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Citation: Santhagunanathan, K. & Ngo, M. (2025). Barriers and Enablers to Accessing a Young Adult Peer Support Group for Proton Beam Therapy Patients. Journal of Adolescent and Young Adult Oncology, doi: 10.1089/jayao.2025.0016

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Link to published version: https://doi.org/10.1089/jayao.2025.0016

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1	Title		
2	Barriers and enablers to accessing a young adult peer support group for proton beam		
3	therapy patients		
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19	Running Title		
20	Peer support for young adult proton beam therapy patients		
21			

22 Keywords

23 Young adult; adolescent; oncology patients; peer support, mentoring; counselling; cancer

24 survivorship

25

27 Introduction

28 The needs of young adults (YA) such as emotional and cognitive development, are poorly

29 met by cancer services that tailor more towards the needs of children and older adults.¹

30 While literature demonstrates the benefits of peer support for older populations^{2,3}, the YA

demographic is often hesitant to engage.^{4,5} However the benefits of accessing peer support

in an oncology setting could improve the YAs experience.

33 Though guidelines exist emphasising the specific needs of this cohort and the importance of

34 specialised care,⁶ YAs often lack access to tailored support. A cancer diagnosis during YA

35 years has a unique impact on this crucial stage of life development, disrupting physical

36 health, educational goals, early-stage career aspirations, and psychological well-being.⁷

37 YA cancer patients face several barriers to accessing peer support in an oncology setting,

38 including lack of age-appropriate services,⁸ person-centred barriers such as emotional

challenges and fear of vulnerability, and logistical issues such as distance⁹. While digital

40 platforms offer alternatives, access and preference vary. Healthcare professionals should

41 address the way in which services and support are introduced to YAs, which may be through

42 a thorough psychosocial assessment, to ensure comprehensive understanding of the YA's

43 resilience, risk factors, needs and associated changes over time.

44 Enablers to peer support have been documented as the emotional competence to express

45 feelings, positive previous experience to seeking help, and education and awareness.^{10,11}

Literature was limited within an oncological setting. To address this knowledge gap, a service

47 evaluation was performed to explore how 18 to 24-year-olds receiving proton beam therapy

48 (PBT) treatment, a form of radiotherapy, perceive and access peer support. Specific

49 objectives were to:

50 (i) Explore how 18 to 24-year-olds perceive peer support

51 (ii) Identify the barriers and enablers to accessing peer support for young adults

52 (iii) Formulate recommendations based on the findings

53

54 Material and Methods

55 Ethical approval for the service evaluation was obtained by the departmental Radiotherapy Governance Committee. As qualitative interviews would be performed, ethical approval 56 from City St George's, University of London was obtained [REF: ETH2324-1817]. Purposive 57 58 sampling was used to encourage a range of participants with different diagnoses, genders, and ethnicities. Service users were invited to participate in the service evaluation if they 59 were 18 to 24 years at the time of treatment and completed radical PBT treatment within 18 60 61 months from the start of the study. Exclusion criteria included individuals currently 62 undergoing active cancer treatment and those who were non-English speaking. Interested participants received a participant information sheet detailing the study's 63 64 background, purpose, and expectations. Written informed consent was obtained from all 65 interested participants (n=11) with the interviews taking place in August and September 66 2024, via Microsoft Teams. Data saturation was reached after the ninth interview, and no

further interviews were conducted. Table 1 provides a summary of the participantcharacteristics.

69

(Insert Table 1 here)

70 Interviews lasted 30-60 minutes, using open-ended questions. These questions explored 71 YA's perceptions and experiences of peer support during their PBT treatment. They 72 examined whether participants had received or would have liked to receive peer support, 73 how it impacted them, and any discussions they had with healthcare professionals about 74 accessing it. The questions also investigated perceived barriers and enablers to engaging in 75 peer support within their age group, the potential benefits of peer support before, during, 76 and after treatment, and ways to facilitate peer connections in an oncology setting. Finally, 77 participants were asked to share their views on what an ideal peer support session would 78 have looked like for them.

The data analysis process followed the five stages of Framework Analysis,¹² due to its widespread application in analysing semi-structured interview transcripts, enabling the development of categories, descriptions and explanations. This method maintains data integrity, enhancing credibility,¹² and allows the research to provide practical recommendations. The NHS England Biopsychosocial Model of Care¹³ was selected as the

analytical framework for coding transcripts, aligning with a study conducted in the 84 Netherlands¹⁴ who investigated supportive care needs for YA service users using a similar 85 framework and qualitative studies assessing the psychosocial impact of interventions on 86 87 individuals. This model captures the strong multi-dimensional nature of health and 88 wellbeing, focussing on enabling care in the NHS which is required when analysing support 89 systems such as peer support. Member checking and peer debriefing between the two 90 authors occurred, enhancing credibility. Dependability and confirmability were enhanced by keeping an audit trail. Both authors kept diaries throughout the data collection and analysis 91 92 process, engaging in reflexivity by acknowledging their individual backgrounds and 93 perspectives.

94

95 Results and Discussion

96 The service evaluation highlighted the significance of peer support, emphasising its role in 97 providing meaningful support from individuals with shared experiences, and an opportunity to be a positive role model for others. Participants expressed that a key challenge was their 98 friends' inability to relate to their experience, which made it hard to receive meaningful 99 100 support. This led to a desire to engage with peer support in an oncological setting. All 101 participants indicated that they did not know anyone with a similar cancer diagnosis, and 102 eight participants did not know anyone who had a cancer diagnosis at all. Similar sentiments 103 have been reflected in other studies, where participants expressed feelings of being different from others,^{15,16,17} and wanting to engage with people in similar situations to them. 104

105 *"What I was going through is not something that any of my friends or any of my colleagues,*106 *close to my age had gone through or were going through..."* - Participant 1

YA cancer service users often strive to mirror the lives of their friends and enjoy the typical experiences of their age group. In a survey of 271 YA service users, 81% of respondents commented that no information had been offered to their friends to explain the cancer, treatment, or side effects.¹⁸ For this reason, it is important that these service users are provided with the means to access support from peers undergoing or having undergone similar oncology treatment.

- 113 *"The kind of support I would have wanted was maybe knowing more people that have*114 *already been through it" Participant 2*
- The presence of a positive role model can be essential to an individual.^{19,20} While some participants felt that they might not personally benefit from peer support sessions, they recognised the value of sharing their own experiences to support others. They expressed a desire to contribute by offering guidance and encouragement, ultimately becoming positive role models for those facing similar challenges.
- 120 "Another thing that would motivate me to go is if I was told that I wouldn't just be going for
- 121 myself...if it was presented to me in a way where I could theoretically do a lot of help in
- someone else's life" Participant 5

123 *"There were so many little things that I found helped me through my journey, I would love to*124 *just like share that with other people" –* Participant 3

- Some participants viewed peer support as a foundation for forming meaningful friendships
 with individuals facing similar health challenges. They expressed a deeper desire to connect
 with peers and share experiences, driven by the rarity of their condition.
- 128 *"It's a lot different than when you're speaking about something that is so vulnerable that you*
- 129 can both connect in because it can be very lonely in that kind of age group. It's something
- 130 that would massively benefit not only you know teenagers, but young people as well...to kind
- 131 of maybe feel a bit visible or a bit, you know, connected in that sense" Participant 1
- 132 *"It definitely would have been nice if there was a group of people my age that I knew I could*
- 133 reliably get to know" Participant 5
- 134

135 Participants highlighted the need to advertise peer support sessions in departments,

- through posters, emails, or verbal reminders to raise awareness and encourage engagement.
- 137 Some participants believed that if sessions were mandatory, individuals would feel obliged
- 138 to attend, which could lead to discovering comfort in a supportive environment and
- 139 fostering connections with peers. This aligns with findings from previous studies, indicating a
- strong demand for accessible peer support opportunities which could positively impact the
- 141 individual's experience.^{21,22}

142 *"It should be advertised because we want to come"* – Participant 6

"I feel like maybe advertisements are always better than just like speaking to someone. See,
maybe they'll just forget. Or I'm just thinking posters, I feel like that's better" – Participant 8

Participants indicated that establishing a safe, familiar, and comfortable environment would
be an enabler to accessing peer support sessions. They emphasised the importance of the
environment potentially mitigating feelings of anxiety, vulnerability and enhancing
motivation to attend.

149 *"I think the more familiar and comfortable you are with your environment, the more able*

150 you are to have conversations and be comfortable to maybe do that thing that isn't so

151 comfortable, like speaking to somebody you haven't spoken to before because you were in a

- 152 place that you feel safe" Participant 1
- 153 When participants described what a peer support session would look like to them, they
- mostly agreed on the length of time and frequency for each session being weekly from 45-60 minutes.
- 156 "I feel like timing and location is important... once a week maybe 30 to 45 minutes" -
- 157 Participant 6
- 158 *"I think having a session weekly where you do meet people your age and it's to build those*
- 159 *friendships up... I would say between maybe 45 minutes to an hour" –* Participant 7
- 160 A range of session formats were suggested, including activity-based options, for example
- 161 board games, craft activities, drawing, or structured discussions on specific topics.
- 162 "So maybe one week you're having a board game week, but another week you're doing an
- 163 easily accessible craft activity...you know doing some drawing or...some clay
- 164 *making...something really simple that is easy to engage with*" Participant 4
- 165 *"I think that would be nice to encourage different topics into conversation... because I think*
- 166 especially people...who don't wanna talk about it, they can speak about something else or
- speak about that topic and then you can like build upon that" Participant 3
- 168 Key discussion topics that could encourage participation in peer support sessions are
- outlined in Figure 1. This aligns with findings by Fox et al. (2021), who highlighted the

importance of co-designed support programmes that reflect the needs and perspectives of
stakeholders.²³ To ensure sessions are relevant and well-received, an introductory survey
could be used to gather participant feedback on content, scheduling, and delivery
preferences. This could enhance both engagement and long-term participation. Online
delivery of sessions is also a viable option, with digital platforms effectively implemented in
the past.^{24,25} However, such platforms must be user-friendly and uphold robust security
measures to maintain confidentiality and foster a sense of safety and trust.²⁴

177

(Insert Figure 1 here)

Four participants raised concerns about trusting strangers, expressing reluctance to confide
in unfamiliar individuals, perceiving this as a barrier to engagement. Peer support involves
honesty, reflecting on experiences and relies on a degree of vulnerability. Maintaining a
consistent facilitator may foster familiarity and help address concerns about trusting new

- 182 individuals.
- "I think just tying into that kind of confidence is the ability to create those relationships... I
 think it's that trust in the group" Participant 2

185 *"It felt really weird opening up to people and I feel like that was a very big barrier cause it's*

186 like I don't wanna tell everyone my problems...It's more like trusting someone new" –

187 Participant 9

Table 2 presents key recommendations derived from the barriers and enablers identified in
 the service evaluation on peer support access. These recommendations aim to overcome
 challenges faced by individuals seeking peer support while enhancing its accessibility and

- 191 effectiveness.
- 192

(Insert Table 2 here)

193

194 Conclusion and Future Research

195 This service evaluation emphasised the importance of peer support in the YA cohort within

an oncological setting. As a distinct group with unique needs, YA cancer patients require age-

appropriate care initiated and facilitated by healthcare professionals. Peer support may

enhance the patient experience by fostering meaningful connections and providing
opportunities to serve as positive role models. Given that many YAs feel disconnected from
their longstanding friends, peer support with other YA oncology patients offers a sense of
normality and shared understanding. Participants expressed a preference for weekly, 45 to
60 minute sessions, and emphasised the need for effective promotion and relevant
discussion topics to encourage engagement.

204

205 Collaboration with other UK PBT centres could provide valuable insights into optimising peer 206 support facilitation. Partnering with charities or utilising the expertise of the departmental 207 youth support coordinator could help ensure continuity of peer support before, during, and 208 after PBT, extending to YA service users receiving standard radiotherapy. Age-specific care is 209 essential in empowering YAs with cancer to develop independence, self-reliance, and a 210 sense of purpose.

211

212 Acknowledgements

- 213 We are grateful to all the participants for giving their time to participate in the study and to
- 214 Professor Rachel Taylor and Danielle Fairweather for their support, advice, and guidance
- 215 with this service evaluation.
- 216 Author 1: Conceptualisation (lead); data curation (lead); formal analysis (lead); methodology
- 217 (equal); validation (lead); visualisation (equal); writing original draft (equal); formal
- analysis (dead); writing review and editing (equal).
- Author 2: Writing– review and editing (equal); methodology (equal); visualisation (equal);
- 220 writing original draft (equal); supervision (lead)

- 222 Declaration of interests
- 223 None
- 224

225	Funding statement
226	No funding required
227	
228	
229	
230	

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- 314

317	
318	Figure Legend
319	
320	Figure 1. Topics of discussion for peer support generated by participants
321	
322	Bar One (Top bar): Navigating relationships with friends, family, and dating
323	Bar Two: Returning to work and life adjustments
324	Bar Three: Dealing with diagnosis, side effects and symptoms
325	Bar Four: Body Image
326	Bar Five: Emotional and mental health
327	Bar Six: How to manage people's reactions and feel normal
328	Bar Seven: Hobbies
329	Bar Eight (Bottom Bar): Faith and spirituality
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Table 1. Characteristics of the interview participants

	n	%	
Sex			
Male	5	55	
Female	4	44	
Age			
22	2	22	
23	4	45	
24	3	33	
Ethnicity			
White	7	78	
Asian/Asian British	2	22	
Tumour type			
CNS	5	55	
Sarcoma	4	44	

- Table 2. Key recommendations highlighted through the service evaluation to better facilitatepeer support amongst YAs

Recommendations	
Advertising and promoting	Sessions should be well-advertised in departments,
peer support to enhance	through posters, emails, or verbal reminders to raise
engagement	awareness and encourage participation.
Establishing a safe, familiar,	A safe space is essential to openly generate discussions
and comfortable	while reducing mental load and anxiety.
environment	
Weekly peer support	Weekly 45 to 60 minute sessions, alternating between
sessions with mixed	activity-based (boardgames, craft activities, drawing) and
approaches were preferred	topic-focussed discussions were favoured in the PBT
	department.
Include themed topics for	Themed topics of discussion may include navigating
discussion	personal relationships, faith and spirituality, hobbies,
	returning to work and life adjustments, body image, and
	dealing with the diagnosis and associated symptoms.
Maintaining consistency in	Maintaining a consistent facilitator fosters familiarity and
the facilitator	helps address concerns about trusting new individuals.
	Participants expressed hesitation in confiding in
	unfamiliar people, viewing this as a barrier to
	engagement.

353 Figure 1

