

APOSW Conference: April 12, 2018

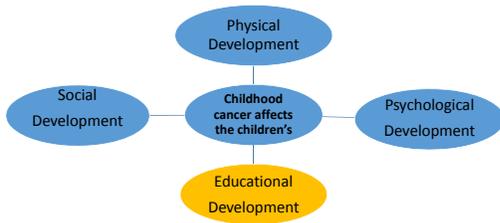
Factors of Successful School Reentry for Children Diagnosed with Cancer: Using Ecological System Framework

Jesmin Akter, MSc
PhD Candidate
Research Assistant

Jaehee Yi, PhD, MSW
Assistant Professor



RESEARCH BACKGROUND



(Brown, Bolen, Brinnkman, Carreira, & Cole, 2011; Kapelaki, Fovakis, Dimitriou, Perdikogianni, Sitakaki, & Kalmanti, 2003)

RESEARCH BACKGROUND (Continued)

- As the survival rate is increasing, the number of these children returning to school is also growing (Herrmann, Thurber, Miles, & Gilbert, 2011; Moore, Kaffenberger, Goldberg, Oh, & Hudspeth, 2009).
- After and/or during treatment, these children return to school, but subsequently they face a number of risk factors that challenge their academic performance and school attendance (McCarthy, Williams, & Plumer, 1998; McLoone, Wakefield, & Cohn, 2013; Vance & Eiser, 2002).

RESEARCH GAPS

- Multiple personal and environmental factors affect successful school reentry of child cancer survivors, but a comprehensive analysis of all the factors together is lacking.

As a result, the children's challenges are not comprehensively identified and holistically understood.

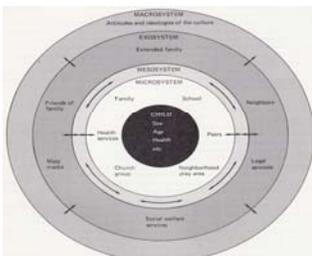
- Examinations of children's views about the challenges they face are also limited in the literature.

PURPOSE OF THE STUDY



- The purpose of the study is to provide an ecological understanding of possible risk and supporting factors (personal and environmental) that influence a child's school reentry so that researchers and practitioners can provide or recommend services based on a more holistic understanding of the situation of the child.

ECOLOGICAL SYSTEMS THEORY



Ecological systems. Adapted from Garbarino, J. (1982). Sociocultural risk: Dangers to competence. In C. B. Kopp & J. B. Krakow (Eds.), *The Child Development in a Social Context* (pp. 630-685). Reading, MA: Addison-Wesley.

ECOLOGICAL SYSTEMS THEORY (continued)

- The ecological systems theory (Bronfenbrenner, 1979) focuses on children's development within the growing up environment.
- The environment of a child is comprised of the four nested layers: the micro-, meso-, exo-, and macro-systems.
- All these systems have direct and/or indirect influence on a child's development.
- Development is a continuous process due to continuous changes in a child's activities and environmental circumstances.
- Human development is *multidetermined*, and varies as a function of the individual person's characteristics and interactions with the environment.

RESEARCH PROCESS



- **Eligible Participants:** Children ages 10-17 who completed treatment or were under treatment and returned to school at least 3 months but no longer than 3 years prior to the study were eligible to participate.
- **Recruitment Strategy:** Participants were recruited through flyers at the Huntsman Cancer Institute, Primary Children's Hospital, and several cancer support organizations in Utah.
- **Data Collection:** In-person interviews of 1 to 1.5 hours were conducted with 13 children (7 male, 6 female) at their chosen location during June and July, 2017.
 - Demographic and medical information was also collected.
- **Data Analysis:** The interview data were analyzed and interpreted using narrative analysis (thematic analysis) approach.

PARTICIPANTS' DEMOGRAPHIC CHARACTERISTICS (N=13)

Characteristics	Number
Gender	
Male	7
Female	6
Age at Interview	
10-12 years	4
13-14 years	5
15-17 years	4
Grade	
Elementary school (K-5)	3
Middle school (6-8)	6
High school (9-12)	4
Race/Ethnicity	
Caucasian	9
Hispanic	4

**PARTICIPANTS' DEMOGRAPHIC CHARACTERISTICS (N=13)
(continued)**

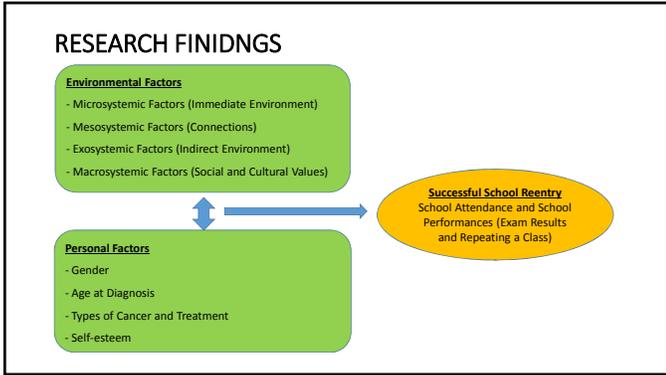
Characteristics	Number
Religion	
The Church of Jesus Christ of Latter-day Saints (LDS)	10
Catholic	2
Christian	1
Family's Income Level	
Middle	12
Lower	1
Two-Parent Family	13
Number of Siblings	
2 or fewer	2
3-4	9
5-7	2

**PARTICIPANTS' DEMOGRAPHIC CHARACTERISTICS (N=13)
(continued)**

Characteristics	Number	
	Mother	Father
Parents' Education		
High school or less	4	3
Some college or technical school education	2	5
College graduate or more	5	4
No school	1	-
Not sure	1	1
Parents' Occupation		
Stay-at-home mom/ Homemaker	6	-
Self-employed/Freelancer	2	2
Part-time	2	-
Company/Factory/Construction worker	1	8
Teacher/Professor/Biologist/Lab technician	2	3

PARTICIPANTS' MEDICAL INFORMATION(N=13)

Diagnosis Type	Number
Acute Lymphoblastic Leukemia (ALL)	8
Acute Myeloid Leukemia (AML)	1
Synovial Cell Sarcoma	1
Osteosarcoma	1
Hodgkin Lymphoma	1
B-cell Lymphoblastic Lymphoma	1
Diagnosis age	
6-10 years	5
11-14 years	7
15-17 years	1
Treatment received	
Chemotherapy only	8
Chemotherapy and other treatment	5



ENVIRONMENTAL FACTORS

Microsystemic Factors	
School	Lack of understanding from peers and other kids in school Support from friends Lack of understanding from teachers Support from teachers The role of other school personnel in helping the participants adjust
Family	Parents' overprotectiveness causes school absence Support from parents Family background influences academic activities Siblings' role in school work
Healthcare Services	Preparation by healthcare personnel for school reentry
Church Group	Support from church members

Lack of understanding from peers and other kids in school

> **Uncomfortable in school due to experiences of staring and facing personal questions**
 "Actually it was a lot of the time at gym because a lot of the time like people [kids] were playing a game or something in gym and that I can't do. Like I just sit like on the side watching and a lot of time people [kids] would look at me like I was sitting and she [one kid] was playing and I **feel really uncomfortable** because people [kids] are staring at me like and I don't like the attention." (girl, 13 years)

> **Bullying/teasing**
 He [peer] said **you still look like a guy** and that kind of made me a little mad." (girl, 14 years)



> **Peer rejection/changed behavior of friends**
 "When I got back, he [friend] like had other friends. I guess it is kind of just like **X [friend's name] was like kind of like mean.**" (boy, 11 years)

> **Fake friendship**
 "Some people [kids] were like I said they [kids] kind of stared but some people [kids] also wanted to like help me because **they [kids] kind of treated me differently because I was like disabled.** They [kids] kind of treated me like a whole new person. **That kind of like made me sad.**" (girl, 13 years)

**Lack of understanding from peers and other kids in school
(continued)**

> **Younger kids treated them differently, such as staring, asking questions, bullying, and rejection**
 "A lot of people [kids] would stare at me and I didn't really like that. **It was usually the younger kids. Younger kids would just ask more about my bald head** and I told them...." (*girl, 14 years*)

"They [younger kids] just didn't know what's going on and **they call, I don't know, baldy** and I am like, oh, I had cancer." (*boy, 13 years*)

"There were some younger kids who didn't know anything and they were kind of like creeped out. **They did not go anywhere with me or do anything. They just stared. They kind of thought that they will be infected** but most people around my age did not do that." (*girl, 13 years*)

Support from friends

> Good friendship was a "powerful catalyst" for the participants' transition between treatment and normal life at school.

- Emotional support
- Academic support
- Financial support



"Sometimes they [friends] like, in gym that's too hard for me to play, **they [friends] are kind of like make it easier for me**, like changed the rules for me, just easier for me to play." (*boy, 10 years*)

"**So my friends, they really wanted me to come back to school**, so I wanna go back to see them because I was not able to see all in anywhere other than in school." (*girl, 13 years*)

"**When I shaved my hair and a lot of boys came and shaved their heads too**...and that kind of just started like a path like all the football players in my grade did it and all my friends, boys...Yeah, it made me feel a little better about myself. **It made me feel more confident really..**" (*girl, 14 years*)

"I have got a friend who helps me with Spanish and a friend like helps me with math." (*boy, 16 years*)

"my own classmates, for like a month they were bringing coins and pennies and dimes and nickels and any coins to raise money for me." (*boy, 10 years*)

Lack of understanding from teachers

> "Well, most of them [teachers] are good. **My teachers understood but there was one who did not understand.** She really, like when I was not feeling really very good and I was just tired and wanted to go home, and she did not allow me to call home." (*girl, 10 years*)

> "Okay, so, my gym class has two teachers and my teacher was never like that but the other teacher who is a girl, she was, **I don't think she really understood my leg. Like I try to tell her that I have a prosthetic but she kind of just assumed way to go that**...so I had to sit down with some other kids who have injuries and she would always like forget and say go that and you guys are fine and you can do that." (*girl, 13 years*)

> "Oh, she [teacher] just kind of like didn't explain things well. She [teacher] was like 'I don't know how to explain it,' like she [teacher] **did not try to go into extra detail.** I guess she [teacher] just explained it kind of like weird." (*boy, 11 years*)

> "**There is nothing that made it [return to school] harder but some of the teachers made it harder,** just some of them. There is a guy named Mr. X [reading teacher] and his teaching was really bad and he didn't know how to like teach kids. He didn't really encourage kids and he just kind of made it really miserable." (*boy, 16 years*)

Support from teachers

➤ **Academic support:** Online classes through Skype, alternative assignments, late submission permission, shortened assignments, and shorter school hours

"My teachers at my school, they are like they are not strict and they are pretty nice... 'if something comes up, you can't do it immediately, we understand', and then, we have like school email, so we can like email assignments to the teachers." (boy, 13 years)

➤ **Emotional support:** visited at home to drop off assignment packet, sent get well wishes or encouraging emails, arranged monkey in chair program, allowed the child to lie down or sleep, encouraged other students to be supportive

"I got like a monkey in a chair. So you send the big monkey and like a notebook and pencil to the class, and they can like take the monkey around the school with them and they write on the notebook like have a journal for me and send it to me every night." (girl, 11 years)

The role of other school personnel in helping the participants adjust

"My school counselor I would go to her a lot....She helped me to choose the classes which helped me to catch up to my periods. So like instead of choosing like art, music or fun things, I would choose like more academic like another math class I am taking, Spanish that counts as an English credit." (girl, 16 years)

"They [counselor and kids] talked to classes, like different things like bullying and stuff, and they offered help." (boy, 13 years)

- **Potential sources of support:** School Counselor, Principal, Nurse
- Many participants were not aware of the school counselor's role, and the counselors did not offer any services proactively.

Parents' overprotectiveness causes school absence



➤ **Fear of possible peer teasing:** "My mom actually after my hair fell out the 2nd time, I didn't want to go back to school because I thought kids would come to me and my mom did not want me to go back either." (girl, 13 years)

➤ **Fear of the children being susceptible to serious infection:** "I used to think I should go to school. You [mom] did not really because you [mom] did not want me to get sick." (boy, 11 years)

Support from parents

- > Children trusted their family more than others:
 "Because my school does not know like as much because like my mom tries to memorize absolutely everything and my dad is like as certain as she tells him absolutely everything, and they both know absolutely everything, and they just tell like something to my school like they [school] have to do." (boy, 10 years)
- > Mom's support:
 "She [mom] is great. I am not hyping it right now. I mean it. She [mom] helps me a ton. Schoolwork if I need help. She [mom] helps me and like all I see like the living down here [Ronald McDonald House] with me because of the treatment." (boy, 16 years)
- > Dad's support:
 "Most of the time my family would help me because, specifically, my dad he would help me with everything that I was missing." (girl, 13 years)

Family background influences academic activities

- > Family's economic situation: "Like orchestra and everything. Like there is an act that we had to buy that cost 40 dollars and lasts for like a year and that is one and there is another like there are some fees and everything at our school that also cost money and that combined with like all the medical bills and everything and it is just a lot to pay off." (girl, 13 years)
- > Parents' occupation: "When I first got cancer, he [dad] does a different job than he does now where he had like to go to work. So he was not here as much. He like comes home like around dinner time. So he was not helping as much." (boy, 13 years)
 "If I need any help, I run to my mom because she is a teacher." (boy, 16 years)
- > Parents' education and language barrier: "If there is like small problem, then I would talk to them [teachers] personally.... There is actually a lot of staff members that speak Spanish and my mom would like talk to them....They would tell me, 'Okay, tell your teacher this, and this, and this or give me a call or to email me.'" (girl, 16 years)

Family background influences academic activities (continued)

- > Medical history of other family members: "He [dad] was usually the one who drove me up there [hospital], so my mom had the kids with her. So he [dad] was the one who like drove me up there every day during the treatment but when we found out he [dad] had a disease, he [dad] cannot drive anymore." (girl, 11 years)



- > Large family: "We [siblings] are close in age and so it's a lot easier because....Yeah, we [siblings] are helping." (girl, 13 years)

Siblings' role in schoolwork

> Not supportive:

"They [siblings] are not supportive, but they are pretty much, like they are the same as before I had cancer, like not too much of my siblings changed. **Honestly, they are like more jealous because of all the cool stuff I got...**" (boy, 13 years)

"My sister did not really help me because when I got diagnosed there was kind of a lot of stress for her, so they [doctors] put her on anxiety meds because she was having suicidal thoughts and when my dad got diagnosed with his apraxia disease, that put her more stress on her, I think. So she did not really help me." (girl, 11 years)

> Supportive:

"I asked them [siblings], like especially my older sister. This is my first year in junior high and I asked her a lot of the questions because she has more experience than I, so I can always depend on her if I have any troubles." (girl, 13 years)

"My older brother, he went to the school and I was there, so he would tell them [school personnel] to help me and stuff." (boy, 16 years)

Preparation by healthcare personnel for school reentry

> grateful to their doctors and nurses for treatment and nursing

> doctors advised them when they were physically prepared to attend school

> received a letter from their doctors documenting their health condition to submit to their schools



Preparation by healthcare personnel for school reentry (continued)

> Two participants talked about how they were prepared by the hospital's personnel for going back to school

"My social worker X, she was telling me that some districts offer online schooling or tutoring and she sent out an email message to my district and they sent me this teacher, she was an English teacher. She would come over Tuesday and she would bring like package, books, and she was one that actually helped me to receive the seven credits. I was not actually at school, but I got credit for art, geography, computer technology, I passed that." (girl, 16 years)

"We [participant and his mom] took like a demonstrational little thing like what cancer looks like. It was a tube and had different colors bits and circles were there like how mine was and how theirs..." (boy, 13 years)

Support from church members

- **Emotional support:** prayers, blessings, a video with well-wishes, gifts, and dinners/foods are some examples of emotional support
- **Academic support:** "She was my primary leader at church. She taught preschool, so she came over and she first helped me with my homework and then she gave me like fun activities to do every after I had finished my work." (girl, 10 years)

ENVIRONMENTAL FACTORS

Mesosystemic factors

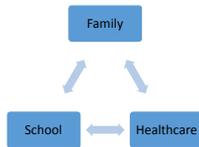
Interactions among the settings

Parents' communication with school and hospital
Limited interactions between school and hospital

Since their family contacted their school or hospital, the interactions between school and hospital were limited.

"Because if she [mom] did not contact the school, they would not be aware of anything and so that's really helpful, just so they [school] know what is going on." (girl, 13 years)

Participants reported that their parents did not have much contact with healthcare personnel regarding school activities.



ENVIRONMENTAL FACTORS

Exosystemic factors

Laws and policies	Challenges due to school policies Shortcomings of homeschool/online school program Hospital visit policy
Mass media/social media	Support through mass media/social media Negative emotion caused by mass media/social media
Social welfare services	Limited social welfare services
Parents' workplace	Support from parents' workplace
Friends of family	Support from friends of family
Extended family	Support from grandparents Support from uncles, aunts, and cousins
Neighbors	Support from neighbors

Challenges due to school policies

- early starting time of their schools
- Shorter lunch time
- restricted bathroom break passes
- lack of a catch-up class
- restricted utility services (e.g., elevator, sanitizer)
- fees for school absence

"Like a lot of schools don't let kids use the elevator. Let them use the elevator." (girl, 16 years)

"not having a limit to the bathroom breaks because when you have a limit it's kind of just stupid because like one teacher allows two bathroom passes for the whole trimester and say like I have to go to the bathroom and we don't have one, and it's just hard for some kids who have had cancer like me like diarrhea or anything." (boy, 13 years)

Shortcomings of homeschool/online school program

- Most of the participants took advantage of homeschool/online school program during treatment, **but the program was not effective for all** due to some gaps in the program

▪ **lack of tutoring**

"It [online homeschool program] is terrible....I hate it. It is not easy to use, and there is no teacher and it is difficult."

"I wish they [school] would let me get held back a year and stay in the sophomore year so I don't have to redo summer school or online stuff...They [school] don't want to do because of money." (boy, 16 years)

▪ **teacher skills for teaching all subjects**

"I could not do math at all because she [teacher] was not good at it." (girl, 16 years)

Hospital visit policy

- Participants were asked whether they had any difficulty regarding make-up classes due to follow-up hospital visits.

- alternative solution for make-up classes due to hospital visit policy (e.g., teacher's alternative plan for make-up classes; hospital visit after school hours)

"Sometimes they [teachers] give us like an absence packet in which we did not do it yesterday and like do some of it...." (boy, 10 years)

it is not necessary that all the policies be changed or modified

Mass media/social media

Support through mass media/social media

- It [media coverage] is helpful because it tells everybody like about it [cancer] so that they [people] can like know, this can happen with anyone." (boy, 10 years)
- "We do have a small town, so once my mom spread the word online like on Facebook, they all kind of just did it [helped]. We never asked really." (girl, 14 years)

Negative emotion caused by mass media/social media

- I didn't even really know what it [cancer] was until after I was diagnosed. Like a lot of people don't really know what it is and how bad it is. Like a lot of time I read a book or watch a movie and they mention it like it is not a big deal or say someone died from it. It makes me sad. I think they should not just put that in there like it is just as an emotional thing. It makes me sad and my mom says the same thing: she doesn't like that. So, I think that is unfair and I think people don't treat it like as bad it is. (girl, 13 years)
- "I hate it because people will just stare at me like they will look at you...I want to be known like as a kid, not like as a sick." (boy, 17 years)

Supports from others

- Parents' workplace
- Friends of family
- Extended family
- Neighbors

"They [dad's workplace] give him like time off sometimes because when I was in hospital once a month. So his company gives him time off to go take me to the hospital and that stuff" (boy, 17 years)

"My grandparents did help me a lot.... They stayed with me when my immune system was down but if I did want to go to school, they would drive me to the school in the morning and when I did have a class and then if I was not feeling good, then I would call them and they would come to pick me up. So they would usually just stay at home and wait for me to call." (girl, 14 years)

- They mainly got emotional and financial support.
- The children did not receive support from all of the possible sources.
 - Extended families live far away
 - Some participants were not comfortable to sharing their illness with neighbors

Limited social welfare services

- The majority of the participants did not receive services from social welfare organizations.
- No support for academic purposes (tutoring services) was reported by any participant.
- The services were limited to a Christmas gift or some sort of financial support and sponsoring a vacation trip.

Recommendation:
"Ask them [cancer survivors] what their hobbies are and maybe like if you guys, if you have funding, get kids fun things like if they like yo-yo or something, then get to learn more yo-yo or something, and they have classes online or you can learn how to yo-yo or if they like art, then have like art things or music or whatever." (boy, 13 years)

ENVIRONMENTAL FACTORS

Macrosystemic factors

Beliefs about cancer	Social attitudes about cancer challenges in getting support
	Spiritual views help coping with cancer
	Ethnic background motivates about education

Social attitudes about cancer challenges in getting support

"I just don't like people to know because it is kind of uncomfortable or I just feel really weird because that's why most of the people then like start treating me differently like 'oh she is disabled'." (girl, 13 years)

"At first, I would be like I don't know why I would feel like if anyone ever talked bad...when I started talking to the therapist X in Primary Children's, I was like it is good like opening up...Since then I have been talking to more people...I was shamed at the beginning. Now I am like I share because that is not my fault that I got it [cancer], so nobody should be like ashamed or like shy about it, just like open up to real people I guess, the people who would feel bad for you like the close friends, close relatives, family and just like I think it is good to talk to them about it because they could probably have someone close that had gone through that and they could help out and stuff like that." (girl, 16 years)



Spiritual views help coping with cancer



"At some points I was really like mad at God why you gave me this. Then I realized that God like gives this disease to people who are stronger and that's why I believe that people who have this disease they are the stronger people." (girl, 16 years, Catholic)

"Just get through it [cancer], have faith really, and get strong through it [cancer] all, know that someone is always going to be there for me and I know I can go to school." (girl, 14 years, LDS)

"I think that maybe I am being tested to see how I will be after." (girl, 10 years, LDS)

Ethnic background motivates about education

"I think that [parents' background] kind of motivated me. I was keeping in my head like oh, oh when I was not doing anything. My mom and dad, they migrated over here for this, you know, so I can just like be a reason for them. Like I think it's a really cool idea just to say that **they migrated over here and their son became a doctor, you know what I mean.**" (boy, 17 years, Hispanic)

"So, both of them [parents] actually encourage me about school. I think that's good because they want me to continue my education **because we, me and my brother, would be like be the first one or two to go to college or like graduate from school,** and I feel like that is really important." (girl, 16 years, Hispanic)

PERSONAL FACTORS

Gender	Emotional vulnerability of a girl with cancer
Age at diagnosis	Older children's more academic problems
Types of cancer and treatment	Types of cancer and/or treatment and school absence rate Types of cancer and/or treatment and academic activities
Self-esteem	Willingness to continue school Self-mechanism to coping with cancer Less active in social relationship hinders support from others

Emotional vulnerability of a girl with cancer



- "Because boys like if they lose their hair, you can't really know because you know some people [boys] rather not have like hair...When I went to school I thought people like, oh, why is your hair like that, like assumed that, oh, you have cancer...and I felt like girls would be asked more questions than the boys because for girls it is more noticeable than a boy. I felt like it is **harder for a girl with cancer to go to school than a boy with cancer.**" (girl, 16 years)
- "Actually when I got my hair shaved off, I was like I **loved my hair and my eyelashes. I loved to put on mascara and so, but like, yeah, that was the main question that I really had why that [cancer] happened to me, why I have to do this,** I guess that really, because I can't handle it I think." (girl, 14 years)
- "**The first day going back to school** I think I was in 6th grade after finding out, I remember, going back to school and I remember my mom gave me this, it's kind of like a wig...It was like long hair but with a hat over it. I was thinking somebody was going to pull off my hat or something or somebody would pull the hair, then it would come off. I remember I was terrified that somebody was going to do that, but when I first went back to school, nobody really said anything to me but everyone stared at me." (girl, 13 years)

Older children's more academic problems

➤ Since children in middle and high school had more classes, they seemed to struggle more to catch up than elementary age children. Many of older children talked about their struggle with math.

➤ Children in middle or high school need to be present physically at school for some particular classes, such as lab class.

"I didn't do the lab experiment because it was too expensive to transfer and they didn't have that equipment and stuff." (boy, 13 years)

Types of cancer and/or treatment and school absence rate

➤ The type of cancer and/or treatment likely had an association with school absence rate as the children with lymphoma cancer missed school longer than others, and all the children with leukemia went back to school within a year. Children with sarcoma returned to school less than 1 year after their diagnosis.

This study did not examine medical explanations of the relationship between school absence rate and types of cancer/or treatment. Thus, the analysis needs to be considered as speculative.

Types of cancer and/or treatment and academic activities

➤ Bone marrow transplant probably had an association with academic performance because the BMT survivors were unable to physically attend school due to this type of treatment.

"I was retaking Spanish because I missed the last quarter, but then I just re-missed the last quarter, so I didn't be there [school] to take it." (boy, 16 years)

They felt isolated as they had to stay in housing (Ronald McDonald House) near the hospital.

"[Staying far away from home] makes it hard because you can't see your friends often, and it might be kind of hard to get used to it because you are living in a small place and you can't go back to a big place, bigger place." (boy, 13 years)

➤ Surgical treatment impacted school activities

"I try my best, but I can't always like do the same things as everyone else like I can't really run...and sometimes my legs hurt, so I can't do the activities and some people do stare, but my teachers usually understand." (girl, 13 years)

Willingness to continue school

➤ **Although all the participants expressed their willingness to continue school, some of them were hesitant about returning to school due to a lack of confidence.**

"I didn't like 9th grade. I didn't want to go to school...I was not confident enough. I was at my house because people [kids] were like staring at me." *(girl, 16 years)*

➤ **Some participants' mental strength regarding attending school was not impacted by cancer.**

"Because it is really up to me since I can just kind of think of me as the same person. I want other kids [cancer survivors] like that, too—to think that you are not any different than you were before and kind of just like don't think differently...you are you and you feel proud to be you." *(girl, 13 years)*

➤ **For some participants, going back to school was beyond academic purpose; they emphasized emotional purposes.**

"I love working about writing and reading. I like everything...I like being with my friends and just playing with them I guess." *(boy, 11 years)*

➤ **For some participants, continuing school was important for their career goals.**

"I feel like I need that education to prepare me for the next scale up, especially like my mom said it is 9th grade, it's going to count for my college grades or my college, what I do, so I thought it was important that I needed to learn from my end of levels. I was kind of mad at myself because I was not used to getting low grades, so I felt like I needed to get those up..." *(girl, 14 years)*

Self-mechanism to coping with cancer

- Reading
- Writing
- Physical exercise
- Meditation
- Yoga
- Music
- Learning new things through online

"I realized when I first started school because I realized like, oh man, I like did online classes but I was not completely, still like back up at school...So I still like a lot of stuff, have to do like to get caught up. Oh. I was like, oh man, this is going to be stressful, so I just started meditating, like planning everything like every minute of the day." *(boy, 17 years)*

"I would say reading has helped me a lot because like reading helps me usually to forget about it [cancer]. Every time I was in hospital, I had books with me because I can try to forget about it [cancer]...When I am in school I read my books... Reading helps me; hence I can forget about anything...My friends are the characters of the books...I just read a lot..." *(girl, 13 years)*

Less active in social relationship hinders support from others

"My 6th grade teacher was going to do that [visit home], but I actually did not want my teachers to come to my house." *(girl, 13 years)*

She feared that her teacher would see her bald head if she visited her: "I don't really like strangers to come over to my house that much because I feel like I don't know. Sometimes around my house I would take my hat off or something, like only my family knew. So I felt like somebody came to my house and my hat off and something, I don't want anybody else there."

"There were some stores around by my school, kids go for lunch...I noticed that they [friends] would walk faster than me, so I had to speed up later, and catch my breath...During school, I noticed I had classes upstairs because it is two-storey building and they [friends] offered me the elevator key and I didn't want it because I want to feel like I am a normal person, so I would take the stairs, and I would feel really tired..." *(girl, 16 years)*

SUMMARY OF FINDINGS



- Multiple personal and environmental factors affected successful school reentry of child cancer survivors.
- Several interacting factors at the individual, family, community, and cultural levels affected a child's school return after/during treatment of cancer.
- It cannot be said that microsystemic factors or immediate environment (e.g., family, peers, and teachers) would be more important factors for successful school return because other environmental factors also had a similar influencing role.
- Likewise, personal/individual factors were equally important because self-confidence in social relationship or employing a self-coping mechanism made a difference for the participants.

RESEARCH IMPLICATIONS [PRACTICE]

- The study findings have implications for social work practice and counseling as the study identified some psychological concerns and challenges of the children and their parents and siblings.
- The study findings provide a base for an ecological assessment tool, which a pediatric oncology social worker can use to understand the child's situation (potential resources, needs, and concerns) to recommend or provide services.
- The ecological assessment tool may also be applicable for other chronic illness children because they have similar problems due to long absences from school.
- The interdisciplinary nature of the study provides information that is equally important for other professionals, such as psychologists, psychotherapists, school counselors, nurses, and oncologists.

RESEARCH IMPLICATIONS [PRACTICE](continued)

- The study findings highlight implications for the development of programs such as training or workshops for teachers, other school personnel, and healthcare personnel.
- This study has also emphasized an education and awareness program for children in school to discourage bullying and build compassion for the sick children. The awareness program will also be helpful for the psychological health of the children because some, especially the younger children, may be afraid of this disease.
- The study recommends an education and awareness program for children with cancer themselves because they may have misconceptions and fears about the disease.

RESEARCH IMPLICATIONS [PRACTICE] (continued)

- Social welfare organizations can use the study findings for providing meaningful services for these children's successful school reentry. Voluntary tutoring services, financing for tutoring service, or supporting learning new things (art/music) were some examples reported by the participants of the study.
- Spiritual care services at hospitals can offer support to the children in their coping process and return to normal life.
- The study findings can be used in social work course curriculum regarding the uses of ecological assessment and its possible implications.

RESEARCH IMPLICATIONS [POLICY]

- This study suggests creating awareness among the children and their families about federal laws/policies that could provide special education plans for children with cancer. Since the participants were not aware of these policies, the effectiveness of the policies could not be identified.
- The study findings suggested an evaluation of the district school policies for homeschool or online school programs.
- Schools can offer some facilities to the children without changing their restricted policy.

RESEARCH IMPLICATIONS [FUTURE RESEARCH]

- Further research should be conducted in different states in the US to inquire about different perspectives of children on the school reentry process.
- Several areas require further research to contribute to the knowledge of school reentry of children with cancer. The influence of family background on academic activities, the effectiveness of education policies, or cultural beliefs about cancer are some examples.
- Further research can be conducted in other countries. Cross-cultural studies will provide information about other countries' best practices, which can be used in the US.
- Collaborative research with different professionals, especially oncologists, is highly recommended to understand medical explanations of the treatment effects and academic performance.

**RESEARCH IMPLICATIONS [FUTURE RESEARCH]
(continued)**

- Investigating the perspectives of other groups of people, including the child, to get a better understanding of the children and their surrounding environment, such as parents, siblings, teachers, healthcare personnel.
- Research organizations can conduct longitudinal studies to determine the effectiveness of ecological assessment.
- Focus group research with parent support groups could be a significant methodology to bring out their concerns and possible solutions.

REFERENCES



Brown, M. B., Bolen, L. M., Brinkman, T. M., Carneira, 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*, 149-165.

Kapelaki, U., Fovakis, H., Dimitriou, H., Perdikogianni, C., Sitakaki, E., & Kalmanti, M. (2003). A novel idea for an organized hospital/school program for children with malignancies: issues in implementation. *Pediatric Hematology and Oncology, 20*, 79-87.

Garbarino, J. (1982). Sociocultural risk: Dangers to competence. In C. B. Kopp & J. B. Krakow (Eds.), *The child development in a social context* (pp. 630-686). Reading, MA: Addison-Wesley Publishing Company.

Herrmann, D. S., Thurber, J. R., Miles, K., & Gilbert, G. (2011). Childhood leukemia survivors and their return to school: A literature review, case study, and recommendations. *Journal of Applied School Psychology, 27*, 252-275.

McCarthy, A. M., Williams, J., & Plumer, C. (1998). Evaluation of a school re-entry nursing intervention for children with cancer. *Journal of Pediatric Oncology Nursing, 15*(3), 143-152.

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*, 484-492.

Moore, J. B., Kaffenberger, C., Goldberg, P., Oh, K. M., & Hudspeth, R. (2009). School reentry for children with cancer: Perceptions of nurses, school personnel, and parents. *Journal of Pediatric Oncology Nursing, 26*(2), 86-99.

Vance, Y. H., & Eiser, C. (2002). The school experience of the child with cancer. *Child: Care, Health & Development, 28*(1), 5-19.

THANK YOU!

Correspondence:

Jesmin Akter

u0623474@utah.edu

jesminakter2007@gmail.com
