



Acceptability and feasibility of a therapeutic board game for children and adolescents with cancer: the Italian version of Shop Talk

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Abstract

Purpose *Shop Talk* is a therapeutic board game for children and adolescents with cancer, aimed at helping them talk about their disease, life, and emotions in a creative way and in a secure setting. The scope of this study was to translate *Shop Talk* into Italian, evaluating its acceptability, feasibility, and emotional impact.

Methods The game board, question cards, and game instructions were translated into Italian from the original English–Spanish version. A sample of 30 pediatric patients aged 7–18 with cancer were enrolled and assigned to one of the following play settings: individual setting, caregiver setting, group setting. The patients' affectivity was assessed before (T0) and after (T1) the game session using PANAS-C. Acceptability and feasibility were assessed at T1 using a specifically designed questionnaire.

Results The patients' acceptability and feasibility perception scores were high. Statistical analyses showed a significant decrease of the negative affect and a significant increase of the positive affect in patients.

Conclusions The results suggest that the patients involved appreciated the game and its content, purpose, and use. In addition, the game session with *Shop Talk* had a positive impact on the players' affectivity. Therefore, *Shop Talk* can be considered a useful tool for psychologists working with pediatric cancer patients in Italy.

Keywords Pediatric cancer · Psychosocial adjustment · Pediatric psychology · Therapeutic game · Psychological intervention

Introduction

The impact of pediatric cancer is psychosocially and physically profound. Children and adolescents may have difficulties in coping with the stressors of treatment and the loss of control caused by the hospital environment, as well as the fear of relapses and death [1].

In addition, children and adolescents manifest body image issues, ongoing lack of self-esteem, and difficulties related to preparation for the transition back to real-world situations (e.g., school) [1].

Therefore, a cancer diagnosis gives rise to several life changes in both the patients and their families, disrupting the reference points and generating emotions that are difficult to share and put into words [2].

To access this “unspeakable” sphere, there is the need to find tools which, together with the clinical interview, are able to help emotions, concerns, and hopes emerge in a non-threatening manner, giving the child and the adolescent the chance to elaborate the illness experience and make sense out of it [3].

Therapeutic play can be considered a powerful instrument for developing this topic. It is defined as a framework of structured activities, designed to enhance the emotional and physical well-being of hospitalized children and adolescents, based on their psychosocial and cognitive development and specific needs [4].

Literature has highlighted how play therapy and games are both feasible and effective in helping pediatric patients cope with illness and hospitalization [5]. Therapeutic play seems to be effective in reducing negative emotions such as children's anxiety and fears related to the illness and treatments, and it helps children and adolescents maintain their self-esteem and confidence, develop creative solutions when coping with problems, have easier communication with peers, families, and nurses, and achieve self-expression [6–10]. Through play, children and adolescents may also become familiar with the hospital's unknown environment and familiarize with healthcare professionals and medical procedures [8].

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Interest in therapeutic board games has burgeoned in the USA, and through their adoption, the clinician can strengthen the therapeutic alliance and start a conversation about stressful arguments, assessing psychological distress and the presence of family conflict [3, 11].

In particular, board games mean that all players have to respect rules, turns, and positions, and help create a shared and well-defined setting, thus giving the child and adolescent a sense of safety, security, responsibility, and psychological containment. This setting supports the expression of those unspeakable emotions that are not easily reachable using the classic therapy of words [12, 13], because thanks to the game, the patient is more open to experiencing new behaviors and stimulated to find new solutions to problems [3].

There are only a few games (and none available in the Italian clinical context) designed to help ill children and adolescents lower their psychological defenses and encourage self-expression. The therapeutic game *Shop Talk* was created for this specific purpose which is very important for children and adolescents with cancer because of the psychological repercussions this disease entails [14].

Shop Talk is a board game developed in the USA by Lori Wiener and Cynthia Mamalian [14] for use by professionals after completing specific training. It is designed for 7–16 year-old children and adolescents with cancer, to help them talk about their disease, life, and emotions in a fun and creative way, by answering questions while playing with a psychologist or other patients within a secure setting.

A literature review has revealed that in the Italian context there are no published studies that have tested the effects of intervention with therapeutic board games on the emotions of children and adolescents hospitalized with cancer.

The aim of this study was to assess the patients' perception of the acceptability and feasibility of the use of *Shop Talk* in the Italian context, and to measure any possible influences of the game on their affectivity.

Method

Participants and study groups

Through daily consultation of the schedule of hospitalized and day hospital (DH) patients, a total of 32 patients in the Onco-Hematology Unit of a prominent pediatric hospital in Italy were asked to participate in the study. One adolescent refused and 31 were enrolled. Since one patient felt unwell due to chemotherapy and could not complete the game session, the final sample included 30 pediatric patients.

Given the lack of appropriate literature to refer to for the power analysis, the sample size was determined by taking a similar study into account that evaluated acceptability and

feasibility of a new tool for pediatric psycho-oncology [15] in a sample of 30 patients.

Eligibility criteria included pediatric patients (1) aged from 7 to 18 years old, (2) Italian speaking, (3) in active treatment for oncological illness, (4) aware of having a tumor, (5) with no cognitive and/or developmental impairment, and (6) no medical issues that could impede the playing of the game (e.g., mucositis). Although *Shop Talk* was initially developed for children and adolescents aged 7–16 years old, patients up to the age of 18 were included in this study on the basis of the clinical experience and context, where we noticed a great similarity in awareness and psychological maturity between 16- and 18 year-old patients. Moreover, there is a high number of adolescents aged over 16 in the hospital where the study was carried out. Therefore, we decided to expand the age range and observe the older patients' reactions to the proposal of playing a therapeutic board game.

The Hospital Ethics Committee approved the study protocol, and informed consent was obtained from the caregivers and children/adolescents before inclusion in the study.

The children and adolescents enrolled were assigned to one of the following game settings in which a research psychologist with experience in clinical psychology was involved as either an active player or a facilitator:

- Individual setting (IS) (patient played with a research psychologist) ($N=22$);
- Caregiver setting (CS) (patient played with a caregiver, research psychologist as a facilitator) ($N=6$);
- Group setting (GS) (patient played with other patient/s, a research psychologist as a facilitator) ($N=2$).

The choice of game setting was based on a clinical evaluation by the psychologist in charge of each family (the same for all patients) in order to enhance the chances of the patient and family benefitting from the game session.

In particular, the game was considered helpful for patients who had difficulty in talking about their illness and the correlated emotional aspects. When caregivers had similar difficulties, their involvement was aimed at promoting communication and caregiver–patient emotional sharing. Conversely, caregiver participation was excluded if they showed high anguish that could be harmful for the child/adolescent, shifting to an individual setting where they could express their emotions and thoughts without being afraid of scaring their caregivers (one of the most frequent fears in our patients). The GS was chosen in a scenario where two to six patients could play within the same setting (e.g., shared room or possibility of staying in the same area), and when a peer relational exchange was beneficial or requested by the patients themselves. Even just listening to others' experiences may be helpful, allowing for a mirroring experience.

Procedure

Shop Talk consists of a colored board with 10 stores represented (hat, book, toy, jewelry, pet, clothing, sports and shoe stores, movie theater, and food court). Each store has a set of 6 items on sale and 15 question cards regarding the store theme at the same time reflecting the typical issues of a young person coping with a tumor (e.g., emotions, thoughts, body acceptance, interests, wishes, fears, relations with peers and family, formal care).

The questions are generally open to give the players the chance to be free in their expression; some are generic questions, while others are more specific to cancer conditions and therefore thought-provoking.

The game session can be in a group, with a maximum of 6 participants, or a single session with a psychologist. It is a typical board game: the participants roll the dice and move their pawns accordingly to reach the stores, where they have the chance to buy an item by answering the question indicated on the question card. The player is not forced to respond but can decide to pass if the question is perceived as frightening, too intimate, or emotionally difficult. The first player to collect at least one item from each store is the winner.

The first part of this study entailed the translation into Italian of the game instructions, question cards, and store names by following the guidelines published for the translation of psychological instruments [16–18]: two independent psychologists (one Spanish native speaker) provided separate Italian translations from the original English and Spanish versions. A single translation was made by comparing these translations and then subjecting them to back-translation, which led to the final version of the game instructions and questions.

A few changes were made to the original version: (a) the age range was extended from 7–16 to 7–18, (b) a new game setting was added (CS) giving caregivers the opportunity to play with the child/adolescent.

The research psychologist is an active player in the IS group and a facilitator in the CS and GS groups, although he/she never becomes active in these last two settings, but can decide whether to ask additional questions and establish a discussion or stop after the players' answers. The clinical use of therapeutic games must be accomplished with sensitivity, honesty, and courage in order to help the children, adolescents, and caregivers explore their inner world, giving meaning to the cancer experience [5]. This is the reason why it is important for the research psychologist to supervise the game even when not involved as a player.

The children, adolescents, and caregivers (when involved as players) were approached by the research psychologist and asked if they wanted to participate in the study. It was explained they would have the chance to talk about the illness, emotions, and general life issues such as friends, family, and dreams, by answering some questions about buying the items from each store in the game.

After collecting the informed consent, and before starting the game session (T0), the children and adolescents were asked to fill in a questionnaire to evaluate the activation of positive and negative affect at that time.

After the game session (T1), another research psychologist asked the participants to fill in the questionnaire regarding affectivity again, as well as a specifically designed self-administered questionnaire to evaluate acceptability and feasibility of the Italian version of Shop Talk. This choice was made to avoid any possible influence on the responses due to the relationship established between the research psychologist who participated in the game and the patients.

Instruments

The Italian version of PANAS-C [19] was used to evaluate positive and negative affect in children and adolescents with 30 words that describe different feelings and emotions: 15 regarding positive affect (PA, e.g., happy, strong, daring), 15 regarding negative affect (NA, e.g., sad, frightened, lonely). Participants had to choose how much each item reflected their state at that time on a 5-point Likert scale (from 1 = not at all to 5 = a lot).

The absence in literature of specific and adequate instruments for assessing the acceptability and feasibility of a therapeutic tool like Shop Talk meant that the authors had to develop a specific questionnaire. The questionnaire takes into account several concepts considered important in the study of Vandelanotte and De Bordeaudhuij [20] and used, as a guiding model, the assessment of acceptability and feasibility of the *Cellie Cancer Coping Kit* by Marsac et al. [15], a tool employed in pediatric oncology to promote coping. Therefore, the acceptability of Shop Talk was evaluated in terms of (1) comprehensibility/understandability, (2) relevance and completeness of contents, and (3) engagement in playing. The game's feasibility was assessed in terms of (1) use of the game, (2) barriers to use, and (3) perceived usefulness. The questionnaire included open and closed answers based on a 4-point Likert scale (from 1 = not at all to 4 = a lot) or "Yes/No" (yes = 2; no = 1), and some reverse items. It consisted of a general section with 19 items and a specific section based on the game setting, with items regarding the same variables, consisting of 4 items for the IS and CS, and 5 items for the GS.

Scores of 3 and 4 on the Likert scale, and 2 for the yes/no answers, were considered satisfactory and allowed the authors to define cutoffs for acceptability (minimum score of 36), feasibility (minimum score of 38), and their subscales.

Furthermore, a 0–10 thermometer measuring the overall evaluation of the game was used (0 = do not appreciate at all; 10 = greatly appreciate), in order to complement the acceptability and feasibility measurement, with a single and global indicator of game appreciation. A minimum score of 6 was considered satisfactory.

Data analyses

Data analyses were carried out on the final sample of 30 patients who completed the game session.

Descriptive statistics were conducted to describe the demographic and clinical characteristics of the sample.

The assessment of acceptability and feasibility of the Italian version of Shop Talk entailed an analysis of the frequency of item responses in the specifically designed questionnaire, also stratified by age (7–12 years old, $n = 11$; 13–16 years old, $n = 11$; 17–18 years old, $n = 8$). This analysis aimed at highlighting possible differences in acceptability and feasibility, especially for participants over the age of 16 who represented a new target for the game.

In order to evaluate the influence of the game session on the parents' affectivity, the PA and NA scores at T0 and T1 were compared using a paired sample t test.

The overall evaluation of the game was analyzed by calculating the thermometer's total average, also stratified by age (7–12, 13–16, 17–18 years old).

All the analyses were conducted with the SPSS Statistics version 25 (IBM Corporation Chicago, IL) and $p < 0.05$ was considered significant.

Results

The main demographic and clinical characteristics of the pediatric sample (mean age = 13.7, SD = 2.9, males = 43.3%) are shown in Table 1.

The acceptability and feasibility analyses showed that most patients (93.4%) declared Shop Talk to be both acceptable (Fig. 1) and feasible (96.7%) (Fig. 2). In particular, as regards acceptability, the game turned out to be engaging (93.3%), relevant (73.3%), and comprehensible/understandable (90%). As far as the feasibility is concerned, it was useful (93.3%), usable (93.3%), and not marred by possible barriers such as people entering the room, noises, or eventual interruptions due to medical routine (93.3%). Similar results were found when stratifying by age: 100% of participants aged 7–12 considered Shop Talk acceptable and feasible as well as 90.9% of patients aged 13–16; among the older adolescents (aged 17–18), the game was acceptable in 87.5% and feasible in 100% of patients.

The t test used to compare the patients' PA and NA scores at T0 and T1 showed a statistically significant difference for the patients' PA, which was higher after the session, and the patients' NA, which was lower after the session (Fig. 3).

The overall evaluation of the game, measured using the thermometer, gave a mean score of 8.8 for the total sample. Children and preadolescents (aged 7–12) scored 9.3, adolescents (aged 13–16) scored 8.9, and older adolescents (17–18) scored 7.9.

Table 1 Demographics of pediatric participants

	Male	Female	Total
Sex, n (%)	13 (43.3)	17 (56.7)	30 (100)
Age, years			
Mean (SD)	13.15 (0.82)	14.06 (0.72)	13.67 (2.95)
(Min = 7; Max = 18)			
Nationality, n (%)			
Italian	13 (100)	15 (88.2)	28 (93.3)
Other ^a	0 (0)	2 (11.8)	2 (6.7)
Diagnosis, n (%)			
Sarcoma	6 (46.2)	7 (41.2)	13 (43.3)
Osteosarcoma	2 (15.4)	2 (11.8)	4 (13.3)
Lymphoma	2 (15.4)	2 (11.8)	4 (13.3)
Leukemia	2 (15.4)	5 (29.4)	7 (23.3)
Neuroblastoma	1 (7.7)	0 (0)	1 (3.3)
Yolk sac tumor	0 (0)	1 (5.9)	1 (3.3)
Time from diagnosis, months			
Mean (SD)	7.83 (2.16)	4.94 (1.87)	6.17 (7.49)
(Min = 0.5; Max = 12)			
Game setting, n (%)			
Individual setting	8 (61.5)	14 (82.4)	22 (73.3)
Group setting	0 (0)	2 (11.8)	2 (6.7)
Caregiver setting	5 (38.5)	1 (5.9)	6 (20.0)
Place of game session, n (%)			
Single room	1 (7.7)	3 (17.6)	4 (13.3)
Double room	9 (69.2)	11 (64.7)	20 (66.7)
Day hospital	1 (7.7)	3 (17.6)	4 (13.3)
Other ^b	2 (15.4)	0 (0)	2 (6.7)

^a Albanian

^b Teen room

Discussion

As reported in literature, a cancer diagnosis can affect the physical, emotional, cognitive, and familiar functioning of children and adolescents [5, 21].

Therapeutic games appear to be one of the instruments that clinical psychologists can use, along with clinical interviews, to help patients elaborate and cope with the illness [4, 8, 9].

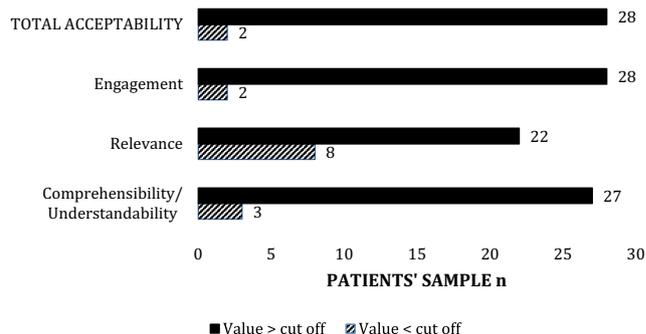


Fig. 1 Acceptability of Shop Talk, Italian version: frequency of total acceptability and subscales

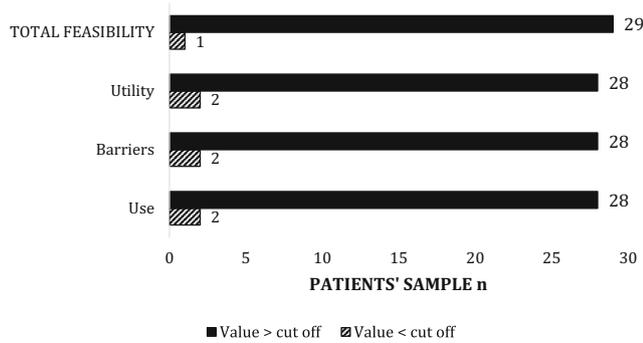


Fig. 2 Feasibility of Shop Talk, Italian version: frequency of total feasibility and subscales

In this perspective, Shop Talk can be considered a useful tool to support the patients' emotions through sharing, assessing psychological issues in a non-threatening way, and strengthening therapeutic alliance [14].

These results show that the Italian version of the game seems to be adequate in terms of acceptability and feasibility, and it also received an overall high evaluation by participants. It is considered comprehensible in relation to the rules, game graphics, and linguistic understandability of the questions, also helping the participants engage, and the contents and topics of question cards were appreciated. The players agreed that despite possible noises and interruptions due to the medical routine, Shop Talk is suitable for use in hospital, regardless of the specific environmental setting and is very useful as an opportunity to talk about emotions and start a conversation and confrontation with other people while having fun.

The results of the *t* test on PANAS-C scores show that the game session has a significant positive impact on the participants' affectivity, as they experience an increase of positive affect and a decrease of negative affect, proving that the game is able to work with emotions in a positive way. These results are in line with literature regarding therapeutic games [3, 12–14].

In this study, we proposed to extend the age range of participants, involving patients older than 16. None of

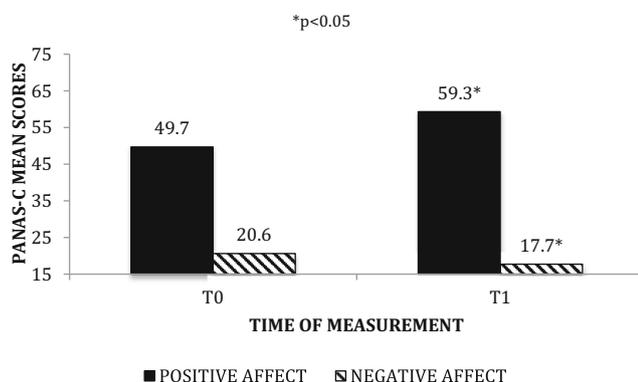


Fig. 3 The patients' positive and negative affect scores before and after the game session

them refused and the majority enjoyed the experience. When stratifying by age, the acceptability and feasibility results are similar to the total sample for every age range. The acceptability tends to decrease as the participants' age increases, while the feasibility remains high at every age. In our opinion, the decrease in acceptability can be explained by the participants' answers to questions regarding clarity and pleasantness of the game graphics. Adolescents and older adolescents tended to have lower scores for these questions, demonstrating that the game needs some changes to improve the experience and to be suitable for all ages, not only for children. This result is in line with the decrease in thermometer scores that follow the same trend, highlighting that Shop Talk is preferred by younger participants, while also maintaining a high global appreciation score with older patients. In light of these data, we believe that Shop Talk could also be used with patients over the age of 16, further to appropriate changes based on their suggestions to widen the experience to a larger sample.

While, as seen above, the adolescents highlighted the need to improve the graphics, the children focused more on the relevance and completeness, making suggestions, such as the addition of more stores in order to have more questions, or the division of the question cards based on age. This observation may explain the lower percentage of this acceptability subscale compared to the others.

This is the first study to introduce a therapeutic game for pediatric oncological patients in Italy and represents an opportunity for open and non-frightening communication. Indeed, information sharing and disclosure with children and adolescents in Italy is regulated by law, requiring that healthcare personnel obtain parents' consent before they can talk with underage patients. Families are often overprotective and, at least at the beginning, they prefer their children not to be told about the detailed clinical situation and diagnosis, for fear of this increasing their emotional suffering. Furthermore, when it comes to communicating a cancer diagnosis, the medical staff often struggle with this kind of conversation. This is the result of a sociocultural and religious context that transforms communication regarding disease and death into a sort of taboo.

One of the aims of psychologists at the hospital is to help families transform unspeakable suffering, making it speakable, allowing them to overcome their death anguish. When pursuing this aim, psychologists tend to be cautious with patients and families, respecting emotional needs and timings, since a straightforward communication, not synchronized with the family/patient, may lead to rejection.

We recognize that communication is extremely important for promoting the patients' adjustment to illness; for this

reason, we believe this study, and the tool it evaluates, could represent an initial step toward demonstrating the importance of open communication about illness with children and adolescents, contrary to the mainstream cultural and religious beliefs.

A limitation of the study is represented by the small sample size, which was due to the difficulties in involving children and adolescents. The patients' medical condition and bed arrangement in the hospital ward facilitate individual or caregiver settings but hinder the chance to form groups and create a peer game session. Moreover, because of the small sample size, it was not possible to investigate whether the different group allocation and the role of the research psychologist (active or facilitator) had an impact on patient outcomes.

Further studies should possibly involve a higher number of patients and focus on studying the acceptability and feasibility of Shop Talk correlated with the physical status of the oncological patients. Moreover, they could explore the usefulness of the game for patients with other medical conditions, such as those suffering from chronic diseases, thus expanding the participant sample and highlighting eventual age and gender differences in emotional benefits.

In this study, we involved caregivers in the CS group in line with literature that affirms the importance of sharing experiences with children and adolescents, connecting to their affect and communicating about illness and processing emotions [22, 23]. We consider it important to propose new studies that could include caregivers as part of the sample size and investigate the impact of Shop Talk on the caregivers' affect and their influence on the patients' affect.

In conclusion, our results suggest that Shop Talk could be applied in the Italian context and integrated by clinicians during psychological interventions with oncological patients, giving children and adolescents the chance to explore and talk about their life, emotions, and illness experience in a different manner. In addition, Shop Talk proved to have a positive impact on affectivity.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval All the procedures in the studies involving human participants were performed in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and subsequent amendments or comparable ethical standards.

Informed consent Informed consent was obtained from the individual participants enrolled in the study.

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