

Introduction

In the last ten years, the number of publications focusing on children with cancer re-entering school (so-called survivor students) has increased. Several fields have been investigated. Some studies are interested in the academic or social difficulties encountered by these children (Mcloone et al., 2011; Park et al., 2018; Pini et al., 2012, 2016; Rivero-Vergne et al., 2011; Vanclooster et al., 2020; Winterling et al., 2015; Yilmaz et al., 2014) especially in cases of brain tumors causing more cognitive and academic difficulties than other cancer diseases (Bruce et al., 2012; Roche et al., 2020; Rubens et al., 2016; Vanclooster et al., 2020; Young et al., 2022). Others investigated the well-being with classmates (Bruce et al., 2008; Chen et al., 2015; Choquette et al., 2015; Kieffer et al., 2012; Upton & Eiser, 2006; Yi et al., 2016), the collaboration between parents and school (Hen, 2022; Stavinoha et al., 2021; Tresman et al., 2016; Vanclooster et al., 2019b, 2019a), or the liaison programs between hospital, families, and school (Bruce et al., 2012; Burns et al., 2021; Chen et al., 2015; Gilleland Marchak et al., 2021; Hocking et al., 2018; Martinez-Santos et al., 2021; Muntaner et al., 2014; Paré-Blagoev et al., 2019; Pini et al., 2016; Thompson et al., 2015, 2015; Vanclooster et al., 2019b, 2019a; Young et al., 2022).

In France, the school re-entry of serious illness survivors is scarcely investigated by researchers and poorly considered by the education administration. Indeed, the vast majority of cancer survivors come back to school after treatment or hospitalization without any specific re-entry program, such as school liaison programs. There is no standardized institutional procedure to support the school re-entry of children with serious illness. Only survivors who need medical assistance in school or who are officially considered disabled students may benefit systematically from adaptations and compensations via standardized plans (Rollin, 2015) whereas most of the survivors do not enter these categories but still have physical or psychological after-effects of their cancer history, impacting their relationships with their peers (Albee et al., 2022; Otth & Scheinemann, 2022) or their academic skills (Kieffer et al., 2012; Oppenheim, 2009). To better understand the French context and the existing barriers to the successful re-entry of cancer survivors, the struggles of French teachers welcoming a child with cancer into their

classroom should first be investigated. Secondly, comparisons between French results and those from other countries should provide recommendations to improve the re-entry of survivors.

Background

Specific requests of teachers welcoming survivor students with special educational needs

Due to the large range of possible after-effects of cancer, the needs of both children and teachers in schools are numerous. Children's needs can be related to different fields. Some students are struggling in the academic field or feel a lack of support (Chen et al., 2015; Pini et al., 2016; Winterling et al., 2015). Others may encounter difficulties in their social lives regarding relationships with their peers (Choquette et al., 2015; Yi et al., 2016; Young et al., 2022). Finally, they can also meet difficulties in maintaining their self-esteem and motivation (Bruce et al., 2008; Chen et al., 2015; Choquette et al., 2015; Park et al., 2018; Yi et al., 2016).

The needs of teachers are not often directly examined in the literature. When teachers are interviewed, they attest to being largely unprepared or insufficiently prepared (Brown et al., 2011; Hen, 2022; Labonté, 2012). They deplore a lack of information and training (Brown et al., 2011; Hen, 2022) and/or request resources or institutional policies to welcome these children in better conditions (Galán et al., 2021; Klein et al., 2022; Labonté, 2012; Otth & Scheinemann, 2022; Vanclooster et al., 2019b). They also testify to the difficulty of having realistic expectations regarding the academic skills of survivors while lacking information about cognitive abilities, socio-emotional functioning, or medical needs from medical staff (Brown et al., 2011; Galán et al., 2021; Klein et al., 2022; Labonté, 2012; Otth & Scheinemann, 2022). They argue that peer awareness, emotional education, and group dynamics are crucial points to creating a peaceful and respectful environment for these children (Galán et al., 2021; Klein et al., 2022; Labonté, 2012; Otth & Scheinemann, 2022). However, informing peers is not always easy to manage without external help (Brown et al., 2011; Labonté, 2012; Otth & Scheinemann, 2022).

Finally, keeping the link with the survivor and his or her family during the treatment is also a consensual point in the literature, even if some teachers are struggling to initiate this link (Hen, 2022) or would like more time to make it more efficient (Labonté, 2012; Vanclooster et al., 2019b).

Key points to support the return to school of survivor students

International studies show that preparing the children for school re-entry (with psychological support, education continuity, and peer awareness) (Chen et al., 2015; Helms et al., 2016; Rivero-Vergne et al., 2011; Vanclooster et al., 2019a; Yilmaz et al., 2014) and/or relying on re-entry or liaison programs (Bruce et al., 2012; Chen et al., 2015; Martinez-Santos et al., 2021; Thompson et al., 2015) has a very beneficial effect on the children's school life and performances. According to Burns and his collaborators (Burns et al., 2021), there are three different kinds of programs that could be settled to help the re-entry of cancer survivors: (i) programs designed to inform peers; (ii) programs designed to provide teachers with information and recommendations to facilitate the survivor's school life; and (iii) liaison or re-entry programs that included a regular liaison between school and medical staff, information for both families and teachers about cancer, treatments, and their consequences, and sometimes educational recommendations or planification. These programs are not available everywhere, and their setup is requested by many teachers (Brown et al., 2011; Hen, 2022; Klein et al., 2022; Labonté, 2012). Indeed, many studies claim for a better preparation of school staff (Donnan et al., 2015; Hay et al., 2015; Soejima et al., 2015; Tresman et al., 2016; Yi et al., 2016) and these programs could be a solution, especially if they introduce a coordinator (school or hospital nurse, specialised teacher) to facilitate the exchanges between school, families, and medical staff (Lee et al., 2020; Lönnerblad et al., 2019; Paré-Blagoev et al., 2019; Vanclooster et al., 2020; Young et al., 2022). Having a regular evaluation of the children's needs (Galán et al., 2021; Hocking et al., 2018; Lönnerblad et al., 2019; Vanclooster et al., 2019a) is also considered essential by teachers to provide an appropriate environment for survivors.

Moreover, teachers claim that communication and cooperation with families is key to understanding the special needs of children with cancer (Brown et al., 2011; Galán et al., 2021; Hen, 2022; Klein et al., 2022; Labonté, 2012; Otth & Scheinemann, 2022; Vanclooster et al., 2019b) and have to be encouraged. As mentioned before, keeping the link with the child and his or her family during the illness and treatment is essential (Martinez-Santos et al., 2021; McLoone et al., 2013; Soejima et al., 2015) and seems to have a major impact on the motivation and self-esteem of the child with cancer and helps the re-entry process (Pini et al., 2012, 2016; Vanclooster et al., 2020).

What about in France?

In France, teachers may face barriers in their search for help or resources. Indeed, few children experience the hospital's school, especially because of the reduction of time spent in hospitals; thus, ordinary teachers are lacking advice from hospital teachers (Feugère, 2017). Telepresence robots are sometimes provided to families, but they are still marginal, and the efficiency of these devices is still discussed in the scientific literature (Gallon et al., 2017; Heitz Ferrand & Avril, 2019; Klunder et al., 2022; Poyet et al., 2018). Moreover, in specific cases, multidisciplinary hospital consultation may help parents and ordinary teachers better understand the special needs of the child (Kieffer et al., 2007). Finally, even if effective experiments have already been conducted in schools to raise peer and educational staff awareness to help survivors re-enter (Dugas et al., 2014; Rollin, 2015), they still remain scarce.

Present research

The aim of this study is twofold: first, to investigate the feelings, difficulties, and needs of French teachers welcoming in their classroom a child with cancer; and second, to compare the experiences of French teachers with those from other countries. In order to achieve these objectives, a specific method was used to find points of convergence in the experiences of the teachers studied. The Delphi method is a forecasting process used to search for consensus on an opinion panel. Usually, the process involves several rounds of questionnaires proposed to a panel of experts; in each round, they have to

note how they agree with the assertions obtained in the previous round. Generally, the first round consists of open-ended questions, and the second round is a Likert-scale survey. This methodology seemed appropriate to achieve our goals.

In a recent study, Galán and his collaborators used this method to question Spanish teachers about their difficulties, their needs, the resources or strategies they used, and their needs for training regarding the welcoming of a child with a serious illness, including cancer, into their classroom (Galán et al., 2021). A lot of assertions were suggested by the participants of Galán's study (in the first round of their study), covering many concerns and resources listed in the literature. Therefore, the same assertions were used and apply to our sample, only in the second round of the Delphi process in order to compare the points of view of French and Spanish teachers. Thus, the discussion of the French situation regarding international literature had been facilitated, and we were able to highlight which practices may help French survivor students returning to school.

Method

Participants

One hundred and twelve teachers in kindergarten and primary schools welcoming a child with a serious illness responded to our study: 70 teachers of children with cancer and 42 teachers of children with other serious illness. According to the aims of the study, only the cases of teachers welcoming students with cancer were explored. Among the 70 teachers welcoming children with cancer, 23 teach in kindergarten, 41 in primary school, 4 in secondary school, and 2 did not mention this information.

Procedure

After an initial contact with institutional educational stakeholders and associations managing home schooling for children with serious illness, 36.000 French kindergarten and primary schools were contacted through their institutional e-mail addresses. Data were collected from December 2022 to June 2023.

Data collection

As previously mentioned, the methodology derived from the study conducted by Galán and his collaborators in 2021 (Galán et al., 2021) was used. The survey is divided into five parts about demographic characteristics, difficulties and needs in welcoming a child with cancer, resources used, and needs of training to welcome them, respectively. The components of each part are available in tables 1 to 5 below.

Part 1: Demographic information

In the first part of the survey, the participants have to indicate some demographic information: the geographical area where they teach, the classroom level, their seniority as a teacher, if they have had multiple experiences with children with cancer or another serious illness, and if they have a diploma in special needs education.

Part 2: Difficulties in welcoming a child with cancer to school

This second part (as in parts 3, 4, and 5) was designed as a Likert-scale survey with five possible answers (from 0 to 4) about the difficulties of teachers. Sixteen statements are suggested, and the respondents have to rate the frequency with which they encounter this difficulty from 0 = “not frequent at all” to 4 = “extremely frequent”.

Part 3: Needs for welcoming a child with cancer to school

The third part is about teachers’ overall needs. Eighteen proposals are made, and the respondents have to rate the level of suitability of each need in their case from 0= “not relevant at all” to 4 = “completely relevant”.

Part 4: Resources used to welcome a child with cancer to school

The fourth part discusses the resources. Twenty-two suggestions are proposed, and the respondents have to rate the utility of each one from 0= “not useful at all” to 4 = “extremely useful”.

Part 5: Needs of training to welcome a child with cancer to school

The fifth part is interested in the need for teachers to be trained. Twenty training contents are proposed, and the respondents have to rate the significance of each one from 0= “not significant at all” to 4 = “extremely significant”.

Open questions

Two open questions were added to the survey to make sure that there were not any concerns or feelings that were excluded, one at the beginning of the survey: “Did you previously have any specific expectation to welcome this child? What, if any, were your questions, your anxieties, and the resources that you thought you could mobilize?”. The other open question ended the survey to give respondents the opportunity to add any details they would like about their teaching experience with children with serious illness: “Do you have something to add or specify regarding your experience that is not suggested or sufficiently detailed in the whole survey?”

Data analysis

Quantitative data

The scored data from 2 to 5 sections (regarding the difficulties, the needs, the resources, and the training program) were computed following the second round of the Delphi method. For each assertion, the percentage of each possible answer (0, 1, 2, 3, or 4) was calculated. To be considered consensual, an item has to reach a cumulative percentage of at least 75% for scores 3 and 4. Descriptive statistics (means and standard deviation) were also performed on the dataset as well as non-parametric tests to examine potential differences between sub-groups (kindergarten vs. primary school, teachers with or without multiple experiences in welcoming students with serious illness, for example).

Qualitative data

The data collected by open-ended questions has been analysed by a thematic analysis. This analysis consisted of extracting key words, topics, and subtopics, and hierarchizing them to create topic trees

(Paillé & Mucchielli, 2016). We also carried out a count of the frequency of the different subtopics to highlight the major considerations of the teachers.

Results

Results from the survey in terms of consensus

Part 1: Demographic characteristics of the teachers' sample

Table 1 shows that the sample is composed of more teachers from primary schools who do not have any previous experience welcoming children with cancer (or other serious illness) but have seniority as teachers.

Table1 : Demographic characteristics of the sample

		Sample size
Teacher's gender	Male	4
	Female	65
	School team	1
Academic level	Kindergarten	23
	Primary school	41
	Other or NA	6
Previous experience in welcoming students with serious illness	With experience or a diploma	13
	Without experience or a diploma	51
	NA	6
Seniority as a teacher	Seniority < 6 years	9
	Seniority > 6 years	59
	NA	3

Part 2: Difficulties in welcoming a child with cancer to school

Table 2 shows that no consensus can be extracted from our study regarding the difficulties. We suggest that this result highlights the large range of situations experienced by teachers. Indeed, the level of after-effects of the survivors, the institutional support provided, the existence of a liaison with medical staff, the seniority and experience of the teacher, the support of the school team, the support of associations, etc. may hugely impact the teachers' experience and generate or resorb difficulties encountered in welcoming survivors at school.

Table 2: results of the Delphi study regarding the difficulties encountered by teachers (according to Galán et al., 2021)

	Difficulties that teachers may have with cancer survivor students in the classroom, teachers may:	Consensus (%)	mean	SD
Item 1	Have to deal with the student's physical difficulties: relapse, occasional indisposition, physical discomfort, etc.	59%	2,769	1,06
Item 2	Have to deal with the student's psychological difficulties: attention problems, low self-esteem, attitudinal problems, lack of motivation, socialization, depression, anxiety, etc.	54%	2,516	1,28
Item 3	Have to deal with the student's difficulties at the educational level: curriculum gap, lack of attendance, different learning rhythm, monitoring of learning, etc.	60%	2,677	1,31
Item 4	Overprotect the student.	41%	2,141	1,10
Item 5	Treat the student the same as the others.	43%	2,242	1,18
Item 6	Work on emotions in the classroom.	51%	2,567	1,15
Item 7	Work without the (material, human) resources necessary to adequately attend to them.	50%	2,458	1,39
Item 8	Not know how to talk about what happened.	33%	1,891	1,21
Item 9	Not know how much they can demand of the student.	39%	2,143	1,25
Item 10	Not know how the student can adapt to the group.	29%	1,852	1,13
Item 11	Not know how to treat the student.	24%	1,656	1,18
Item 12	Not know how to prepare the classmates for the survivor's return to classroom.	36%	1,871	1,42
Item 13	Work with very large numbers of students.	41%	2,158	1,46
Item 14	Not know what sort of difficulties the student may have.	36%	1,810	1,31
Item 15	Not know what support these students require.	37%	2,079	1,23
Item 16	Not understand the disease or the process suffered by the survivors and their families.	36%	1,875	1,26

Part 3: Needs for welcoming a child with cancer to school

Table 3 shows that the teachers assert that in order to work properly with the children with cancer, they must encourage the relationship with the families (item 5), be informed regularly of any change in the children's physical or mental condition (item 18) and be able to use the group dynamics and to warn peers regarding cancer consequences (item 4). Teachers also claim that they need resources, advice, or training to know about the needs of survivor students and to be more in line with emotional education (items 14 and 1).

Table 3: results of the Delphi study regarding the teachers' needs to work with children with cancer (according to Galán et al., 2021)

	The needs of teachers when working with these students	Consensus (%)	mean	SD
Item 1	Know how to work on emotional education.	84%	3,397	0,79
Item 2	Know how to work on acceptance of the disease.	67%	2,923	1,08
Item 3	Use group dynamics.	86%	3,270	0,81
Item 4	Know how to create awareness among the rest of the classroom group.	84%	3,185	0,93
Item 5	Encourage family-school collaboration.	93%	3,554	0,84
Item 6	Use material resources to help the student catch up.	77%	3,046	0,98
Item 7	Provide the student with extra work and reinforcement.	21%	1,773	1,16
Item 8	Make greater use of support teachers in the classroom.	46%	2,175	1,38
Item 9	Use methodologies and tools so that these students can better adapt to the school/institute.	71%	2,810	1,16
Item 10	Be trained to help these students get back into school life.	70%	2,797	1,21
Item 11	Be trained in motivational classroom techniques and resources.	54%	2,661	1,15
Item 12	Be trained in the physical and mental health of this type of student.	74%	3,109	0,90
Item 13	Be trained in relaxation and meditation techniques.	56%	2,656	1,23
Item 14	Be trained in the needs of these students during and after treatment.	84%	3,292	0,94
Item 15	Be trained in types of cancer, effects of treatments, and recurrences.	61%	2,818	0,98
Item 16	Be provided with psychological support.	60%	2,800	1,28
Item 17	Be advised by health professionals.	74%	3,077	1,04
Item 18	Be provided with updated information on the student's physical and mental condition.	90%	3,333	0,82

Part 4: Resources used to welcome a child with cancer to school

Concerning the resources used by teachers, Table 4 shows that several kinds of resources are highlighted. The first category concerns the relationship between the survivor student and the classroom, as keeping the link during the absence period is an essential resource for teachers (items 19 and 20). Raising awareness among peers to develop empathy (item 4) also seems essential to help classmates better understand the needs and difficulties encountered by the survivor student. The second category relates to the adaptations and the support provided to the survivor student; teachers attest that they have to regularly observe the child with accuracy to suggest the appropriate support (items 7, 10, 13, and 14), adaptation, or compensation (item 18). The third category concerns the status of the child in the classroom: a very important point for the participants is to treat the student normally

to decrease the potential stigmatization and to offer him a kind of bubble to put the cancer away when they are at school (item 16).

Table 4 : results of the Delphi study regarding the resources used by teachers (according to Galán et al., 2021)

	Resources, techniques, or strategies that teachers have used to work with these students:	Consensus (%)	mean	SD
Item 1	Used emotional education.	60%	2,770	1,07
Item 2	Used common sense.	91%	3,698	0,68
Item 3	Been trained in social skills to promote their reintegration.	41%	2,246	1,29
Item 4	Made the student's classmates aware of the disease.	77%	3,328	0,81
Item 5	Used serious game to raise peer awareness.	46%	2,382	1,12
Item 6	Given the student the opportunity to talk about their experience so that everyone can understand him/her.	71%	3,100	0,97
Item 7	Given personalized attention so that they can complete their tasks.	90%	3,476	0,65
Item 8	Given them reinforcement and extra help.	73%	2,984	1,02
Item 9	Asked the student to sit in the front row.	31%	2,073	1,36
Item 10	Motivated and praised him/her when they do well.	83%	3,467	0,71
Item 11	Asked the student to work with helpful classmates.	70%	3,161	0,83
Item 12	Not draw attention to the student in front of others if the student is disruptive.	43%	2,540	1,20
Item 13	Observed the student (to see if he/she is distracted, sleepy, or uncomfortable).	87%	3,590	0,76
Item 14	Given the student support and conversation.	87%	3,635	0,68
Item 15	Used new technologies to monitor and deliver work.	59%	2,707	1,24
Item 16	Treated the student normally, although without forgetting their situation.	90%	3,603	0,65
Item 17	Worked in a fun and motivating way.	71%	3,207	0,91
Item 18	Adapted games so that they can take part.	79%	3,345	1,03
Item 19	Kept in touch with the student throughout his/her illness.	90%	3,694	0,62
Item 20	Kept in touch with the family throughout the illness.	91%	3,721	0,50
Item 21	Kept in touch with the family after the illness.	74%	3,491	0,74
Item 22	Entered into agreements and work commitments with the educational team, families, and the student.	70%	3,097	1,15

Part 5: Needs of training to welcome a child with cancer to school

Table 5 shows that teachers mentioned the contents that could be included in a training program, for instance, about the management of emotional aspects in a wide sense: they would like to feel stronger in psychologically supporting the student with cancer as well as classmates (item 3), to know how to explain the situation (item 19) and to reinforce the links between the classroom and the child with cancer (item 20). Another important point would be to be trained about the consequences of cancer

(items 5 and 8) and the adaptations that they could set up in practice in their classroom to help the survivor student and to take into account all his or her needs (items 1 and 9).

Table5 : results of the Delphi study regarding the trainings requested by teachers (according to Galán et al., 2021)

	Content of a training program that will help teachers work with these students	Consensus (%)	mean	SD
Item 1	Emotional intelligence	76%	3,190	0,91
Item 2	Group psychology	74%	3,143	0,91
Item 3	Psychological support for the student	90%	3,484	0,63
Item 4	Attention to diversity	56%	2,895	1,07
Item 5	Effects of cancer treatments on a physical and psychological level	79%	3,254	0,80
Item 6	Problems of cancer survivor students, Knowledge on what life is like after this disease, cancer detection, treatment, and follow-up	63%	2,949	0,97
Item 7	Individualized information on what the healing process has been like, the time it has taken to heal, current medication and habits, and what the student has been taught in hospital (if there were hospital classrooms)	74%	3,048	0,84
Item 8	Counseling by the medical staff and by parents about the needs of the student	94%	3,569	0,58
Item 9	Methods and strategies to help children on a personal and educational level	83%	3,323	0,78
Item 10	Motivational learning techniques	57%	2,814	1,00
Item 11	Personal motivation and the improvement of self-esteem	73%	3,048	0,92
Item 12	Practical cases	61%	2,818	1,16
Item 13	Experiences of other teachers	70%	3,082	0,87
Item 14	How to help families	74%	3,095	0,86
Item 15	How to reintegrate the child into school: methodologies and resources	70%	3,131	1,03
Item 16	How to adapt content to the student's needs	71%	3,133	0,86
Item 17	Awareness of how to work with the rest of the classroom	54%	2,797	0,99
Item 18	Awareness and preparation of the school for the return of the student	73%	3,183	0,77
Item 19	Explaining the situation to their classmates	79%	3,377	0,78
Item 20	Encourage the relationship with classmates during treatment	81%	3,381	0,81

Comparisons between sub-samples

Finally, when looking at possible differences between the sub-samples of teachers according to type of school, experience, and seniority, no statistically significant differences can be highlighted. However, if we look at the results by sub-sample, we can even see that some difficulties seem to be more common for teachers with less seniority or without previous experience with children with cancer or serious

illness. In parallel, teachers who are welcoming older children seem to be more confronted with difficulties relating to emotional aspects, self-confidence, or acceptance by peers.

Results from the open-ended questions¹

Sixty-four teachers in our sample answered two semi-directive questions about their feelings regarding their teaching experience. Six main topics can be extracted from the thematic analysis of the teachers' answers, highlighting their major considerations (see Table 6).

Table 6 : Count of the different key words mentioned by the teachers in the open-ended questions (The number of mentions is indicated in brackets.)

The main topics and sub-topics discussed by the teachers in open-ended questions	
Concerns	death and health (19) peers' management (11) professional skills (11)
Questioning	peers' awareness and stigmatisation (13) emotional skills (15) teacher posture (9) learning objectives and adaptation (9) relationship with families (5)
Difficulties	keep distance (5) appropriate support for families (5) psychological impact (5)
Feeling	loneliness (6) overwhelming experience (6) enriching experience (2)
Needs	training on children's needs and cancer consequences (6) institutional support (13) psychological support (10) human and material resources (13) school-hospital liaison (8)
Fulcrums/supports/resources	link with families (32) team work (10) link with the hospital and medical advice (11) awareness and constant link with the peers (25) educational continuity and home schooling (36) positive and caring environment (12) educational accommodations (16) planning arrangements (8)

¹ : "Did you previously have any specific expectation to welcome this child? What, if any, were your questions, your anxiety, and the resources that you thought you could mobilize?"

"Do you have something to add or specify regarding your experience which is not suggested or sufficiently detailed in the whole survey?"

As with the qualitative data, these key words and topics can also be interpreted in terms of difficulties, resources, and needs, as described below.

Difficulties in welcoming a child with cancer to school

One of the major difficulties highlighted by French teachers who welcome survivor students is the lack of information. Most of the time, they have to manage the aftermath of the illness or the consequences of attendance disturbances with few or no recommendations from the medical staff, without any training or guidelines, without a liaison coordinator between school and hospital, and without systemic support.

JM: "No support is offered to teachers in these situations, neither in the management of the classroom nor in the help of the students with cancer and their families."

Another difficulty is the absence of institutionalized and systematic support from the education system. It is deplored by several participants who feel lonely and even abandoned sometimes by their hierarchy or the school psychologist, who do not provide them with the support and consideration they would like to have.

SP: "I felt very lonely during these years; the colleagues at school did not understand the uniqueness of the welcoming of this child, nor did the hierarchy (who did nothing to make my work less difficult) [...] Welcoming a child with serious illness should not be the commitment of a single person but of a team. »

Finally, some teachers express concerns about communication with families, claiming that they are not able to find a good balance and the appropriate posture to have regarding the families in order to maintain the necessary professional distance and objectivity.

MV: "My difficulties were mainly with the family who was seeking psychological help [...]. I had difficulty managing this request from the family, not getting too involved."

Resources used to welcome a child with cancer at school

Parents are the major resource for French teachers welcoming a student with cancer. Indeed, parents are, most of the time, the only source of support, helping them to have an appropriate concern for these kids with cancer. Since this is the case, they develop a very strong and close relationship with families. They all argue that it is a key point for the re-entry of students with cancer.

EP: "As teachers in a mainstream school, we are not part of the care team, and the only information we have is what the family gives us. "

Keeping the link with survivors during their absence from school also appears as a key point in the collected answers. Indeed, there are numerous teachers who claim that peer awareness and a constant link with survivors and their families are crucial for successful reintegration.

CF "It is important to always maintain the link with the student and their family. The little support we can provide is useful and reassuring. »

Finally, the teachers who experienced a partnership with medical staff and hospital teachers were, for the huge majority, very satisfied with this collaboration, which helped them to manage not only the special education needs of these children but also the awareness of peers.

CM "Fortunately, my sister [nurse in the paediatric oncology department] was able to allow us to create a carer/teacher/family triangle so that everyone could act jointly for the well-being of the student with cancer. I think that many teachers are not so lucky."

Needs for welcoming a child with cancer to school

The first need highlighted by French teachers is to benefit from a real partnership between school staff and hospital staff. Most of the teachers interviewed regret that this partnership is not more developed, although it could help them to better understand the special needs of cancer survivors.

CM "It seems essential to be informed of the different stages of the disease in order to know the expectable reactions to the treatments (focusing difficulties due to chemo

molecules, tiredness of the learner, fear of death leading to anxiety, which can interfere with learning, etc.).

Some teachers were also campaigning for psychological support to help them talk about cancer or death with their pupils because they do not feel adequately trained to deal with this element.

VF "I asked the school psychologist to intervene to explain to the children what this illness was; [...] she told me that she would only intervene if she [the child with cancer] died, which destabilized me even more. It's difficult!!! Talking about death, life, the essential, and returning to the fundamentals, calculate, read, and the daily life of the student."

Both qualitative and quantitative data provided evidence that some resources or strategies previously described in the literature are needed in the re-entry process, like communication and cooperation with families, updated information about the student's needs, or social links with peers. The analysis of the two sets of data also highlights some barriers, like a weak relationship with medical staff or a lack of resources, and the low support or training provided by education administration.

Discussion

The difficulties, needs, and resources of French teachers welcoming students with cancer may be related to four main topics: (i) institutional support and child school career monitoring; (ii) the relationships between school and families; (iii) the importance of the liaison with hospital and medical staff and (iv) the link with peers. These issues are also debated in the international literature and will be discussed below in regards to the functioning of the French educational system.

Institutional support and child-school career monitoring

Firstly, the results highlight that French teachers request more liaisons inside the educational system to provide them support and to ease the school career of the survivors by streamlining the transmission of relevant information from one classroom, school, or service to another, like Israeli teachers (Hen,

2022). French teachers argue that keeping track of the child's educational accommodations and development can help them to welcome him or her in good conditions. This point was also noted by Canadian teachers (Labonté, 2012).

French teachers also request more psychological support to help them and their classmates deal with this illness and its consequences. They particularly request help in talking about cancer or death with students because they don't feel adequately trained to do it properly.

The relationships between schools and families

The results show that French teachers develop a very strong relationship with the families of children with cancer. This involvement seems similar to those observed in international studies, maybe even more developed. Indeed, our results in both the questionnaire and open-ended questions attest that the involvement of the parents in communication or collaboration is always very welcome. Teachers believe that they collaborate easily and spontaneously with parents, and they all agree that this close relationship must be encouraged. Such a result does not appear consensual for Spanish teachers who acknowledge that close relationships with parents are a strong resource but not a need (Galán et al., 2021), as well as for Belgian teachers who think the link with parents is essential but do not seek to push this link further (Vanclooster et al., 2019b). These authors also show that Belgium teachers sometimes encounter disagreement with parents (Vanclooster et al., 2019b), which is not attested by any French teacher.

These differences between countries may be explained by the fact that French teachers and parents have informal contacts since kindergarten school which is mandatory in France from the age of 3. In addition, home schooling is mostly provided by the teacher of the mainstream school where the survivor is registered. That is not always the case in other countries, where teachers sometimes have difficulties initiating the link with families (Hen, 2022) or with home schooling teachers (Labonté, 2012).

Thus, getting involved in a close relationship with parents seems to be a relevant help for teachers welcoming students with cancer. However, the right attitude towards parents is not always easy to find,

as attested by some participants. It seems to be a concern for teachers in general who are questioning the right attitude to have and/or would like to be trained to know how they may best support families (Galán et al., 2021; Otth & Scheinemann, 2022).

The importance of the liaison with the hospital and medical staff

The results suggest that French teachers need advice from medical staff but do not always know how to get it. Coordination between education and the medical world is not clearly defined in France and is devoted to different people (hospital teachers, school doctors, and sometimes coordination nurses) having many other tasks. Consequently, in most cases, the liaison just does not exist. However, the liaison seems not to be standardized and generalized in other countries as well. Several studies argue that the link between school staff and medical staff is unfortunately mostly left to parents (Paré-Blagoev et al., 2019; Vanclooster et al., 2020) whereas a dedicated coordinator could greatly help the school-family-hospital collaboration (Pini et al., 2016; Soejima et al., 2015; Vanclooster et al., 2019a; Yilmaz et al., 2014).

The link with medical staff is considered by teachers to be very supportive of understanding the needs of students with cancer in many countries. Even if a few devices are available in France (Kieffer et al., 2012), French teachers would even like it to be more developed. This result is also found in Spain, Belgium, and Canada (Galán et al., 2021; Labonté, 2012; Vanclooster et al., 2019a) while in other countries, like Switzerland, it seems that teachers are globally satisfied by the advice they receive from parents and medical staff (Otth & Scheinemann, 2022). If international studies claim that teachers would like to have medical information about cancer processes and treatments (Brown et al., 2011; Galán et al., 2021; Klein et al., 2022), it does not emerge as consensual in the present study. French teachers seem to wait for information about the students' educational needs instead. This could be explained by the fact that French teachers have few contacts with specialised teachers inside mainstream schools in comparison with other countries. Thus, they sometimes struggle to translate the medical information they have into successful educational accommodations in classroom.

The importance of peers and the school environment

The results highlight the importance of peers and the school environment. Most of the respondents greatly encourage raising peer awareness and maintaining the link between the survivor and his or her classmates during hospitalization or recovery time at home. As in other studies, teachers also request using group dynamics, peer tutoring, and emotional skills to support survivor re-entry (Galán et al., 2021; Labonté, 2012). However, they also point out that treating children with cancer like anyone else (taking into account their special needs) is very important in order to avoid stigmatizing them and to offer a “free of cancer” time at school. As mentioned in other studies (Vanclouster et al., 2019b), it seems important that French teachers meet these children’s need for normality in terms of attitudes and requirements toward them, especially when the diagnosis of cancer is long-standing and the child does not need to leave the school regularly for treatment. Even if peer awareness seems to be quite consensual in scientific literature, some teachers in the present study argued that some survivor students could also be afraid of compassion, person-centred attention, or discrimination, which would be counterproductive as mentioned elsewhere (Hen, 2022; Vanclouster et al., 2020).

Biases and limitations

Even though the majority of French schools have been contacted, there is still a recruitment bias because some territories did not provide any answers. Another limitation is the sample size, which does not allow for a strong statistical comparison between sub-samples. Last, the recruitment process should be improved to have more respondents.

Further studies

This study can be considered as a first step in improving the French re-entry process for students with cancer at school. Therefore, it could be interesting to investigate the existing barriers to implementing a “French-style” liaison program and to design the outlines of such a program. For example, a standardized liaison program including the home schooling organisation (involving ordinary teachers

and families, as well as relevant medical information for learning) and hospital teachers (when appropriated) might be relevant to be tested.

Conclusion

This first study investigating the feelings and experiences of French teachers welcoming cancer students suggests that to improve the well-being at school it is crucial to optimise the flow of information in two ways: firstly, by developing the liaison between school, families, and medical staff, and secondly, by raising awareness among peers and the school community about the difficulties encountered by survivor children. However, as mentioned recently, it does not seem feasible without standardising the processes of the educational system, which is currently a setback for the re-entry process of these students with cancer (Klein et al., 2022). Instead, the creation of a real and systematic monitoring of these children's school careers, by developing existing collaborations with medical staff, associations, etc., and by supporting teachers with resources and training, would greatly facilitate the re-entry process of French cancer survivors. It would also reduce the burden on families, who very often play a role in this process that they should not have to play.

References

- Albee, M., Allende, S., Cosgrove, V., & Hocking, M. C. (2022). A prospective study of social competence in survivors of pediatric brain and solid tumors. *Pediatric Blood & Cancer*, 69(9), e29670. <https://doi.org/10.1002/pbc.29670>
- Brown, M. B., Bolen, L. M., Brinkman, T. M., Carreira, K., & Cole, S. (2011). A Collaborative Strategy With Medical Providers to Improve Training for Teachers of Children With Cancer. *Journal of Educational and Psychological Consultation*, 21(2), 149-165. <https://doi.org/10.1080/10474412.2011.571478>
- Bruce, B., Chapman, A., MacDonald, A., & Newcombe, J. (2008). School Experiences of Families of Children With Brain Tumors. *Journal of pediatric oncology nursing : official journal of the*

- Association of Pediatric Oncology Nurses*, 25, 331-339.
<https://doi.org/10.1177/1043454208323619>
- Bruce, B. S., Newcombe, J., & Chapman, A. (2012). School Liaison Program for Children With Brain Tumors. *Journal of Pediatric Oncology Nursing*, 29(1), 45-54.
<https://doi.org/10.1177/1043454211432296>
- Burns, M. A., Fardell, J. E., Wakefield, C. E., Cohn, R. J., Marshall, G. M., Lum, A., Ellis, S. J., Donnan, B., Walwyn, T., Carter, A., Barton, B., & Lah, S. (2021). School and educational support programmes for paediatric oncology patients and survivors : A systematic review of evidence and recommendations for future research and practice. *Psycho-Oncology*.
<https://doi.org/10.1002/pon.5606>
- Chen, C.-M., Hsu, B.-H., Chen, Y.-C., Cheng, S.-N., & Liaw, J.-J. (2015). Meshing Gears : Mothers and Their Adolescents Returning to Their Social Life After Cancer Treatment in Taiwan. *Journal of Pediatric Oncology Nursing: Official Journal of the Association of Pediatric Oncology Nurses*, 32(4), 219-229. <https://doi.org/10.1177/1043454214563402>
- Choquette, A., Rennick, J., & Lee, V. (2015). Back to School After Cancer Treatment : Making Sense of the Adolescent Experience. *Cancer nursing*, 39.
<https://doi.org/10.1097/NCC.0000000000000301>
- Donnan, B. M., Webster, T., Wakefield, C. E., Dalla-Pozza, L., Alvaro, F., Lavoipierre, J., & Marshall, G. M. (2015). What About School? Educational Challenges for Children and Adolescents With Cancer. *The Educational and Developmental Psychologist*, 32(1), 23-40.
<https://doi.org/10.1017/edp.2015.9>
- Dugas, K., Rollin, Z., Brugières, L., Valteau-Couanet, D., & Gaspar, N. (2014). Évaluation d'interventions destinées à faciliter le retour en classroom d'élèves du secondaire traités pour un cancer. *Bulletin du Cancer*, 101(11), 1009-1019. <https://doi.org/10.1684/bdc.2014.2029>
- Feugère, R. (2017). Scolariser l'enfant ou l'adolescent malade en milieu hospitalier. Témoignage d'une directrice pédagogique en milieu hospitalier (Hôpital de la Timone, Marseille). *La nouvelle*

revue de l'adaptation et de la scolarisation, 79-80(3-4), 43-51.

<https://doi.org/10.3917/nras.079.0043>

Galán, S., Tomé-Pires, C., Roy, R., Castarlenas, E., Racine, M., Jensen, M. P., & Miró, J. (2021). Improving the Quality of Life of Cancer Survivors in School : Consensus Recommendations Using a Delphi Study. *Children (Basel, Switzerland)*, 8(11), 1021. <https://doi.org/10.3390/children8111021>

Gallon, L., Dubergey, F., & Negui, M. (2017). Robot de Téléprésence : Un Outil Numérique Utilisé Par Le Sapad Pour Rendre Présent l'élève Absent. *La nouvelle revue de l'adaptation et de la scolarisation*, 3-4(3), 157. <https://doi.org/10.3917/NRAS.079.0157>

Gilleland Marchak, J., Devine, K. A., Hudson, M. M., Jacobson, L. A., Michel, G., Peterson, S. R., Schulte, F., Wakefield, C. E., & Sands, S. A. (2021). Systematic Review of Educational Supports of Pediatric Cancer Survivors : Current Approaches and Future Directions. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, 39(16), 1813-1823. <https://doi.org/10.1200/JCO.20.02471>

Hay, G. H., Nabors, M., Sullivan, A., & Zygmund, A. (2015). Students with Pediatric Cancer : A Prescription for School Success. *Research, Advocacy, and Practice for Complex and Chronic Conditions*, 34(2), Article 2. <https://doi.org/10.14434/pders.v34i2.19643>

Heitz Ferrand, M.-H., & Avril, C. (2019). Une expérience de télé-présence avec Nao. *La nouvelle revue - Éducation et société inclusives*, 85(1), 331-344. <https://doi.org/10.3917/nresi.085.0331>

Helms, A. S., Schmiegelow, K., Brok, J., Johansen, C., Thorsteinsson, T., Simovska, V., & Larsen, H. B. (2016, janvier 1). Facilitation of school re-entry and peer acceptance of children with cancer : A review and meta-analysis of intervention studies. *EUROPEAN JOURNAL OF CANCER CARE*, 25(1), 170-179.

Hen, M. (2022). Mothers' and teachers' experience of school re-entry after a child's prolonged absence due to serious illness. *Psychology in the Schools*, 59(6), 1122-1134. <https://doi.org/10.1002/pits.22666>

- Hocking, M. C., Paltin, I., Belasco, C., & Barakat, L. P. (2018). Parent perspectives on the educational barriers and unmet needs of children with cancer. *Children's health care : journal of the Association for the Care of Children's Health*, 47(3), 261-274. <https://doi.org/10.1080/02739615.2017.1337516>
- Kieffer, V., Longaud, A., Callu, D., Laroussinie, F., Viguier, D., Grill, J., & Dellatolas, G. (2012). Teachers' report of learning and behavioural difficulties in children treated for cerebellar tumours. *Brain Injury*, 26(7-8), 1014-1020. <https://doi.org/10.3109/02699052.2012.661116>
- Kieffer, V., Oppenheim, D., Laroussinie, F., Gadalou, G., Coutinho, V., Ribaille, C., Raquin, M.-A., Doz, F., Hartmann, O., Kalifa, C., Laurent-Vannier, A., & Grill, J. (2007). Une consultation multidisciplinaire pour les enfants traités pour une tumeur cérébrale. *Archives de Pédiatrie*, 14(11), 1282-1289. <https://doi.org/10.1016/j.arcped.2007.08.009>
- Klein, S., Byford, N., Ellison, S., & Jurbergs, N. (2022). Support for Community School Personnel Working with Pediatric Cancer Patients : A Quality Improvement Initiative. *Continuity in Education*, 3(1), 1-12. <https://doi.org/10.5334/cie.36>
- Klunder, S., Saab, N., & Admiraal, W. (2022). A teacher perspective on using a hybrid virtual classroom for students with a chronic illness in mainstream primary and secondary schools. *Technology, Pedagogy and Education*, 31(4), 493-508. <https://doi.org/10.1080/1475939X.2022.2033824>
- Labonté, N. (2012). *Mon élève a le cancer--comment intervenir? Perceptions d'enseignantes du primaire ayant accueilli un élève traité pour un cancer sur les services offerts et souhaités.*
- Lee, J. A., Lee, J. M., Park, H. J., Park, M., Park, B. K., Ju, H. Y., Kim, J. Y., Park, S. K., Lee, Y. H., Shim, Y. J., Kim, H. S., Park, K. D., Lim, Y.-J., Chueh, H. W., Park, J. K., Kim, S. K., Choi, H. S., Ahn, H. S., Hah, J. O., ... Lee, M. J. (2020). Korean parents' perceptions of the challenges and needs on school re-entry during or after childhood and adolescent cancer : A multi-institutional survey by Korean Society of Pediatric Hematology and Oncology. *Clinical and Experimental Pediatrics*, 63(4), 141-145. <https://doi.org/10.3345/kjp.2019.00696>

- Lönnerblad, M., van't Hooft, I., Blomgren, K., & Berglund, E. (2019). A nationwide, population-based study of school grades, delayed graduation, and qualification for school years 10-12, in children with brain tumors in Sweden. *Pediatric Blood & Cancer*, 7(2). <https://doi.org/10.1002/pbc.28014>
- Martinez-Santos, A.-E., Fernandez-De-La-Iglesia, J. del C., Sheaf, G., & Coyne, I. (2021). A systematic review of the educational experiences and needs of children with cancer returning to school. *Journal of Advanced Nursing*, 77(7), 2971-2994. <https://doi.org/10.1111/jan.14784>
- McLoone, J. k., Wakefield, C. e., & Cohn, R. j. (2013). Childhood cancer survivors' school (re)entry : Australian parents' perceptions. *European Journal of Cancer Care*, 22(4), 484-492. <https://doi.org/10.1111/ecc.12054>
- Muntaner, J. J., Forteza, D., & Salom, M. (2014). The Inclusion of Students with Chronic Diseases in Regular Schools. *Procedia - Social and Behavioral Sciences*, 132, 74-79. <https://doi.org/10.1016/j.sbspro.2014.04.280>
- Oppenheim, D. (2009). *Grandir avec un cancer. L'expérience vécue par l'enfant et l'adolescent*. De Boeck Supérieur; Cairn.info. <https://www.cairn.info/grandir-avec-un-cancer--9782804167257.htm>
- Ott, M., & Scheinmann, K. (2022). Back to school – The teachers' worries and needs having a childhood cancer patient or survivor in their classroom. *Frontiers in Oncology*, 12. <https://doi.org/10.3389/fonc.2022.992584>
- Paillé, P., & Mucchielli, A. (2016). Chapitre 11. L'analyse thématique. *Collection U*, 4, 235-312.
- Paré-Blagoev, E. J., Ruble, K., Bryant, C., & Jacobson, L. (2019). Schooling in survivorship : Understanding caregiver challenges when survivors return to school. *Psycho-Oncology*, 28(4), 847-853. <https://doi.org/10.1002/pon.5026>
- Park, M., Park, H. J., Lee, J. M., Ju, H. Y., Park, B. K., Yu, E.-S., Yang, H.-K., Kim, J. Y., Park, S. K., Lee, Y. H., Shim, Y. J., Kim, H. S., Lee, J. A., Lim, Y.-J., Cheuh, H. W., Park, J. K., Lee, M. J., Kim, S. K., Choi, H. S., ... Shin, H. Y. (2018). School performance of childhood cancer survivors in Korea : A multi-

- institutional study on behalf of the Korean Society of Pediatric Hematology and Oncology. *Psycho-Oncology*, 27(9), 2257-2264. <https://doi.org/10.1002/pon.4819>
- Pini, S., Gardner, P., & Hugh-Jones, S. (2016). How teenagers continue school after a diagnosis of cancer : Experiences of young people and recommendations for practice. *Future Oncology (London, England)*, 12(24), 2785-2800. <https://doi.org/10.2217/fon-2016-0074>
- Pini, S., Hugh-Jones, S., & Gardner, P. H. (2012). What effect does a cancer diagnosis have on the educational engagement and school life of teenagers? A systematic review. *Psycho-Oncology*, 21(7), 685-694. <https://doi.org/10.1002/pon.2082>
- Poyet, F., Hachani, M. E., & Darlington, E. (2018). *Retours d'usages sur les robots de téléprésence en éducation* [Report, ELICO]. <https://hal.science/hal-01798556>
- Rivero-Vergne, A., Berrios, R., & Romero, I. (2011). The return to the community after cancer treatment : From safety to reality check. *Journal of Psychosocial Oncology*, 29(1), 67-82. <https://doi.org/10.1080/07347332.2010.532300>
- Rollin, Z. (2015). Comment comprendre et faciliter le retour en classroom des lycéens traités pour un cancer ? Retour sur une recherche-action sociologique. *Santé Publique*, 27(3), 309-320. <https://doi.org/10.3917/spub.153.0309>
- Soejima, T., Sato, I., Takita, J., Koh, K., Maeda, M., Ida, K., & Kamibeppu, K. (2015). Support for school reentry and relationships between children with cancer, peers, and teachers. *Pediatrics International: Official Journal of the Japan Pediatric Society*, 57(6), 1101-1107. <https://doi.org/10.1111/ped.12730>
- Stavinoha, P. L., Trinh-Wong, T., Rodriguez, L. N., Stewart, C. M., & Frost, K. (2021). Educational Pain Points for Pediatric Brain Tumor Survivors : Review of Risks and Remedies. *Children*, 8(12), 1125. <https://doi.org/10.3390/children8121125>
- Thompson, A. L., Christiansen, H. L., Elam, M., Hoag, J., Irwin, M. K., Pao, M., Voll, M., Noll, R. B., & Kelly, K. P. (2015). Academic Continuity and School Reentry Support as a Standard of Care in

- Pediatric Oncology : School Reentry in Pediatric Oncology. *Pediatric Blood & Cancer*, 62(S5), S805-S817. <https://doi.org/10.1002/pbc.25760>
- Tresman, R., Brown, M., Fraser, F., Skinner, R., & Bailey, S. (2016). A School Passport as Part of a Protocol to Assist Educational Reintegration After Medulloblastoma Treatment in Childhood. *Pediatric Blood & Cancer*, 63(9), 1636-1642. <https://doi.org/10.1002/pbc.26071>
- Upton, P., & Eiser, C. (2006). School experiences after treatment for a brain tumour. *Child: Care, Health and Development*, 32(1), 9-17. <https://doi.org/10.1111/j.1365-2214.2006.00569.x>
- Vanclooster, S., Bilsen, J., Peremans, L., Van der Werff Ten Bosch, J., Laureys, G., Willems, E., Genin, S., Van Bogaert, P., Paquier, P., & Jansen, A. (2019a). Attending school after treatment for a brain tumor : Experiences of children and key figures. *Journal of Health Psychology*, 24(10), 1436-1447. <https://doi.org/10.1177/1359105317733534>
- Vanclooster, S., Bilsen, J., Peremans, L., Van der Werff Ten Bosch, J., Laureys, G., Willems, E., Genin, S., Van Bogaert, P., Paquier, P., & Jansen, A. (2019b). Short-term perspectives of parents and teachers on school reintegration of childhood brain tumour survivors. *Developmental Neurorehabilitation*, 22(5), 321-328. <https://doi.org/10.1080/17518423.2018.1498553>
- Vanclooster, S., Hoeck, K., Peremans, L., Bilsen, J., van der Werff Ten Bosch, J., Laureys, G., Paquier, P., & Jansen, A. (2020). Reintegration into school of childhood brain tumor survivors : A qualitative study using the International Classroomification of Functioning, Disability and Health - Children and Youth framework. *Disability and Rehabilitation*.
- Winterling, J., Jervaeus, A., Sandeberg, M., Johansson, E., & Wettergren, L. (2015). Perceptions of School Among Childhood Cancer Survivors : A Comparison With Peers. *Journal of pediatric oncology nursing : official journal of the Association of Pediatric Oncology Nurses*, 32. <https://doi.org/10.1177/1043454214563405>
- Yi, J., Kim, M. A., Hong, J. S., & Akter, J. (2016). Childhood cancer survivors' experiences in school re-entry in South Korea : Focusing on academic problems and peer victimization. *Children and Youth Services Review*, 67, 263-269. <https://doi.org/10.1016/j.chilyouth.2016.06.022>

Yilmaz, M. C., Sari, H. Y., Cetingul, N., Kantar, M., Erermis, S., & Aksoylar, S. (2014). Determination of school-related problems in children treated for cancer. *The Journal of School Nursing: The Official Publication of the National Association of School Nurses*, 30(5), 376-384.
<https://doi.org/10.1177/1059840513506942>

Young, K., Bowers, A., Prain, K., & Bradford, N. (2022). I could have used a lot more help than I had : A qualitative systematic review and synthesis of families' experiences of paediatric brain tumour and schooling. *British Journal of Educational Psychology*, 92(2).
<https://doi.org/10.1111/bjep.12474>