

RESEARCH

Open Access



Policy and care in tandem: structuring youth volunteerism for psychological benefits in pediatric palliative care

Qingwei Wang^{1*}, Jiahe Zhang², Zixin Zhang², Yuhao Shen², Yu Ma³, Zixuan Wu⁴ and Brian J. Hall⁵

Abstract

Terminally ill children (TIC) in pediatric palliative care often encounter psychological deprivation due to isolation, impacting their self-discovery and identity formation. The Young Pioneer Voluntary Teams (YPVTs), initiated by the Ministry of Education of China, address these challenges while also benefiting adolescents with enhanced self-esteem and self-efficacy. However, the current lack of a standardized approach in integrating youth volunteerism into pediatric care raises concerns about potential negative impacts on TIC. This paper introduces a framework to standardize YPVTs training, focusing on psychological resilience, respectful attitudes, and enthusiasm, which are crucial for quality engagement with TIC. This framework includes a selection session, a training session, a feedback collection mechanism, and a framework evaluation. The selection session is composed of a questionnaire for basic information, the General Self-Efficacy Scale and the Motivation of Volunteers Scale, accompanying a scenario-based interview to assess genuineness of their capability to navigate situational challenges. The training session starts with program orientation and responsibility introduction. Lectures, workshops, and exercises are incorporated, aiming to strengthen the three main qualities. Further feedback will be collected from YPVTs with the assistance from child psychologists to detect present flaws and enhance operational quality. Framework effectiveness is evaluated by reassessing the Identity Scale for Adolescents, the General Self-Efficacy Scale, and the Motivation of Volunteers Scale for YPVTs and TIC. Developed through observations at a pediatric palliative care center in China, this framework aims to enhance the well-being of both TIC and YPVTs, embodying person-centered care in healthcare.

Keywords Terminally Ill Children, Youth Volunteerism, Palliative Care, Health Policy, Mental Health

Introduction

Terminally ill children (TIC), particularly those abandoned by their parents and residing in a pediatric palliative care center in southern China, are adversely impacted by delays in self-discovery. This issue is primarily due to enforced geographical isolation in remote urban areas, compounded by social isolation characterized by limited social interaction beyond their caregivers. The government recommends isolation to protect TIC's health, especially during the COVID-19 and post-pandemic period. A policy recommendation suggests establishing a registration system for all personnel entering and existing, and avoiding unnecessary visits [32]. This

*Correspondence:

Qingwei Wang
qingwei.wang@xjtlu.edu.cn

¹ HeXie Management Research Centre, Xi'an Jiaotong-Liverpool University, 111 Ren'ai Rd, Suzhou, Jiangsu 215123, China

² Xi'an Jiaotong-Liverpool University, 111 Ren'ai Rd, Suzhou, Jiangsu 215123, China

³ University of Bristol, Beacon House, Queens Rd, Bristol BS81QU, UK

⁴ Duke Kunshan University, 8 Duke Ave, Kunshan, Jiangsu 215316, China

⁵ Center for Global Health Equity, NYU Shanghai, N812 567 West Yangsi Rd, Pudong New District, Shanghai, PR 200124, China



© The Author(s) 2025. **Open Access** This article is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, which permits any non-commercial use, sharing, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if you modified the licensed material. You do not have permission under this licence to share adapted material derived from this article or parts of it. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

measure aims to safeguard their fragile health, as they are more vulnerable to secondary infections. For instance, one such risk is pulmonary tuberculosis, which can be transmitted through airborne droplets from visitors carrying *Mycobacterium tuberculosis*, posing serious harm to immunosuppressed TICs [16, 60].

However, an unintended consequence of protective isolation is psychological developmental delays, characterized by a limited understanding of themselves and the external world [34]. In palliative care centers, managers and caregivers serve as the legal guardians and often assume parental roles for these children, primarily because many are orphans. They strive to meet the needs of TICs and avoid conflicts, given the children's limited life expectancy. This situation leads to prevalent hyper-parenting behaviors among the caregiving staff, who, through overprotection and restricted autonomy, unintentionally limit the TIC's ability to navigate and internalize norms of interpersonal relationships [30]. Consequently, there is a tendency towards self-centeredness, as the focus is predominantly on safeguarding their physical health rather than fostering psychological development [3, 4, 22, 37]. The lack of opportunities for socialization in external environments further exacerbates delays in the self-discovery process, inhibiting the TIC from engaging in enriching interactions like playing with peers and exploring diverse settings [12, 51, 55]. These constrained childhood experiences adversely affect children's understanding of their identity, including talents, interests, and vision by limiting their exploration of the world [17, 31, 46].

The impact of peer interaction in the self-discovery process

Self-discovery, which includes identifying personal interests, character traits, and social roles, plays a crucial role in mental health, particularly during adolescence. This process aids in understanding social interactions and daily functioning, mainly including living habits and recreational activities [56]. It is important for identity formation, a process of understanding one's self within a social context, where group interactions play a facilitating role [2, 14, 36, 51].

Adolescents typically experience a transition period where their life focus shifts from family members to peers [54, 64], moving from parent-dependent self-definition to a self-identity integrated within society [38]. Peer interactions are critical in developing social-emotional competence, enabling adolescents to self-regulate and maintain relationships [23, 29, 41, 55, 59].

Moreover, the quality of peer relationships significantly influences this process. Positive peer interactions can enhance mental health and psychological well-being, reducing issues like social anxiety and depression [26].

However, interactions with at-risk peers can negatively affect the TIC's identity formation [10, 19, 43]. This emphasizes the need for careful selection and training in volunteerism.

Volunteerism's impact on pediatric palliative care

Acknowledging the delays in the self-discovery process of TIC compared to their peers highlights their unique developmental challenges. Children raised in institutions often experience developmental delays and psychological deprivation, and positive peer interactions are a viable solution [61]. In this context, China's Young Pioneer Voluntary Teams (YPVTs) in pediatric palliative care centers emerge as a promising strategy to address these issues.

The YPVTs are groups of adolescents who engage in voluntary activities as a form of social practice, which are under the control of the Ministry of Education [6, 35]. YPVTs typically volunteer during weekends and summer and winter holidays, ensuring consistent operation of these programs. Traditional voluntary activities in the health sector include outpatient medical guidance and assistance with self-service registration, with the goal of equipping adolescents with healthcare knowledge. However, these programs often fall short in imparting practical health knowledge, underscoring the additional purpose of volunteer intervention in pediatric palliative care.

Moving to the impact on TIC, research by Haski-Leventhal et al. [20] emphasized the essential role of youth volunteerism in addressing social exclusion and discord among TIC, highlighting that, in contrast to the service-oriented approach of adults, youth volunteering tends to be relationship-oriented [42]. Unlike their adult counterparts, teenage volunteers within the YPVTs are less inclined towards excessive coddling, thereby enabling TIC to cultivate interpersonal skills and emotional intelligence through more naturalistic social interactions. Moreover, the proximity in age and interests between YPVTs and TIC facilitates a more authentic understanding and engagement [9]. These volunteers bring diverse experiences, from understanding popular culture to sharing travel stories, enriching TIC's learning and broadening their worldviews. This facilitates personal identity development and a deeper self-discovery process in TIC. The viewpoints of YPVTs bring to light new challenges, significantly influencing the development of interventions within pediatric care.

Further exploring the volunteers' perspective, YPVTs also experience benefits in terms of psychological well-being. Engaging in voluntary programs allows YPVTs to interact with people from diverse socio-economic backgrounds, which gives them a sense of community and being needed. Moreover, lower possibility of

depression and higher life satisfaction and self-esteem is linked with youth volunteering [25, 33].

However, challenges exist in the implementation of YPVTs. Inconsistencies in volunteer selection and training can lead to unpreparedness and behaviors that are not conducive to the sensitive environment required for TIC. Inadequate psychological readiness may result in inappropriate interactions, impacting the TIC's psychological well-being and hindering their growth. Additionally, volunteers may experience psychological distress, including anxiety, depression, and even post-traumatic stress disorder, when confronted with the suffering or death of the children they assist [40, 47]. This issue is exacerbated by the lack of comprehensive death education in China, emphasizing the need for rigorous selection and training processes [5]. Another concern is the high turnover rate among volunteers, which can disrupt the continuity of care and reduce service quality [1, 15]. Increased investment in the selection and training processes is necessary to enhance the overall performance of organizations, as it directly impacts the quality of care provided [28].

Research has investigated adult volunteer selection and training in palliative care and the effect of youth volunteering, but most of them are fragmented, indicating an absence of research focus on the impact of youth volunteering on TIC and a lack of systematic frameworks for adolescent volunteers working in pediatric palliative care. Studies like Niinomi [39] demonstrate the effectiveness of training programs in enhancing volunteers' confidence in providing palliative care through a series of five progressive lectures, but these methods are not directly transferable to adolescent volunteers due to differences in age and maturity. Training content for adolescent volunteers should be simpler and more relatable, emphasizing easy-to-grasp concepts in pediatric palliative care. Furthermore, the incorporation of adolescent volunteers' perspectives, crucial for feedback collection, has been largely overlooked in policy-making [11]. A formal feedback mechanism for regular volunteerism is essential for efficient improvement. Zeanah [62] also highlighted the issue of attachment disruption in orphanage volunteering, where short-term volunteer relationships can negatively impact children's psychological well-being, leading to poor social behavior and even serious psychiatric disorders.

To address this gap, this paper advocates for youth volunteerism as a transformative element of pediatric palliative care. A comprehensive framework aims to achieve mutual psychological development in both YPVTs and TIC. The effectiveness of this framework will be assessed through two distinct psychological questionnaires, tailored respectively to the YPVTs and TIC, to understand

the benefits each group derived from the volunteer program and guide future enhancement.

Methodology

A four-step framework to improve volunteerism in pediatric palliative care

To address identified deficiencies and optimize the contributions of YPVTs, a four-step framework is proposed. It is grounded in three important virtues: psychological resilience, respectful demeanour, and a proclivity for enthusiastic sharing. Firstly, psychological resilience is crucial as it promotes mutual psychological well-being among TIC and YPVTs, allowing volunteers to navigate the complexities of rare diseases without undue distress [8]. This resilience is vital in maintaining a supportive presence and safeguarding TIC from potential negative reactions. Secondly, a respectful attitude is imperative for building a foundation of mutual trust. Physical demeanour, such as maintaining eye contact, is an essential expression of this respect, which contributes to creating an environment conducive to equitable communication [11]. Lastly, the embodiment of sharing enthusiasm is also important to facilitate interaction between TIC and YPVTs and further encourage TIC's self-discovery process. The volunteers are required to show a willingness to openly share their interests, talents, and experiences, cultivating a rich exchange of perspectives. This enthusiastic sharing fosters a reciprocal interaction, encouraging TIC in their journey of self-discovery while also allowing volunteers to glean deeper insights into the lived experiences of the TIC.

This framework (Fig. 1) includes meticulous selection processes, comprehensive training program, and dedicated follow-up procedures. Each stage is designed to reinforce these core qualities, ensuring that volunteers are well-prepared. The goal is to minimize the risks of adverse impacts and establish a platform that facilitates the recognition and constructive utilization of the YPVT's insights.

Discussion

Selection process

The selection process for YPVTs consists of two stages: a questionnaire and an interview. Initially, candidates complete a series of closed-ended questions covering personal background, interests, and talents, providing program managers with preliminary insights.

Further, the process mainly evaluates volunteers' qualities of psychological resilience and a proclivity for enthusiastic sharing by incorporating the General Self-Efficacy Scale (GSES) (Fig. 2) and the Motivation to Volunteer Scale (MTVS) (Fig. 3), both pivotal in assessing crucial traits for volunteering. The GSES is a 10-item

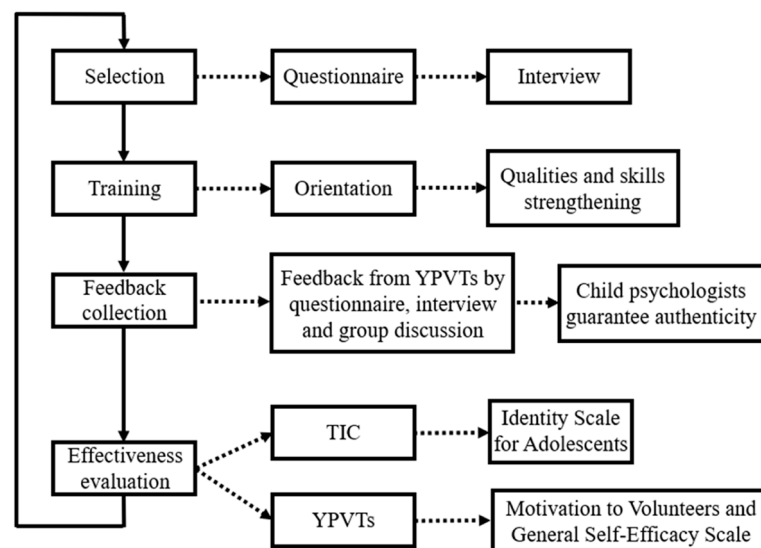


Fig. 1 A Four-step framework to improve volunteer work

General Self-Efficacy Scale	Not at all true	Hardly true	Moderately true	Exactly true
I can always manage to solve difficult problems if I try hard enough	1	2	3	4
If someone opposes me, I can find the means and ways to get what I want	1	2	3	4
It is easy for me to stick to my aims and accomplish my goals	1	2	3	4
I am confident that I could deal efficiently with unexpected events	1	2	3	4
Thanks to my resourcefulness, I know how to handle unforeseen situations	1	2	3	4
I can solve most problems if I invest the necessary effort	1	2	3	4
I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4
When I am confronted with a problem, I can usually find several solutions	1	2	3	4
If I am in trouble, I can usually think of a solution	1	2	3	4
I can usually handle whatever comes my way	1	2	3	4

Fig. 2 General Self-Efficacy Scale (GSES). Source: Schwarzer, R. (Ed.). [49]. Self-efficacy: Thought control of action

Motivation to volunteers	Not at all true	Hardly true	Moderately true	Exactly true
Volunteering makes me feel good about myself	1	2	3	4
It will help me in the future	1	2	3	4
It is easy for me to identify with the teenagers in the centers	1	2	3	4
I wanted to meet new people	1	2	3	4
I was brought up to volunteer	1	2	3	4
I received help and wanted to help others	1	2	3	4
Free time	1	2	3	4
They told me to volunteer in school	1	2	3	4
I had nothing better to do with my time	1	2	3	4
I was lonely	1	2	3	4

Fig. 3 Motivation to Volunteers Scale. Source: Haski-Leventhal, D., Ronel, N., York, A. S., & Ben-David, B. M. [20]. Youth volunteering for youth: Who are they serving? How are they being served?

questionnaire using a four-point Likert scale to measure self-efficacy, reflecting a volunteer's commitment to caring for TIC and their ability to effectively navigate challenges while volunteering [49]. Each item is rated as "Not at all true," "Hardly true," "Moderately true," and "Exactly

true." "Not at all true" indicates no confidence in managing the described situation or task. "Hardly true" suggests minimal confidence, with occasional capability under limited conditions. "Moderately true" reflects a moderate belief in handling challenges, indicating capability

in many situations, though not consistently. “Exactly true” signifies strong confidence, showing the ability to effectively dealing with challenges and tasks in most situations. Higher GSES scores indicate commendable psychological resilience among YPVTs.

Considering the nature of volunteerism, special attention should be paid to voluntary motivation. The MTVS uses the same scoring method to assess the candidates’ voluntary commitment to the program [20]. It categorizes motivation into voluntary and involuntary, reflecting their enthusiasm when meeting TIC. An evaluative approach will be applied to the MTVS by computing the average scores for both voluntary (e.g., “Volunteering makes me feel good about myself”) and involuntary motivation (e.g., “They told me to volunteer in the school”), which is to assess YPVTs’ underlying motivation. Those who are self-motivated will be preferred.

To achieve the accurate assessment, the GSES and MTVS must be precisely translated and culturally adapted for Chinese youth volunteers. This process involves multiple steps to guarantee accuracy and cultural appropriateness. The translation team is composed of at least two independent subgroups, including native speakers of both English and Chinese with bicultural backgrounds. This diversity allows culturally specific terms, such as “self-efficacy,” to be appropriately translated and adapted to the Chinese cultural context [18]. Team members experienced with the target population help align terminology with the group’s understanding and needs. Professional child psychologists play a key role in refining the translations for clarity and comprehensibility. The independent teams then compare their translations and reach a consensus, followed by a separate team’s back-translation into the original language. Finally, pilot testing with a small sample identifies and resolves any ambiguities or misunderstandings, ensuring the final versions of the scales are accurate and contextually appropriate for the intended population [57].

With the translation process confirming cultural relevance and clarity, the refined scales are now poised for effective deployment in evaluating candidates. When considering the two scales comprehensively, criteria for identifying “relatively lower scores” on the GSES will be established through using normative data and statistical benchmarks derived from the pilot tests. Previous research with a sample size of 9,578 students in China indicates a mean of 28.75, which is used as a benchmark to measure the self-efficacy level for the YPVTs [63]. Scores below 28.74 may be classified as having a relatively lower self-efficacy level. However, candidates with strong motivation on the MTVS will still be eligible for admission, provided they undergo additional training to build their self-efficacy and better equip them to handle

challenges effectively during their volunteer service. The scores from scales will not be the sole determinants for the eligibility of YPVTs to participate in volunteering, unless combining the results from further interviews.

The interview phase builds upon the insights gained from these scales. During this stage, evaluators pay attention to how candidates respond and their level of enthusiasm, which are key indicators of their genuineness and suitability. Given that the candidates are adolescents, a trait-based selection method is preferred to minimize stress and potential subjectivity [11]. The use of the GSES and MTVS in this phase ensures a standardized and objective approach to scoring the candidates’ performance.

In addition to standardized scales, the selection process incorporates scenario-based interviews. These interviews utilize real-life cases from pediatric palliative care centers, featuring virtual avatars and narrative explanations to create realistic scenarios. The goal is to elicit natural responses from candidates, allowing them to demonstrate their problem-solving abilities in practical situations [24, 58]. Candidates who feel uncomfortable during the interview have the right to withdraw at any time. The materials used in these interviews will be reviewed by volunteer managers and child psychologists to mitigate potential psychological risks, underscoring commitment to safeguarding the mental well-being of all participants.

Candidates who exhibit psychological resilience, intrinsic self-motivation, and adeptness in addressing scenario-based interviews will be prioritized for entry into the training process. Conversely, those with transmittable diseases, a history of misconduct, or insufficient time commitment will be excluded from the program. These exclusion criteria are designed to protect the psychological and physical health of TIC and to enhance the overall quality of the volunteer program. This rigorous selection acts as an effective way to protect both TIC’s and YPVTs’ physical and psychological health during the program.

Training

Upon the conscientious selection, a comprehensive training session is imperative to aptly equip YPVTs with the requisite competencies, especially the three qualities mentioned above, to navigate the complexities of their volunteering roles effectively. This training initiates with an orientation, aiming to imbue the YPVTs with a deeper understanding of the program’s objectives [39]. It’s essential that YPVTs are furnished with foundational knowledge of palliative care paradigms, coupled with an insight into the specificities governing the experiences of the TIC, such as their daily routines and prevalent symptomatic manifestations. This pedagogical approach seeks to promote an atmosphere of familiarity and contextual

sensitivity, enabling the YPVTs to better resonate with the challenges faced by the TIC as well as a psychological preparation for themselves [11]. Elaboration on the responsibilities of YPVTs also constitutes a pivotal aspect of the training, ensuring alignment with the program's ethos and objectives. The training incorporates lectures, workshops and exercises to foster competency and preparedness among the YPVTs. Key topics including “Cultivating Empathetic Perspectives” and “Nurturing Care in Interpersonal Engagements” will be emphasized. These topics are designed to reinforce the three main qualities mentioned in the selection section, and help YPVT to empathize effectively with TIOs [50].

Feedback collection

To further refine the program, a sophisticated feedback collection and evaluation framework is proposed, envisioning a synergistic collaboration between various pediatric palliative care centers. Throughout their volunteer engagements, YPVTs acquire invaluable insights into the obscured challenges and needs represented within the palliative environments through observation and communication [44]. Moreover, the personal feelings of YPVTs should be collected to ensure they are not stressful after the interaction with TIC, protecting their psychological well-being [47]. Feedback, reflective of these insights, will be systematically harvested through a variety of methods, including questionnaires, post-engagement interviews and discussions. Such feedback endeavours to drive internal enhancements, tailored specifically to improve the program and daily care provision. To uphold the integrity and authenticity of the feedback, the preliminary collection process will be led by professional's adept in child psychology. This approach is strategic in circumventing potential biases or power imbalances inherent in adult-centric interpretations, as it acknowledges the propensity for adults to unconsciously position teenagers as their subordinates [27]. Naturalistic settings characterized by peer companionship, where teenagers feel emboldened to express their perspectives, is also important, aiming to foster an environment conducive to open expression and reflection. Utilizing a holistic evaluative lens, results collated from group discussions and interviews will be synergistically analyzed alongside field observations, ensuring a consideration of all pertinent insights [13]. Ultimately, this feedback and evaluation framework is instrumental in driving continuous refinement within this program.

Effectiveness evaluation

To assess the impact of the four-step framework on the psychological well-being of YPVTs and TIC, three different scales will be administered post-volunteering. For

TIC, evaluations will be conducted by volunteer team managers in pediatric palliative care centers with caregiver assistance. The Identity Scale for Adolescents, suitable for individuals aged 13–18, will be employed. This 39-items self-report questionnaire uses a 4-point Likert rating scale 0 (never), 1 (rarely), 2 (sometimes) and 3 (often) to categorize adolescents into three personality types: positive, negative, and arrogant self-identity [2, 48]. It measures identity formation, with an expectation of a shift towards a positive self-identity, characterized by sociability and optimism, after interactions with YPVTs. Negative identity shows a lack of confidence and social skills and arrogant identity indicates egoistic and feeling superior which potentially results from hyper-parenting behaviors.

In evaluating YPVTs, the GSES and MTVS will be reapplied to develop deeper into their motivations and the changes they experience through the program. This approach aims to assess personal traits such as dedication and professionalism among the youth volunteers, ensuring alignment with the framework's objectives. By comparing the results obtained during the selection process with those gathered post-program, any increase in scores will indicate an improvement in self-efficacy, a desirable outcome of the volunteer experience. In addition, it is anticipated that responses on the MTVS will shift towards affirmations like “Volunteering makes me feel good about myself” and “It will help me in the future,” reflecting a positive transformation in their perception of volunteer work. Opposite responses would indicate the potential reasons for dropping out of the voluntary program, where more attention should be paid to retaining the youth volunteers.

These two scales can be used to regularly measure and track the volunteers' self-efficacy and motivation. This ensures they are engaged and find meaning in their work, while also helping to identify suitable roles and responsibilities for future adaptation. For instance, volunteers who resonate with the statement “I can handle whatever comes my way” and score high in feeling good about themselves through volunteering could be encouraged to take on leadership roles within the volunteer group. They can also provide immediate feedback on the impact of their work. Moreover, this approach helps identify when volunteers might need additional support or a change in role to stay motivated. Such a strategy not only aids in their self-discovery process but also contributes to fostering a culture of continuous improvement within the volunteer program.

In practical terms, these self-report scales will be utilized for self-evaluation by the young volunteers. They will rate their agreement on a Likert scale, ranging from 1 (“Not at all true”) to 4 (“Exactly true”), under condition

of confidentiality to encourage honest responses. Post-volunteering, these scales will be re-administered to assess any changes in self-efficacy and motivations. This approach provides valuable insights into the program's impact and the volunteers' development. The longitudinal data obtained will help in understanding the volunteers' personal traits, their dedication, and professionalism. This information is significant for informing the refinement of future volunteer training and the overall development of the program.

Limitations

One of the challenges in youth volunteerism is the high turnover rate. The first step to controlling the turnover rate is to improve the recruiting process to gain more qualified candidates since recruitment and retention are two interrelated processes [53]. Moreover, peer groups positively strengthen the relationships within the volunteering groups, improve their commitment to the task, and help control the turnover rate [20]. Additionally, the volunteers in palliative care centers, who bear the sadness of witnessing their clients suffering, tend to be overstressed psychologically, being a major reason for withdrawing from the volunteering program [7]. Timely counselling and taking time off are common ways to release stress, indicating that professional psychological support and a proper volunteering schedule may help volunteers maintain a good status and retain them [45]. In the feedback collection section, YPVTs should be interviewed about their motivation to join and reasons for leaving the program, which can comprehensively improve the framework from both TIC's and YPVTs' perspectives, striving for a sustainable program [21, 52, 53].

There might be some potential flaws or weaknesses in the framework worth noting. In the selection section, the threshold for determining YPVTs' eligibility to enroll in the program is unclear due to the limited data available. A significant issue in the framework evaluation section is the self-assessment bias inherent in these tools. Since all motivation items and statements are self-reported, responses could be influenced by the individual's current mood or self-perception. This might lead to an inaccurate portrayal of one's true capabilities or motivations. Furthermore, complex personal traits such as dedication and professionalism may not be fully captured through self-reporting, as such qualities are often better demonstrated through actions rather than introspection. Moreover, governmental regulations pose challenges in data collection from local palliative care centers in collaboration with welfare institutions, primarily due to concerns over data and privacy protection.

To address these limitations, the questionnaire scores should be collected in the pilot experiments to

determine a more reliable threshold by calculating the range of scores of youth volunteers who withdraw from the program. The incorporation of performance-based assessment with multiple raters is planned. This approach will include assessments from peers, supervisors, or community members, providing a more objective measure of the volunteer's traits and performance. Additionally, the process of synergistically analyzing feedback from various sources, including group discussions, interviews, and observations, though complex, is essential. Ensuring accurate reflection of all viewpoints in this data synthesis is significant for a comprehensive evaluation. Combining both qualitative feedback collection and quantitative methods, such as graded scales, offers a more balanced approach to evaluation.

Conclusion

Due to the relatively recent introduction of pediatric palliative care in China, the application of youth volunteering as an effective intervention to promote the self-discovery process among TIC remains an area not yet extensively explored by researchers and policymakers. A further research direction involves conducting pilot experiments to assess the effectiveness of the proposed framework. This paper presents an innovative approach, advocating for the empowerment of private palliative care centers to address the psychological challenges among disadvantaged children.

Acknowledgements

We express our thanks to Ms. Fang Huang, President of Nanjing Rainbow Hospice Care Center, for her guidance and suggestions, and to Professors Jing Ding and Hao Cheng of Nanjing University of Posts and Telecommunications for their comments.

Authors' contributions

QW led the overall design of the research and was involved in the conceptualization, analysis, interpretation, and discussion of findings. JZ, YS, and ZZ wrote the first draft of the manuscript, with inputs and writing contribution from YM and ZW. BH contributed to analysis and critical comments on the manuscript. All authors approved the final version of the manuscript.

Funding

Not applicable.

Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Received: 20 April 2024 Accepted: 5 February 2025

Published online: 14 March 2025

References

- Amenta MM. Death anxiety, purpose in life and duration of service in hospice volunteers. *Psychol Rep.* 1984;54(3):979–84.
- Ashiq U, Saleem S, Jabeen A, Mahmood Z. *J Pakistan Psychiatric Society.* 2019;16(2):36–40.
- Brummelman E, Thomaes S, Nelemans SA, Orobio de Castro B, Overbeek G, Bushman BJ. Origins of narcissism in children. *Proc Natl Acad Sci.* 2015;112(12):3659–62. <https://doi.org/10.1073/pnas.1420870112>.
- Campbell WK, Bonacci AM, Shelton J, Exline JJ, Bushman BJ. Psychological entitlement: Interpersonal consequences and validation of a self-report measure. *J Pers Assess.* 2004;83(1):29–45. https://doi.org/10.1207/s15327752jpa8301_04.
- Cao R. Facing Death: Should Death Education Be Taught to Chinese Youth as a Controversial Issue? *Creat Educ.* 2024;15(04):678–91. <https://doi.org/10.4236/ce.2024.154041>.
- Chinese Young Pioneers Work Society. Notice on launching the pilot project of the "Little Volunteers" activity. 2016. https://zgscxd.k618.cn/wjkwjw_80609/zsbfb/201701/t20170120_10124599.html.
- Claxton-Oldfield S, Claxton-Oldfield J. Should I stay or should I go: A study of hospice palliative care volunteer satisfaction and retention. *Am J Hosp Palliat Med.* 2012;29(7):525–30. <https://doi.org/10.1177/1049909111432622>.
- Coleman H, Walshe C. What are the emotional experiences of being a volunteer in palliative and end-of-life care settings? A systematic review and thematic synthesis. *J Pain Symptom Manage.* 2021;62(3):232–47. <https://doi.org/10.1016/j.jpainsymman.2021.02.025>.
- Damon W, Lerner RM. Child and adolescent development: an advanced course. John Wiley & Sons; 2008.
- Dishion TJ, Tipsord JM. Peer contagion in child and adolescent social and emotional development. *Annu Rev Psychol.* 2011;62:189–214. <https://doi.org/10.1146/annurev.psych.093008.100412>.
- Doyle D, editor. Volunteers in hospice and palliative care: A handbook for volunteer service managers. Oxford: Oxford University Press; 2002.
- Eccles JS, Gootmsn JA. (Eds.). Community program to promote youth development. National Academies Press. 2002.
- Eder D, Fingerson L. Interviewing Children and Adolescents. In: Holstein JA, Gubrium JF, editors. *Inside Interviewing: New Lenses, New Concerns.* California: Sage; 2003. p. 33–54.
- Erikson E. *Childhood and society.* New-York: Norton & Company; 1950.
- Even RJ. Volunteer high turnover diminishment in non-profit organizations: A qualitative descriptive phenomenological study (Doctoral dissertation, Northcentral University). 2018.
- Geoghagen M, Pierre R, Evans-Gilbert T, Rodriguez B, Christie CD. Tuberculosis, chickenpox and scabies outbreaks in an orphanage for children with HIV/AIDS in Jamaica. *West Indian Med J.* 2004;53(5):346–51.
- Gray P. Free to learn: Why unleashing the instinct to play will make our children happier, more self-reliant, and better students for life. Basic Books; 2013.
- Guillemin F, Bombardier C, Beaton D. Cross-cultural adaptation of health-related quality of life measures: Literature review and proposed guidelines. *J Clin Epidemiol.* 1993;46:1417–32.
- Hartup WW. Peer interaction: what causes what? *J Abnorm Child Psychol.* 2005;33:387–94. <https://doi.org/10.1007/s10802-005-3578-0>.
- Haski-Leventhal D, Ronel N, York AS, Ben-David BM. Youth volunteering for youth: Who are they serving? How are they being served? *Child Youth Serv Rev.* 2008;30(7):834–46. <https://doi.org/10.1016/j.childyouth.2007.12.011>.
- Hopkins B, Dowell D. Recruitment and retention in not-for-profit organisations: tailored strategies for younger and older volunteers. *Employee Relations: Int J.* 2022;44(1):259–73. <https://doi.org/10.1108/ER-10-2020-0450>.
- HHorton RS. Parenting as a cause of narcissism. In *The Handbook of Narcissism and Narcissistic Personality Disorder* (eds W.K. Campbell and J.D. Miller). 2011. <https://doi.org/10.1002/9781118093108.ch16>.
- Howes C, Rubin KH, Ross HS, French DC. Peer interaction of young children. *Monogr Soc Res Child Dev.* 1988;53(1):i–92. <https://doi.org/10.2307/1166062>.
- Jaidin JH. Scenario-based interview: An alternative approach to interviewing children. *Asia-Pac J Res Early Childhood Educ.* 2018;12(1):23–37. <https://doi.org/10.17206/apjrece.2018.12.1.23>.
- Kim J, Morgül K. Long-term consequences of youth volunteering: Voluntary versus involuntary service. *Soc Sci Res.* 2017;67:160–75. <https://doi.org/10.1016/j.ssrresearch.2017.05.002>.
- King KM, McLaughlin KA, Silk J, Monahan KC. Peer effects on self-regulation in adolescence depend on the nature and quality of the peer interaction. *Dev Psychopathol.* 2018;30(4):1389–401. <https://doi.org/10.1017/S0954579417001560>.
- Kostenius C. Interviewing children: An ethical discussion about the imbalance of power and suggestions on how to handle it. *Luleå University of Technology.* 2007;23–35. <https://www.diva-portal.org/smash/get/diva2:993384/FULLTEXT01.pdf>.
- Kuo T, Lin M, Lan C. Factors in volunteer turnover at nonprofit organizations: A study of lifeline in Taiwan. *Asian Social Science.* 2013;9(1):22–28. <http://search.proquest.com.proxy1.ncu.edu/docview/1345426536?accountid=28180>.
- Li Y, Doyle Lynch A, Kalvin C, Liu J, Lerner RM. Peer relationships as a context for the development of school engagement during early adolescence. *Int J Behav Dev.* 2011;35(4):329–42. <https://doi.org/10.1177/0165025411402578>.
- Locke JY, Campbell MA, Kavanagh D. Can a parent do too much for their child? An examination by parenting professionals of the concept of overparenting. *Aust J Guid Couns.* 2012;22(2):249–65.
- Marcia JE. Development and validation of ego-identity status. *J Pers Soc Psychol.* 1966;3(5):551–8. <https://doi.org/10.1037/h0023281>.
- Ministry of Civil Affairs. Yaoqiu Gedi Quanli Zuohao Ertongfuliyuan Lingyu Fuwujiugou Xinxinguanzhuangbingbu Ganran De Feiyan Yiqing Fangkong Gongzuo. 2020. https://www.gov.cn/xinwen/2020-01/28/content_5472693.htm.
- Moore CW, Allen JP. The effects of volunteering on the young volunteer. *J Primary Prev.* 1996;17:231–58. <https://doi.org/10.1007/BF02248794>.
- Mozolev O, Marusynets M, Zdanevych L, Smuk O, Chehi T. Children's socialization in family-style orphanages. *Open J Soc Sci.* 2021;09(07):154–67. <https://doi.org/10.4236/jss.2021.97010>.
- National Permanent Standing Commission-Young Pioneers of China. Zhonggong Zhongyang Guanyu Quanmian Jiaqiang Xinshidai Shaoxian-dui Gongzuo De Yijian. 2023. https://zgscxd.k618.cn/zyzx/202102/t20210204_18130784.html.
- Nawaz S. The relationship of parental and peer attachment bonds with the identity development during adolescence. *Journal of Social Sciences.* 2011;5:104–19.
- Neimetz C. Navigating family roles within an institutional framework: An exploratory study in one private Chinese orphanage. *J Child Fam Stud.* 2011;20(5):585–95. <https://doi.org/10.1007/s10826-010-9431-2>.
- Newman PR, Newman BM. Early adolescence and its conflict: Group identity versus alienation. *Adolescence.* 1976;11(42):261.
- Niinomi K, Soejima M, Hiraga K, Kodama S, Okazaki S, Nakao S. Effectiveness of a volunteer training program on the learning support of children in hospice palliative care. *Am J Hosp Palliat Med.* 2020;37(2):100–7. <https://doi.org/10.1177/1049909119860249>.
- Nissen S, Carlton S, Wong JHK. Supporting volunteer well-being through disaster: Perspectives and practices of a youth-led informal crisis volunteer group. *Nonprofit Volunt Sect Q.* 2023;52(3):704–22. <https://doi.org/10.1177/08997640221113882>.
- Ohl M, Fox P, Mitchell K. Strengthening socio-emotional competencies in a school setting: Data from the Pyramid project. *Br J Educ Psychol.* 2013;83(3):452–66. <https://doi.org/10.1111/j.2044-8279.2012.02074.x>.
- Omoto A, Snyder M, Martino S. Volunteerism and the life course: Investigating age-related agendas for action. *Basic Appl Soc Psychol.* 2000;22(3):181–97. https://doi.org/10.1207/S15324834BASP2203_6.
- Parker JG, Asher SP. Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychol Bull.* 1987;102(3):357–89. <https://doi.org/10.1037/0033-2909.102.3.357>.
- Pascuet E, Beauchemin L, Vaillancourt R, Cowin L, Ni A, Rattray M. Volunteer satisfaction and program evaluation at a pediatric hospice. *J Palliat Med.* 2012;15(5):567–72.
- Pesut B, Hooper B, Lehbauer S, Dalhuisen M. Promoting volunteer capacity in hospice palliative care: a narrative review. *Am J Hospice Palliat Med®.* 2014;31(1):69–78. <https://doi.org/10.1177/1049909112470485>.

46. Piaget J. The construction of reality in the child (M. Cook, trans.) New York: Ballantine Books. 1954.
47. Roditi E, Bodas M, Jaffe E, Knobler HY, Adini B. Impact of stressful events on motivations, self-efficacy, and development of post-traumatic symptoms among youth volunteers in emergency medical services. *Int J Environ Res Public Health*. 2019;16(9):1613. <https://doi.org/10.3390/ijerp16091613>.
48. Saleem S, Iqbal S, Jabeen A. Assessing identity in adolescence: A psychometric study. *FWU Journal of Social Sciences*. 2019;13(2):25–35.
49. Schwarzer R. (Ed.). Self-efficacy: Thought control of action. Taylor & Francis. 2014.
50. Scott RC, Burgin D. Volunteering for the future: the impact on young volunteers of volunteering in paediatric palliative care. *International Journal of Volunteer Administration*. 2004;22(2):21–5.
51. Sivan A, Tam VCW, Siu GPK, Stebbins RA. Adolescents' self-exploration in leisure experience. *Leisure/Loisir*. 2020;44(4):441–68. <https://doi.org/10.1080/14927713.2020.1815561>.
52. Starnes BJ, Wymer WW Jr. Conceptual foundations and practical guidelines for retaining volunteers who serve in local non-profit organization Part I. *J Nonprofit Public Sect Mark*. 2001;9(1–2):97–117. https://doi.org/10.1300/J054v09n01_06.
53. Stefanick L, Best-Bertwistle R, Race LS. Retaining Volunteers in the Age of Precarious Work. *J Nonprofit Public Sect Mark*. 2020;32(2):124–46. <https://doi.org/10.1080/10495142.2018.1526747>.
54. Tarrant M. Adolescent peer groups and social identity. *Soc Dev*. 2002;11(1):110–23.
55. The St. Petersburg-USA Research Team. Characteristics of children, caregivers, and orphanages for young children in St. Petersburg. *Russian Federation Appl Dev Psychol*. 2005;26:477–506. <https://doi.org/10.1016/j.appdev.2005.06.002>.
56. Thorkildsen TA. Adolescents' self-discovery in groups. Routledge; 2016.
57. Van Widenfelt BM, Treffers PDA, De Beurs E, Siebelink BM, Koudijs E. Translation and Cross-Cultural Adaptation of Assessment Instruments Used in Psychological Research With Children and Families. *Clin Child Fam Psychol Rev*. 2005;8(2):135–47. <https://doi.org/10.1007/s10567-005-4752-1>.
58. Villani D, Repetto C, Cipresso P, Riva G. May I experience more presence in doing the same thing in virtual reality than in reality? An answer from a simulated job interview. *Interact Comput*. 2012;24(4):265–72. <https://doi.org/10.1016/j.intcom.2012.04.008>.
59. Walker AL, Rujimora J, Swygert A, McNiece Z, Yoon E, Machado M, Myers K, Richardson E, Lenex E, Hebert L, Marchi E, Arthurson-McColl Z, Lagmay J, Puig A. A novel palliative care peer support program for adolescents and young adults: Survey and factor analytic study. *J Palliat Med*. 2023;26(5):627–36.
60. Weinstein JW, Barrett CR, Baltimore RS, Hierholzer WJ. Nosocomial transmission of tuberculosis from a hospital visitor on a pediatrics ward. *Pediatr Infect Dis J*. 1995;14(3):232–4.
61. Worku BN, Abessa TG, Franssen E, Vanvuchelen M, Kolsteren P, Granitzer M. Development, social-emotional behavior and resilience of orphaned children in a family-oriented setting. *J Child Fam Stud*. 2018;27:465–74. <https://doi.org/10.1007/s10826-017-0908-0>.
62. Zeanah CH, Wilke NG, Shaffer C, Roach T, Howard AH, Dozier M. Misguided altruism: the risks of orphanage volunteering. *The Lancet Child & Adolescent Health*. 2019;3(9):592–3. [https://doi.org/10.1016/S2352-4642\(19\)30213-5](https://doi.org/10.1016/S2352-4642(19)30213-5).
63. Zeng G, Fung S, Li J, Hussain N, Yu P. Evaluating the psychometric properties and factor structure of the general self-efficacy scale in China. *Curr Psychol*. 2022;41(6):3970–80. <https://doi.org/10.1007/s12144-020-00924-9>.
64. Zhang Y, Qin P. Comprehensive review: understanding adolescent identity. *Stud Psychol Sci*. 2023;1(2):17–31. <https://doi.org/10.56397/SPS.2023.09.02>.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.