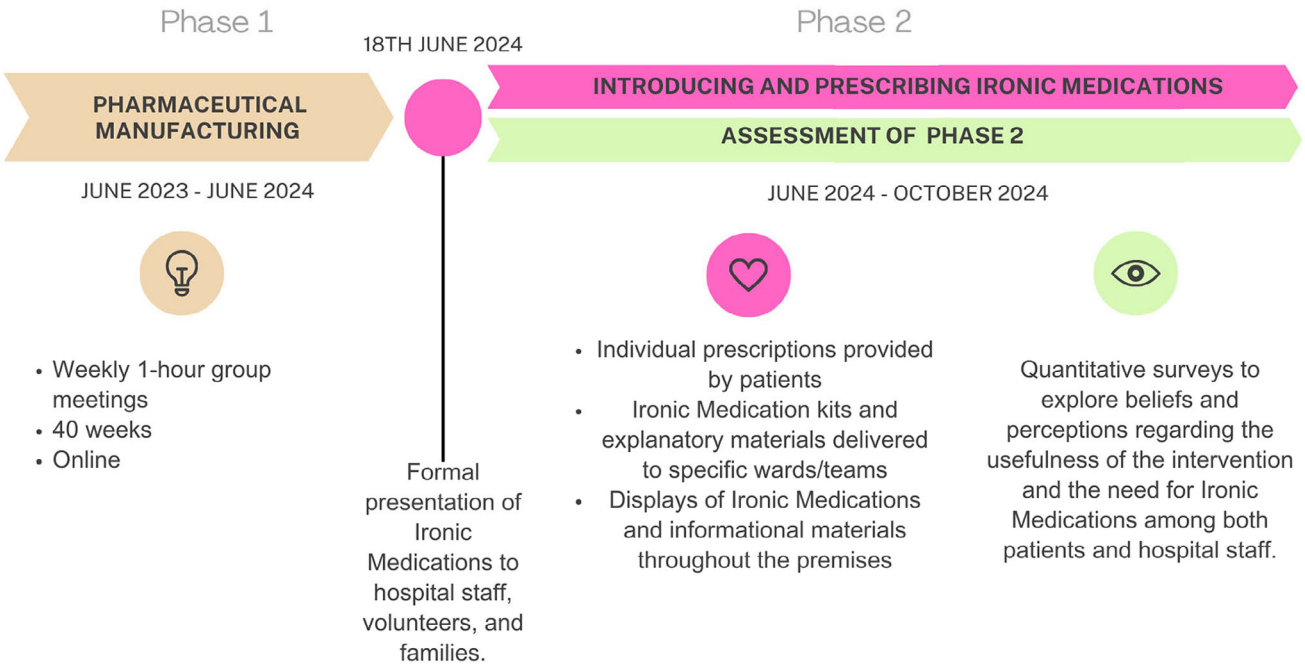

FIGURE 1 | Overview of the Ironic Medications intervention phases. Schematic representation of the two phases of the intervention.

decision-making with the adolescents, aligning with participatory and patient-centred design frameworks in psychosocial interventions [29, 30].

The intervention took place from June 2023 to October 2024 and unfolded across two phases (the project phases are illustrated in Figure 1): Phase 1: Group Meetings and Pharmaceutical Manufacturing; Phase 2: Prescribing Ironic Medications. Phase 1 was conducted between June 2023 and June 2024 and consisted of weekly one-hour group sessions over a 12-month period. The sessions were facilitated by a psychologist and an educator to ensure an integrative approach addressing both emotional and educational dimensions. Adolescents were invited to share and reflect on their experiences of diagnosis and treatment for haematological malignancies. Through the weekly discussions, the adolescents identified key themes related to their emotional and relational challenges (Supplementary Table SA). Based on these discussions, six *Ironic Medications* were created (Table 1), each symbolically representing a specific psychosocial need. The adolescents named the medications, defined fictional active ingredients and developed accompanying explanatory materials (Supplementary S1), including mock pharmaceutical leaflets (Supplementary S2) as well as illustrative cards and posters (Supplementary S3). To facilitate replication and potential adaptation of the intervention in other clinical settings, the materials developed for the Ironic Medications project are available in both Italian and English and can be provided by the authors upon reasonable request. The process of co-creating these materials served both as an expressive activity and as a structured way of articulating their lived experiences within the hospital environment.

Following this development phase, Phase 2 (June–October 2024) focused on exploring communication and relational perceptions through the prescription of *Ironic Medications*. This phase involved a formal event during which adolescents presented the medications to hospital staff, explaining their meaning and intended purpose. Fictional drug boxes were physically produced and displayed in a way that replicated a real pharmacy setting (Figure 2). After the event, hospital staff were invited to complete a metacognitive exercise in which participants reflected on the perceived relevance and usefulness of each medication for different professional roles. Through this activity, the intervention incorporated a metacognitive component aimed at encouraging both adolescents and healthcare professionals to reflect on how relational and communication needs are perceived within the clinical environment.

The initial implementation of the Ironic Medications project required an approximate budget of €10,000, fully supported by the parents' association Fondazione Maria Letizia Verga. These costs were primarily related to the production of physical materials used during the launch event and dissemination phases, including mock medication boxes, leaflets, display materials, brochures and notebooks. The core elements of the intervention, such as group sessions, narrative activities and co-creation processes, were delivered by healthcare professionals (psychologists and educators) already working within the clinical setting and did not require additional dedicated staffing resources.

2.2 | Assessing Communication and Relational Perceptions and Needs Through Ironic Medication Prescriptions

Quantitative surveys were administered to explore beliefs and perceptions regarding the usefulness of the intervention and to assess alignment and misalignment in perceived relational and communication needs. This part of the project is an observational non-randomised study.

TABLE 1 | Overview of ironic medications: descriptions, active ingredients, themes and slogans.

Medication name	Description	Fictional active ingredients	Themes addressed	Slogan
Normalvit	A supplement designed to support the return to normal life at the end of paediatric onco-haematology treatments.	Serenol, Studiolyte, Vitamin AS (AntiStressine)	- Healing and Return to Normality - Promises, Expectations and Disappointments	'Because there's nothing more extraordinary than normality!'
Gentylin (Gentylin Eye Drops)	Drops of kindness for sensitive eyes, promoting empathetic and considerate observation during interpersonal interactions.	Empathin, Kindlyze	- Kindness and Consideration - Intimacy and Loneliness	'Kindness makes all the difference!'
Discretella—a Private Intimate Wash	A specific solution for intimacy, designed to preserve privacy and provide comfort in sensitive situations.	Break-the-Ice-ine, Respectol	- Intimacy and Loneliness - Words and Language	'A discreet and reserved solution for everyday invasions.'
Temporil	Ointment for temporal strains, aiding in the understanding and management of time-related challenges experienced during treatment.	Patientene, Relatol	- Time - Healing and Return to Normality	'While others simply wait.'
Xpecta	An injection of confidence and expectations, providing emotional support in the face of delayed recoveries, side effects and unmet expectations.	Hopeamine, Suretyl	- Promises, Expectations and Disappointments - Healing and Return to Normality	'No worries, There's Xpecta!'
Conversan	A selection of eight herbal teas, each with a targeted action to facilitate specific types of communication based on the character and mood of the interlocutor.	Various fictional herbs and extracts	- Words and Language - Promises, Expectations and Disappointments	'It's always tea time, and always time for a good word with Conversan!'
	Tea of Clear and Simple Words	For those who speak in an incomprehensible way. Simplifies difficult and complex language, such as medical jargon.	Clearese, Geniusberry	
	Tea of Smooth and Peaceful Words	For those who feel furious and enraged. Calms heated and irritable conversations.	Pipeweed	
	Tea of Funny and Playful Words	For moments of sadness. Induces laughter and cheerful, light-hearted conversations.	Jokewit, Laughable	
	Tea of Calm and Relaxed Words	For nervous and agitated speakers. Promotes peaceful and unperturbed conversations.	Calmomile flowers	
	Tea of Wise and Shared Words	For when you feel confused and disoriented. It is ideal for authoritative and expert discussions.	Wise Willow Tree	

(Continues)

TABLE 1 | (Continued)

Medication name	Description	Fictional active ingredients	Themes addressed	Slogan
Tea of Balanced Words	For those who express themselves eccentrically. Restores sensibility and reason to wild and chaotic conversations.	Madweed		
Tea of Reassuring Words	For anxious moments. Infuses dialogues with natural trust and security.	Forget-you-not flowers		
Tea of Kind Words	For those in need of comfort. Encourages loving and supportive conversations.	Caring Rose		

2.2.1 | Procedure

The day after the official presentation of the Ironic Medications on 18 June, adolescent patients and 203 hospital staff members were electronically invited to complete a quantitative survey using a convenient snowballing non-probabilistic sampling method. All participants and, for minors, their parents or legal guardians provided written informed consent for participation in the study and for the collection and processing of personal data for research purposes. The study was conducted as an observational psycho-educational intervention within routine psychosocial care activities and was not designed as a clinical trial.

2.2.2 | Materials

The survey was developed ad hoc for this exploratory study to reflect the specific objectives and narrative structure of the Ironic Medications intervention. Item development was informed by the literature on adolescent oncology communication, psychosocial needs, and patient–provider relational dynamics [9, 10, 20], as well as by themes emerging during the participatory co-creation process with adolescents. The survey included:

- Socio-demographic information for patients and socio-demographic and professional information for staff.
- One item measuring general satisfaction with the Ironic Medications project on a 0–10 Likert scale, with higher numbers reflecting greater satisfaction.
- A 5-point Likert scale (from 0 = useless to 4 = very useful) evaluating patients' and staff's perception of the utility of Ironic Medications in addressing communication and relational needs. Three questions assessed whether Ironic Medications could improve communication with hospital staff members and family, raise awareness about the Teen Group at the Hospital Centre, and use irony as a communication tool. Four questions explored whether Ironic Medications could promote mutual understanding amongst adolescents, help them recognise that their experiences are shared, foster a sense of being welcomed and enhance their feeling of belonging within the group.
- Ad hoc questions to collect patients' and staff members' opinions on the relevance and use of the Ironic Medications. Participants were asked to indicate which Ironic Medications they believed were most needed by different hospital staff groups (e.g. physicians, nurses and psychologists). Hospital staff also indicated which Ironic Medications they believed adolescents needed most. Multiple Ironic Medications could be prescribed for the same group. Additionally, a 5-point Likert scale (from 0 = not at all to 4 = very much) was used to assess how strongly participants felt the need to prescribe (patients) or receive (staff) each Ironic Medication.
- To assess alignment and misalignment in perceived relational and communication needs, a metacognitive exercise was conducted in which adolescents predicted which Ironic Medications staff would prescribe to them, and staff predicted which Ironic Medications adolescents would prescribe to them. This exercise aimed to encourage healthcare providers to reflect on their assumptions about adolescent needs and to explore gaps in mutual understanding.
- A 0–10 scale was used to investigate how comfortable patients felt administering Ironic Medications to each staff group, and how comfortable the staff felt receiving them overall.

The patients' survey also included:

- The Multidimensional Scale of Perceived Social Support (MSPSS) [31]. A self-report measure of perceived social support. It comprises 12 items rated on a 7-point Likert scale (1 = very strongly disagree to 6 = very strongly agree). Its three subscales assess the individual's social support from significant others (SO), family (FA), and friends (FR). Higher scores indicate greater perceived support.

Descriptive statistics were applied to interpret the survey results.

3 | Results

A total of 12 adolescents and 62 hospital staff members (response rate = 30%) completed the survey. Participants' features are reported in Table 2.

FIGURE 2 | Display of the Ironic Medications during the presentation event. Example of the physical display of the fictional Ironic Medications prepared by adolescents. The medications were presented in boxes arranged to resemble a pharmacy setting, allowing participants to interact with the materials and reflect on their symbolic meaning and intended relational and communicative functions.

3.1 | Satisfaction and Perceived Utility of Ironic Medications

Overall, both adolescents ($M = 8.83$, $SD = 1.34$) and hospital staff members ($M = 8.97$, $SD = 1.39$) reported high levels of satisfaction with the project, with 83% of adolescents and 85% of staff members reporting 8 to 10 ($z = -0.1917$, $p = 0.849$).

Adolescents emphasised three main aspects: recognising that their experience is shared with others ($M = 3.75$, $SD = 0.62$) (relational need), using irony as a tool for care ($M = 3.67$, $SD = 0.65$) and facilitating communication with hospital staff ($M = 3.67$, $SD = 0.65$) (communication needs). In contrast, hospital staff tended to view the Ironic Medications as more useful in addressing relational needs. They believed the Ironic Medications would help adolescents feel part of a group ($M = 3.54$, $SD = 0.78$), feel welcome ($M = 3.52$, $SD = 0.83$) and get to know each other better ($M = 3.46$, $SD = 0.93$) (perceptions of the utility of Ironic Medications in addressing relational and communication needs by staff and patients are reported in Supplementary Table SB).

TABLE 2 | Socio-demographic and professional characteristics of participants.

	Patients ($N = 12$)	
Age	13–20 years	M = 17, $SD = 2.48$
Perceived social support (MSPSS)		
Significant others	($M = 21.33$, $SD = 3.70$)	
Family	($M = 21.67$, $SD = 2.57$)	
Friends	($M = 20.33$, $SD = 3.55$)	
	N	%
Sex		
Female	9	75
Male	3	25
Clinical stage		
Stop therapy	4	33.3
Maintenance	4	33.3
In treatment	4	33.3
Undergone haematopoietic stem cell transplantation	8	66
	Healthcare staff ($N = 62$)	
Age	25–63 years	$M = 39.33$, $SD = 11.57$
	N	%
Sex		
Female	54	87.1
Male	8	12.9
Marital status		
Single	10	16.4
Married	31	50.8
Engaged cohabitant	12	19.7
Engaged non-cohabitant	7	11.5
Widowed	1	1.6
Children		
Yes	29	46.8
No	33	53.2
Role		
Structured physician	9	15.5
Resident physician	19	32.8
Nurse	14	24.1
Hospital school member	6	10.3
Maria Letizia Verga operators	5	8.6
Hospital volunteers	1	1.7
Other	4	6.9
Professional seniority		
1–5 years	25	41
6–10 years	11	18
11–15 years	8	13.1
>16 years	3	4.9
Students	14	23
Professional seniority at the study hospital		
<1 year	7	11.7
>1 year	9	15
>2 years	12	20
>5 years	14	23.3
>10 years	18	30

3.2 | Ironic Medications' Prescriptions and Misalignment in Perceived Needs

When examining the hospital staff's overall perspectives, they reported the greatest need for Normalvit (for normality) ($M = 2.95$, $SD = 0.96$) and Xpecta (confidence-building) ($M = 2.90$, $SD = 1.08$). In contrast, adolescents believed that hospital staff would benefit most from Temporil (temporal relief) ($M = 3.08$, $SD = 1.31$) and Xpecta ($M = 2.58$, $SD = 1.62$). The results for other Ironic Medications are shown in Table 3.

Table 4 presents the two most selected Ironic Medications for each group, as identified by adolescents and hospital staff members, highlighting areas of consensus and divergence in their preferences. Adolescents and hospital staff members largely aligned on which Ironic Medications should be prescribed to the different groups. However, adolescents prescribed themselves Normalvit ($N = 3$) and Conversan (for relational support) ($N = 4$), emphasising their desire for normality and relational support. Conversely, staff more frequently prescribed Xpecta ($N = 28$) and Temporil ($N = 27$) for adolescents, indicating a focus on confidence-building and temporal relief. The metacognitive exercise revealed that adolescents expected staff to prescribe Conversan ($N = 4$) and Xpecta ($N = 4$), which partially aligned with staff choices but underestimated their need for Normalvit.

When focusing on physicians, they most frequently prescribed themselves Conversan ($N = 19$) and Gentylin ($N = 7$). Adolescents, however, tended to prescribe Temporil ($N = 8$) and Conversan ($N = 6$) to physicians. In the metacognitive reflection exercise, where physicians were asked to predict what adolescents would prescribe for them, they anticipated Conversan ($N = 20$) and Xpecta ($N = 7$), highlighting a partial misalignment with adolescents' actual choices.

Considering the nurses' perspectives, they most frequently prescribed themselves Discretella ($N = 8$) and either Normalvit ($N = 2$) or Xpecta ($N = 2$). Adolescents, on the other hand, tended to prescribe them Xpecta ($N = 6$) and Discretella ($N = 4$). In the metacognitive reflection exercise, nurses predicted that

TABLE 3 | Hospital staff versus adolescents' perspectives about the need for Ironic Medications in staff (0 = not at all, to 4 = very much).

	Conversan *M* (*SD*)	Discretella *M* (*SD*)	Gentylin *M* (*SD*)	Normalvit *M* (*SD*)	Temporil *M* (*SD*)	Xpecta *M* (*SD*)
How much hospital staff feel the need for each Ironic Medication	2.87 (1.17)	2.17 (1.33)	2.27 (1.30)	2.95 (0.96)	2.71 (1.14)	2.90 (1.08)
How much the adolescents believe that the hospital staff need each Ironic Medication	2.50 (1.38)	2.42 (1.56)	2.33 (1.30)	2.55 (1.69)	3.08 (1.31)	2.58 (1.62)

TABLE 4 | The two most selected Ironic Medications for groups by adolescents and hospital staff.

	What adolescents would prescribe to… *N*	What hospital staff would prescribe to… *N*
Physicians	Temporil (8)	Temporil (23)
	Conversan (6)	Conversan (47)
Nurses	Discretella (4)	Discretella (31)
	Xpecta (6)	Gentylin (24)
Healthcare assistant	Conversan (4)	Discretella (36)
	Xpecta (2)	Gentylin (20)
Psychologists	Xpecta (4)	Xpecta (22)
	Conversan (3)	Normalvit (23)
Social workers	Conversan (4)	Coversan (17)
	Xpecta (3)	Normalvit (31)
Educators	Xpecta (3)	Xpecta (16)
	Normalvit/ Conversan (2)	Normalvit (32)
Cleaners	Discretella (3)	Discretella (33)
	Conversan (3)	Gentylin (13)
Clown therapist	Discretella (8)	Discretella (18)
	Conversan (2)	Normalvit (12)
Hospital school staff	Normalvit (3)	Normalvit (22)
	Discretella (3)	Conversan (21)
Maria Letizia Verga employees	Conversan/Normalvit/ Xpecta (1)	Normalvit (16)
	Temporil (2)	Conversan (21)
Hospital volunteers	Discretella (5)	Discretella (18)
	Conversan/Temporil/ Xpecta (2)	Normalvit (14)
Parents	Normalvit (4)	Normalvit (33)
	Xpecta (3)	Xpecta (28)
Adolescents	Conversan (4)	Xpecta (28)
	Normalvit (3)	Temporil (27)

TABLE 5 | Ironic Medications prescription to physicians and nurses by adolescents, physicians and nurses.

	Physicians	Nurses
Physicians' prescription to…	Conversan (19)	Gentylin (10)
	Gentylin (7)	Discretella (9)
Nurses' prescription to…	Conversal (7)	Discretella (8)
	Temporil (6)	Normalvit (2)/ Expecta (2)
Adolescents' prescription to……	Temporil (8)	Discretella (4)
	Conversan (6)	Expecta (6)

adolescents would prescribe Discretella ($N = 6$) and Xpecta ($N = 2$), demonstrating a perfect alignment with adolescents' choices.

Table 5 summarises the reciprocal Ironic Medication prescriptions for physicians and nurses. From these data, it emerged that physicians, nurses and adolescents agreed that physicians mostly need Conversan, while nurses primarily require Discretella.

3.3 | Comfort With Prescription

The hospital staff felt generally comfortable receiving the Ironic Medications ($M = 8.31$, $SD = 1.72$). Among staff respondents, nurses reported the lowest comfort level ($M = 6.85$, $SD = 1.82$), while employees of Maria Letizia Verga Centre expressed the highest comfort ($M = 9.60$, $SD = 0.89$). On the other hand, adolescents were less comfortable prescribing Ironic Medications to social workers ($M = 2.27$, $SD = 2.10$) and physicians ($M = 2.92$, $SD = 1.83$), but felt more comfortable prescribing them to parents ($M = 5.67$, $SD = 4.10$) and educators ($M = 5.25$, $SD = 3.52$). Exploratory analyses did not reveal meaningful associations between healthcare providers' age or parental status and comfort receiving Ironic Medications from adolescents, nor clear differences in descriptive patterns of overlap between anticipated and actual adolescent prescriptions.

4 | Discussions

This study examined the development and implementation of *Ironic Medications*, a novel psycho-educational intervention designed to enhance communication, emotional expression and relational awareness among adolescents with haematological malignancies. The intervention used irony and narrative

techniques as tools for reflection, enabling adolescents to engage in metacognitive exercises that encouraged self-awareness and deeper interactions with hospital staff.

One of the primary findings was the difference in how adolescents and hospital staff perceived the utility of Ironic Medications. Adolescents valued them equally for relational and communicative needs, while staff primarily recognised their function in fostering intragroup cohesion, overlooking their potential as a tool for improving intergroup communication. This suggests that while adolescents view Ironic Medications as a bridge to convey their thoughts and emotions to staff and family members, hospital staff tend to see them as instruments for peer support rather than as communication facilitators. This divergence highlights the need to further explore interventions that foster staff–patient dialogue and improve healthcare professionals' ability to recognise and address adolescents' relational and communication needs [32].

Further misalignments emerged in how different groups perceived the needs of adolescents. Adolescents prioritised Normalvit (for normality) and Conversan (for relational support), whereas staff focused on Xpecta (confidence-building) and Temporil (temporal relief). The metacognitive exercise revealed that adolescents expected staff to prescribe Conversan and Xpecta, underestimating their actual need for Normalvit. This finding underscores a key challenge in adolescent oncology care: the mismatch between what young patients identify as essential for their well-being and what healthcare professionals perceive as their primary needs. Training initiatives aimed at enhancing perspective-taking among healthcare providers could help bridge this gap and create more patient-centred approaches [33]. It is also important to note that a substantial proportion of the participating adolescents in our study had undergone haematopoietic stem cell transplantation, indicating that many of them had experienced particularly intensive treatment trajectories. This clinical context may have heightened the salience of relational and communication needs and may partly explain the depth and significance of the perspectives expressed during the intervention.

Further distinctions were observed among professional groups. While physicians, nurses and adolescents largely agreed on prescribing Conversan for physicians and Discretella for nurses, adolescents' perspectives were more aligned with nurses than with physicians. Nurses demonstrated a stronger metacognitive alignment with adolescents, while physicians' responses showed greater divergence. Interestingly, nurses also reported the lowest comfort levels in receiving Ironic Medications, suggesting a potential sense of professional vulnerability or reluctance to engage in patient-led interventions. Future research should explore whether this discomfort is linked to role expectations, professional identity or concerns about being evaluated by patients.

The metacognitive component of the intervention provided valuable insights into relational dynamics within the hospital. By engaging in the prescription exercise, both adolescents and staff were prompted to reflect on how they perceive each other's needs. This process challenged preconceived notions, encouraging healthcare professionals to step outside their habitual frameworks and consider the patient's perspective more deeply. Ironic Medications thus functioned as a 'metacognitive mirror', fostering a shift in perspective-taking and relational awareness among staff. Given the importance of these skills in patient-centred care, incorporating similar reflective exercises into medical and nursing training may be beneficial. The presentation of the Ironic Medications to hospital staff also created a shared reflective space within the clinical setting, allowing adolescents to voice experiences and relational needs that are often difficult to express in routine interactions and fostering a more open dialogue between patients and healthcare professionals.

Finally, the findings highlighted the versatility of Conversan, a medication addressing multiple aspects of communication, from clear, jargon-free language to empathetic listening. Future investigations should acknowledge these multiple dimensions and explore how tailored communication tools can be effectively integrated into psycho-educational interventions.

Although developed within a specific clinical context, the Ironic Medications intervention may be transferable to other adolescent healthcare settings where communication barriers between patients and healthcare professionals are common. The narrative and metaphorical structure of the intervention allows adolescents to express relational and emotional needs in an indirect yet meaningful way, facilitating perspective-taking within clinical relationships. Because the intervention relies on relatively simple group activities and creative narrative tools, it could be adapted across different healthcare contexts with minimal structural requirements. This suggests that the intervention is scalable and adaptable, even in resource-limited settings where psychosocial care resources are available. Future research could explore its implementation in other clinical settings and examine its impact on communication outcomes.

5 | Conclusion

This study describes the development and evaluation of Ironic Medications, a creative psycho-educational intervention designed to support adolescents with haematological malignancies. By integrating narrative techniques, irony and metacognitive reflection, the intervention provided a novel way for adolescents to articulate their emotions and engage in meaningful communication with healthcare staff. The findings reveal gaps in perspective-taking between adolescents and staff, particularly regarding the recognition of adolescent needs. While Ironic Medications facilitated reflection and empathy, discrepancies in perceived usefulness and comfort suggest opportunities to strengthen relational and communication training among healthcare professionals.

Future research should explore the long-term effectiveness of the intervention, its adaptability to other healthcare settings, and its potential integration into routine psycho-educational care. By refining and expanding such interventions, healthcare providers can foster more responsive, patient-centred approaches

that enhance the emotional well-being and communication experiences of adolescents in medical care.

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Conflicts of Interest

The authors declare that they have no conflicts of interest, financial or non-financial, related to the research, authorship and/or publication of this article.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Ethics Statement

All participants and, for minors, their parents or legal guardians provided written informed consent for participation in the study and for the collection and processing of personal data for research purposes. All data reported in this manuscript are presented in anonymised and aggregated form. No identifiable personal information or identifiable participant images are included in this publication. The study was conducted as an observational psycho-educational intervention within routine psychosocial care activities and was not designed as a clinical trial. Therefore, this study does not have a clinical trial registration number.

Use of Artificial Intelligence

Artificial intelligence tools were used to assist with linguistic editing and improvement of the manuscript's readability. No AI tools were used to generate scientific content or interpret data. The authors take full responsibility for the integrity and accuracy of the work.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.

Supporting File 1: pbc70491-sup-0001-SuppMat1.pdf **Supporting File 2**: pbc70491-sup-0002-SuppMat2.pdf **Supporting File 3**: pbc70491-sup-0003-SuppMat3.pdf **Supplementary Table SA**: Summary of emerging themes during intervention sessions in Phase 1 **Supplementary Table SB**: Adolescents' and Hospital Staff Members' perceptions of the utility of Ironic Medications for relational and communication needs (0 to 4 scale)