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Exploring the qualitative aspects of peer educator development and assessing training program suitability for adolescent reproductive health in Zambia

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Abstract

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Background: In Zambia, addressing the multifaceted challenges in adolescent reproductive health has become increasingly imperative as the youth population continues to grow. Peer education programs, a key strategy, leverage the influence of peer dynamics and relatability for effective knowledge dissemination and behavior change among adolescents. However, a lack of standardized guidelines for training adolescent peer educators has led to significant variations in program duration, age criteria, and content among different organizations. To address this issue, stakeholders in Zambia collaborated to create a preliminary training program tailored to the unique needs of adolescent peer educators, emphasizing interactive activities and dynamic discussions.

Methods: To develop the training program, extensive data synthesis was conducted. Findings from FGDs were combined with stakeholder input, utilizing a triangulation approach to ensure a well-rounded understanding. This method, based on Fern's concept, involves examining the subject from multiple angles and drawing insights from various research components, emphasizing the need for factual data sources. Diverse data collection methods, including FGDs, document analysis, and stakeholder group interviews, formed the foundation for the training program development, incorporating a wide range of data sources and perspectives. The outcomes of this triangulation process laid the foundation for the meticulous development of the training program, resulting in a holistic understanding and the creation of an effective program.

Results: Different organizations' programs were compared, showing variations in duration, age criteria, and content. The study stressed the significance of peer educators in adolescent reproductive health education and the necessity for support, resources, and acknowledgment. Challenges faced by peer educators were discussed, and their relevance to psychological theories was noted. A summary is presented in vital peer education concepts, including age-appropriate training, peer learning, peer educator benefits, cultural sensitivity, and the value of support and supervision.

Conclusion: The study underscores the importance of peer educators in adolescent reproductive health education, highlighting the need for support and recognition. Findings reveal variations in training programs and underscore the value of addressing challenges faced by peer educators. Ultimately, the study calls for a more standardized and supportive approach to enhance the effectiveness of such programs.

Keywords: *Support and recognition, Training programs, Adolescent reproductive health, Challenges Standardization, Peer educators*

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INTRODUCTION

Adolescent reproductive health education stands as an imperative component of public health initiatives in many nations worldwide, with Zambia being no exception to this prevailing concern. As the youth population continues to burgeon, the significance of addressing the unique and pressing needs and challenges confronted by adolescents in the realm of reproductive health becomes increasingly evident and imperative [1]. This multifaceted issue encompasses a range of matters, including comprehensive sexuality education, HIV prevention, family planning, and fostering positive behaviors and attitudes toward sexual and reproductive health [2].

One innovative and impactful strategy in the field of adolescent reproductive health education is the deployment of peer educators, a cohort of individuals who belong to the same demographic group as the intended recipients of education and who undergo specialized training to disseminate relevant knowledge and foster behavioral change among their peers [3]. Peer education programs leverage the powerful dynamics of relatability, trust, and peer influence, recognizing that adolescents often learn most effectively from their peers [4,5].

In the context of Zambia, where a burgeoning youth population grapples with distinctive challenges related to sexual and reproductive health, the role of peer educators becomes increasingly pivotal [6]. These challenges encompass issues such as early and unintended pregnancies, a high burden of HIV and sexually transmitted infections (STIs), limited access to comprehensive sexuality education, and a need for informed decision-making concerning reproductive health [7]. Addressing these multifaceted concerns necessitates the cultivation of a cadre of well-equipped and well-informed adolescent peer educators who can effectively disseminate accurate information, facilitate dialogue, and guide their peers in adopting healthy behaviors and attitudes [8].

This article seeks to explore and elucidate the qualitative aspects of peer educator development in the specific context of Zambia, aiming to comprehensively assess the suitability and effectiveness of existing training programs for adolescent peer educators. Through an in-depth examination of the origins, structures, and key components of these training initiatives, this study endeavors to shed light on variations among different organizations involved in adolescent reproductive health education in Zambia. Furthermore, the study delves into the outcomes of a collaborative data collection workshop where stakeholders united in the effort to formulate a draft training program that aligns with the unique needs of adolescent peer educators.

Origins and Structure of Training Programs

One central organization of interest in this inquiry is Kabwata Home-Based Care, which embarked on its peer education program in response to the escalating HIV prevalence, particularly among young individuals, approximately two years prior to the initiation of this study in 2002 [9] (Mwaanga et al., 2005). It is noteworthy that Kabwata Home-Based Care based its program on the "Family Health Education" training document, which was the product of a collaborative endeavor involving multiple organizations and was supported by international funding [10]. This underscores the pivotal role of cooperation and partnership in tackling complex health challenges faced by adolescents in Zambia.

One salient observation pertains to the varying durations of training programs across different organizations [11]. For instance, Kabwata Home-Based Care opted for an extended training period of 18-20 weeks, a substantial commitment compared to the durations observed in some other programs [12]. This extended training period underscores the recognition of the multifaceted nature of the issues that peer educators are expected to address, emphasizing the need for comprehensive and well-rounded training to nurture competent and effective peer educators.

Compensation for Peer Educators

An intriguing dimension brought to the fore in this study revolves around the subject of compensation, or the lack thereof, for peer educators [13]. Kabwata Home-Based Care, for instance, opted not to provide monetary compensation but instead employed T-shirts as symbolic identifiers for peer educators [14]. This distinctive approach raises thought-provoking questions regarding the motivations and incentives that drive peer educators to actively engage in their roles. Moreover, it underscores the commendable dedication and commitment exhibited by these young educators who voluntarily invest their time and efforts in educating their peers, thus contributing to the enhancement of adolescent reproductive health in Zambia.

Variations Among Organizations

The study casts a discerning eye on the training programs that were offered by diverse organizations actively engaged in adolescent reproductive health peer education [15]. This exploration revealed substantial variations in program duration, age eligibility criteria, and program content across different organizations [16]. Notably, both the Young Men's Christian Association (YMCA) and Young Women's Christian Association (YWCA) utilized the "Family Life Education" training program but diverged in terms of age inclusion criteria and training durations [17]. These observed disparities suggest a lack of standardized guidelines governing the training of adolescent peer educators in Zambia, raising critical questions about program effectiveness, consistency, and the need for a unified approach to peer education training.

Draft Training Program Content

In response to the observed variations and the imperative need for a more standardized and comprehensive approach to peer educator training, stakeholders convened in a collaborative effort to formulate a preliminary training program explicitly tailored to adolescent peer educators in Zambia. This pioneering program encapsulates a multifaceted spectrum of topics pertinent to adolescent reproductive health, personal development, and advocacy. Of particular significance is the program's incorporation of interactive activities and dynamic discussions, designed to engage participants actively and to facilitate the effective delivery of critical reproductive health information [18].

Through an exploration of these multifaceted facets of peer educator development and training program suitability, this study embarks on a nuanced journey to assess the qualitative dimensions of adolescent reproductive health education in Zambia, with the ultimate goal of advancing the quality and effectiveness of peer education initiatives that hold great promise for the well-being and future prospects of Zambia's adolescent population.

MATERIALS AND METHODS

Methodological Preparation for Training **Program Development**

Before embarking on the training program development, it was imperative to synthesize the extensive data previously gathered. The findings from the Focus Group Discussions (FGDs) were reported verbatim and juxtaposed with the content of the training program collaboratively crafted by stakeholders. To amalgamate all study components effectively, a triangulation approach was employed, drawing upon the insights derived from stakeholder group interviews, FGDs, and pertinent literature.

Triangulation, as articulated by Fern (2001:8), involves comparing results obtained through different research methods to ensure validation. This practice is widely endorsed in qualitative research within the context of focus group studies underscores that triangulation entails examining a subject from various angles or viewpoints to ascertain its true essence: "It is better to look at something from several angles than to look at it in only one way." Mertens (2005:256) further elucidates that triangulation encompasses "the utilization of multiple methods and diverse data sources to bolster the robustness of interpretations and conclusions in qualitative research," emphasizing the need for factual data sources.

Data Collection Methods

To guide the selection of design and methodology for this study, it was essential to comprehend the diverse theories, dimensions, and research paradigms. This understanding empowered the researcher to make informed choices regarding the study's design and methodology. The research study employed the following data collection methods in advance of the training program development:

Focus Group Discussions

FGDs were conducted to gather data from adolescents concerning the characteristics of an ideal peer educator and the factors that positively or negatively influence the development of such educators.

Document Analysis

Document analysis was employed to assess the content of training programs utilized by stakeholders. This process culminated in the creation of a checklist, which outlined key themes, topics, meanings, and overall content conveyed within these documents.

Group Interviews: Group interviews provided stakeholders with an opportunity to thoroughly scrutinize their training programs, enabling them to refine these programs to best align with their objectives. Furthermore, the insights derived from the FGDs were integrated into the training program development, emphasizing the importance of adolescents' input.

Triangulation: The outcomes derived from the aforementioned data collection components were harmonized to shape the content of the training program. This triangulation approach ensured that a comprehensive and well-rounded training program was developed, drawing from multiple data sources and perspectives.

By employing these diverse data collection methods, this study achieved a holistic understanding of the subject matter, enabling the creation of a robust and effective training program.

The outcomes of this triangulation process formed the foundational bedrock upon which the training program was meticulously developed. The sequential procedures outlined in this chapter are visually represented in Figure 1

Figure 1: Study process in development of peer education training program

RESULTS

Training Programme Overview by Kabwata Home-Based Care

The presenter from Kabwata Home-Based Care provided insights into their training program, shedding light on its origins, structure, and key components.

Program Commencement and Origins

Kabwata Home-Based Care initiated its program in response to the escalating HIV prevalence, particularly among the youth, approximately two years before the study in 2002. Notably, the organization adopted a training document developed by the Family Life Movement of Zambia titled "Family Health Education." This document was a collaborative effort involving PPAZ, YWCA, Family Life Movement of Zambia, and the Adolescent Reproductive Health Project (ARHP/GRZ/UNFPA) during 1998 and 1999. Funding for the document's development came from the Margaret Sanger Center International in the USA and UNFPA.

Training Program Duration

The training program conducted by Kabwata Home-Based Care spanned a duration of 18-20 weeks. The presenter emphasized that the organization did not limit itself to this particular training program but embraced various documents, choosing them based on the age group of the participants they were training.

Key Components of Training

Drawing from the Family Life Education document, the essential components of Kabwata's training program encompassed a wide array of topics, including values, family structure, self-awareness, self-esteem, decision-making, sexuality, gender, preventing pregnancies, relationships, responsible parenthood, STIs, HIV/AIDS, abuse and violence, substance use and abuse, planning for the future, advocacy, sexual abstinence, behavioral change processes, and home-based care (HBC).

Training Duration Justification

During the presentation, a participant raised a query regarding the prolonged training period compared to the two to three weeks typically allocated for training peer educators by other programs. In response, the Kabwata Home-Based Care presenter explained that their extended training duration was necessary due to the complexity of issues they needed to address. They believed that a shorter period would not suffice to develop competent peer educators.

Peer Educator Compensation

Another participant sought clarification on whether Kabwata Home-Based Care compensated its peer educators for their work. It was revealed that peer educators were not remunerated monetarily but were provided with T-shirts as identifiers of their peer educator status. Several peer educators from Kabwata Home-Based Care were in attendance at the stakeholders' workshop, all dressed in black T-shirts bearing the organization's name. Notably, the presenter from Kabwata Home-Based Care was an adolescent, attired similarly to his peer educators.

These insights offer a comprehensive understanding of Kabwata Home-Based Care's training program, including its origins, structure, and the unique challenges and considerations that shape its approach to peer educator development.

Training Programs by Various Organizations

The study explored training programs presented by different organizations involved in adolescent reproductive health peer education. Below is a summary of the key findings from each organization:

Young Men's Christian Association (YMCA)

- YMCA is a Christian Non-Governmental Organization.
- They follow the Family Life Education training program.
- Initial training program duration is five days, followed by a four-week session.
- Age inclusion criterion for peer educators is 12-20 years.
- YMCA runs an adolescent reproductive health program in refugee camps in collaboration with Zambia's Ministry of Home Affairs and UNHCR.
- Peer educators are volunteers and are not paid allowances.

Young Women's Christian Association (YWCA)

- YWCA also uses the Family Life Education training program.
- Training program is in English and yet to be translated into local languages.
- Target group includes youth aged 15-25, in-school and out-of-school youths.
- Initial training period is 10 days, with refresher courses later.
- They have trained 288 peer educators, but only 58 are actively engaged.

- Focus on life skills, including topics like abstinence and condom use.
- Some concern about media advertisements that promote sexual activity for profit.

Family Health Trust

- Family Health Trust has its own training program based on the "Happy, Healthy, and Safe" document.
- Training covers various topics, including HIV/AIDS, reproductive health, and gender.
- Criteria include a minimum Grade 12 pass in Biology and English, age 18-25, and residence in the area of operation.
- Monthly allowances are paid to peer educators.
- Strict policies include dismissing girls who get married.

World Vision International

- World Vision's program, "Adventure Unlimited," is an HIV/AIDS prevention program for children aged 5-15.
- They emphasize abstinence and marital fidelity.
- Training focuses on life skills for children.
- They do not distribute condoms due to their Christian organizational policy.

United Nations High Commissioner for Refugees (UNHCR)

- UNHCR's program is run by stakeholders, including Zambia's Ministry of Home Affairs and YMCA.
- Training started in 1994, targeting asylum seekers.
- Peer educators are volunteers without incentives.
- Challenges include diverse cultural backgrounds and languages.
- Emphasis on counselling skills for peer educators.
- The stakeholders discussed challenges, life skills, risk behaviors, and training content. They proposed changes, such as a more logical structure and standardizing training periods. The study aimed to develop a draft training program based on stakeholders' input.

This comprehensive overview provides insights into various organizations' approaches to adolescent reproductive health peer education and highlights key elements and challenges of their training programs.

Discussion on the Outcomes of the Data Collection Workshop

During the data collection workshop, all participating stakeholders had the opportunity to present their training programs. Key observations and variations among these programs included:

1. Duration of Training

- Training durations ranged from three to five days for some organizations (World Vision International, Family Health Trust, UNHCR, and YMCA).
- Other organizations had longer training periods, such as 10 days or more (YWCA, Kabwata Home-Based Care, and Family Life Movement).

2. Age Inclusion Criteria

- Stakeholders had varying age criteria for adolescent peer educators:
- Kabwata Home-Based Care: 18-20 years
- YMCA: 12-20 years
- YWCA: 15-25 years
- Family Health Trust: 18-25 years
- UNHCR: 12-20 years
- World Vision International: 5-10 years and 11-15 years (age groups not specified)

3. Definitions of Adolescence

The study revealed a wide range of definitions for adolescence, from as young as 5 years old to as old as 25 years old, which did not align with the WHO's definition of adolescence (10-19 years).

4. Training Period Standards

There was no consensus or established standard regarding the ideal length of time for training adolescent peer educators.

Studies reviewed in this research did not specify appropriate training durations.

5. Use of US-Based Programs

Most stakeholders used training programs initially developed in the USA, with modifications to suit Zambian contexts.

Some phrases and components in these programs did not fully align with the local context, and there were errors in content and activities.

6. Emphasis on HIV and AIDS

Many training programs focused primarily on HIV and AIDS prevention, potentially neglecting other crucial aspects of adolescent reproductive health, such as cultural beliefs, norms, risk factors, peer pressure, life skills, psychosocial skills, and counseling. Based on these observations, the stakeholders collaborated to develop a draft training program content. This content was designed to be more

contextually relevant and comprehensive in addressing the training needs of adolescent peer educators in Zambia. The new additions and revisions were endorsed by the stakeholders in terms of content, session sequencing, and overall structure.

The study highlighted the need for a standardized approach to training program duration and content to effectively address the complexities of adolescent reproductive health in Zambia. Further research and evaluation of program impact at individual and community levels were identified as crucial next steps.

Table 1 shows draft training programme as developed by the stakeholders. The draft training program for Adolescent Reproductive Health Peer Educators in Zambia is comprehensive, covering various aspects of adolescent reproductive health, personal development, and advocacy. Each session is designed to provide participants with essential knowledge, skills, and a supportive environment for effective peer education. The program incorporates interactive activities and discussions to engage participants and enhance their understanding of critical topics. By the end of this training program, peer educators will be equipped with the knowledge and skills necessary to address adolescent reproductive health issues, promote healthy behaviors, and advocate for youth-related concerns in their communities. In general, a number of positive changes were made to the document that was used as a baseline. These included topics like pre-adolescent health education, leadership training, palliative care, abuse and violence, and entrepreneurship skills. It can be noted from the presentation above that some of the concerns raised by the researcher are still evident in the stakeholders' draft training programme and that some of the new themes that they raised during presentation of their programmes were not included in the above document. The reason for this is not fully understood. One can only hypothesize that while they would want change, they are still caught up in the mindset of what they have as content in their training programmes.

Table 1: Draft Training Programme for Adolescent Reproductive Health Peer Educators in Zambia

Session	**Topics Covered**
Introductory Activities	**Narration:** These activities help build a sense of community and set the stage for the training program. Participants get to know each other and understand the program's objectives.
A. Find someone who...	Participants engage in an icebreaker activity to connect and share common experiences.
B. Introduction to family life education	An overview of family life education is provided, outlining its importance and relevance.
C. Values voting	Participants discuss and vote on values that are important to them, promoting dialogue and reflection.
D. Developing a group contract	The group establishes expectations and rules to ensure a respectful and productive learning environment.
E. Ground rule session	Ground rules for group discussions and interactions are established, fostering a respectful atmosphere.
F. T-shirt symbols	Participants explore the significance of symbols and are introduced to T-shirt symbols for peer educators.
G. Introduction to life skills for behavioral change	An introduction to essential life skills is provided, setting the foundation for later sessions.
Session 1 Values	**Narration:** This session delves into personal values, cultural norms, and their impact on behavior and decisions.
A. Introduction to values	The concept of values is introduced, emphasizing their role in shaping individuals' lives.
B. Family values	Participants discuss values within a family context, considering how they influence family dynamics.
C. Values voting	Participants engage in a voting activity to identify shared values and foster discussion.
D. Values and behavior	The link between values and behavior is explored, encouraging self-reflection and awareness.
E. Norms of Zambian societies	Cultural norms and societal values specific to Zambia are discussed, promoting cultural sensitivity.

Session	Topics Covered
F. Cultural and traditional beliefs	Traditional beliefs and practices are examined, highlighting their influence on decision-making.
Session 2 Family and Parenting	**Narration:** This session focuses on understanding family structures, roles, and challenges, essential for addressing adolescent reproductive health.
A. Family structure	Participants learn about different family structures and their implications on adolescents.
B. Family relationships	The dynamics of family relationships are explored, emphasizing their significance in adolescent development.
C. Family roles	Participants discuss the roles and responsibilities of family members within various family structures.
D. Values and attitudes about parents	Attitudes towards parents are examined, addressing the importance of respect and communication.
E. Challenges of parenting	Challenges faced by parents in raising adolescents are discussed, fostering empathy and understanding.
F. Qualities of a good father/mother	Participants identify qualities that make someone a good parent, promoting awareness of parental roles.
Session 3 Self-awareness	**Narration:** This session focuses on adolescents' self-awareness, exploring the physical, social, and emotional changes during adolescence.
A. What is adolescence	Adolescence is defined and its significance in the developmental journey is discussed.
B. Physical changes during adolescence	Physical changes that occur during adolescence are explained, addressing common concerns.
C. Social and emotional changes	Participants explore the social and emotional changes adolescents experience, encouraging empathy and understanding.
D. Male and female reproductive organs	Reproductive anatomy is introduced, providing essential knowledge for future sessions.
E. Pre-adolescent health education	Pre-adolescent health education is discussed, emphasizing its importance in early adolescence.
Session 4 Self-esteem	**Narration:** This session aims to boost participants' self-esteem, body image, and communication skills, which are crucial for peer educators.
A. Building self-esteem	Strategies for building self-esteem are discussed, promoting self-confidence and self-worth.
B. Body image	Body image and its impact on self-esteem are explored, addressing common body image concerns.
C. Communicating assertively	Participants learn and practice assertive communication skills, essential for peer educators.
D. Leadership training	Leadership qualities and skills are introduced, encouraging participants to take on leadership roles.
Session 5 Decision Making	**Narration:** Decision-making skills are vital for adolescents. This session introduces the concept of decision making and its application.
A. Introduction to decision making	The importance of decision making is discussed, emphasizing its relevance in adolescence.
B. Three Cs to good decision making	Participants learn the three critical elements of effective decision making.
C. Practising resisting pressure when making decisions	Strategies for resisting peer pressure and making informed decisions are explored.
Session 6 Sexuality	**Narration:** Adolescents need a comprehensive understanding of human sexuality. This session delves into feelings, fears, and sexual decision making.
A. Introduction to sexuality	The concept of sexuality is introduced, highlighting its relevance in adolescence.
B. Human sexuality	Participants explore the diverse aspects of human sexuality, including emotional and physical components.
C. Feelings, fears, frustrations	Participants discuss feelings, fears, and frustrations related to sexuality, promoting open dialogue.
D. Sexual decision making	Strategies for making responsible sexual decisions are addressed, encouraging safe choices.
Session 7 Sexual Abstinence	**Narration:** This session defines sexual abstinence and emphasizes its importance as a

Session	Topics Covered
	choice for adolescents.
A. Defining sexual abstinence	Sexual abstinence is defined and discussed, highlighting its significance in preventing early pregnancies.
Session 8 Gender	**Narration:** Understanding gender roles and expectations is crucial. This session explores early memories, stereotypes, and more.
A. Early memories	Participants reflect on early memories related to gender, fostering self-awareness and critical thinking.
B. Gender roles and expectations	The impact of gender roles and societal expectations on adolescents is discussed, promoting awareness.
C. Defining gender terms	Key gender-related terminology is introduced, ensuring a common understanding of relevant terms.
D. Myths and popular culture	Participants explore myths and stereotypes related to gender and popular culture, promoting critical thinking.
E. Institutions and systems	The influence of institutions and systems on gender roles and expectations is discussed, encouraging reflection.
Session 9 Family Planning and Fertility Awareness	**Narration:** Adolescents need to understand family planning and the consequences of early pregnancy. This session addresses these topics.
A. Preventing an unwanted pregnancy	Strategies for preventing unintended pregnancies are discussed, emphasizing responsible choices.
B. Social and health consequences of early pregnancy	The impact of early pregnancy on social and health aspects is explored, fostering awareness.
C. Abortion	Abortion is discussed, addressing its implications and considerations for adolescents.
Session 10 Relationships	**Narration:** Healthy relationships are essential for adolescents. This session introduces relationship dynamics and qualities.
A. Introduction to relationships	The importance of healthy relationships is emphasized, setting the stage for discussion.
B. Assessing relationships	Participants learn how to assess the quality of their relationships, promoting self-awareness.
C. Who makes a good friend?	Qualities of a good friend are discussed, encouraging participants to evaluate their friendships.
Session 11 Sexually Transmitted Infections (STIs)	**Narration:** Understanding STIs is crucial for adolescents. This session explores the topic through engaging activities.
A. Sexually transmitted infections	STIs are introduced, emphasizing their impact and prevention.
B. STIs football	A unique activity, the "STIs football," is used to facilitate learning about different STIs.
C. Condom line-up	Participants engage in an activity to learn about different types of condoms and their use.
Session 12 HIV and AIDS	**Narration:** HIV and AIDS are significant topics for adolescents. This session provides interactive activities to enhance understanding.
A. Question cards	Participants use question cards to learn about HIV and AIDS, promoting interactive discussions.
B. HIV/AIDS password	An engaging activity, "HIV/AIDS password," is used to reinforce key concepts related to HIV and AIDS.
C. News about HIV/AIDS and other STIs	Current information on HIV/AIDS and STIs is shared, keeping participants informed.
D. HIV transmission game	An interactive game helps participants understand how HIV is transmitted.
E. Voluntary Counselling and Testing (VCT)	The importance of VCT services is discussed, promoting awareness and access.
F. Mother to child transmission	The concept of mother-to-child transmission is explored, emphasizing prevention strategies.
G. Opportunistic infections	Opportunistic infections related to HIV/AIDS are discussed, fostering understanding.
H. Positive living	Strategies for living positively with HIV/AIDS are addressed, promoting a supportive outlook.

Session	Topics Covered
I. Stages of HIV and AIDS	The stages of HIV/AIDS progression are explained, increasing awareness of the disease.
J. Anti-retroviral therapy	Participants learn about anti-retroviral therapy and its role in HIV/AIDS management.
Session 13 Palliative Care	**Narration:** Providing care and support is essential. This session focuses on love, care, and basic counseling skills.
A. Love and care for HIV and AIDS patients	Participants discuss the importance of love and care for individuals living with HIV/AIDS.
B. First aid	Basic first aid skills are introduced, equipping participants with essential knowledge.
C. Psychosocial counseling	The fundamentals of psychosocial counseling are addressed, promoting supportive relationships.
D. Spiritual counseling	Participants learn about providing spiritual counseling, offering holistic support.
Session 14 Abuse and Violence	**Narration:** Addressing abuse and violence is crucial. This session explores various forms and prevention strategies.
A. Domestic violence	Domestic violence is discussed, emphasizing the need for awareness and prevention.
B. Sexual abuse and family violence	Participants learn about sexual abuse and family violence, recognizing signs and prevention measures.
C. Rape and date rape	The sensitive topic of rape and date rape is addressed, promoting understanding and prevention.
D. Child rights	Children's rights are discussed, emphasizing the importance of protecting and advocating for them.
E. Defilement	The legal aspects of defilement are explained, ensuring participants understand its gravity.
F. Child labour	The issue of child labor is explored, raising awareness about its impact on adolescents.
G. Child abuse	Various forms of child abuse are discussed, promoting awareness and prevention.
Session 15 Substance Use and Abuse	**Narration:** Adolescents need to be informed about substance use and abuse. This session provides comprehensive information.
A. Types of drugs and substances (old and new)	Different types of drugs and substances are discussed, including emerging trends.
B. Drug use and abuse	The distinction between drug use and abuse is made, highlighting risks and consequences.
C. Making decisions about drugs	Strategies for making informed decisions regarding substance use are discussed.
D. The truth about tobacco	Participants learn about the health risks associated with tobacco use, promoting informed choices.
E. Alcohol – telling it as it is	The impact of alcohol on health and decision making is discussed honestly and openly.
F. Ways to say NO to sex, drugs, and other pressures	Participants acquire skills to resist peer pressure and make responsible choices.
Session 16 Planning for the Future	**Narration:** Preparing adolescents for the future is essential. This session focuses on goal setting, values, and practical skills.
A. Setting short- and long-term goals	Participants learn how to set achievable goals, both short-term and long-term.
B. Values and vocations	The relationship between personal values and career choices is explored, fostering thoughtful planning.
C. Preparing a resumé	Practical skills for creating a resume are taught, enhancing participants' employability.
D. Entrepreneurship skills	Entrepreneurship skills are introduced, encouraging entrepreneurial thinking and independence.
E. Project proposal writing skills	Participants acquire skills in writing project proposals, essential for future endeavors.
F. Monitoring and evaluation skills	Monitoring and evaluation skills are discussed, emphasizing their importance in personal and project development.
G. Working parents: a panel discussion	A panel discussion featuring working parents provides insights into balancing work and family life.
Session 17 Advocacy	**Narration:** Advocacy is a vital skill for adolescents. This session introduces advocacy and personal advocacy planning.
A. What is advocacy?	The concept of advocacy is introduced, highlighting its significance in addressing youth

Session	Topics Covered
	issues.
B. Advocating for youth issues	Participants learn about advocating for youth-related concerns, emphasizing their role in creating change.
C. Personal advocacy plan of action	Participants create personal advocacy plans, outlining their objectives and strategies for advocating for change.

Results In the Light of Reviewed Literature

The findings of this study shed light on the critical role of peer educators in adolescent reproductive health education, aligning with insights from the reviewed literature. Adolescents indeed possess valuable insights into the training needs of their peers, as suggested by Sawyer [19,]. However, these ideas need guidance and affirmation, particularly from their parents and stakeholders [20].

Peer Learning as a Driving Force

The literature review underlines that adolescents learn most effectively from their peers [21]. This aligns with the findings that adolescents are more likely to embrace training when they can choose peer educators they admire and respect, highlighting the power of positive peer influence [16]. Therefore, the effectiveness of peer educators in Zambia hinges on their ability to be exemplary role models. It is evident that these trainees possess the zeal to continue their training as peer educators but face frustration due to various negative factors attributed to program managers and coordinators.

The Quest for Role Models and Recognition

Adolescents tend to model themselves after individuals with challenging attributes rather than those deemed as failures [16]. This signifies that for Zambian adolescents to emulate trained peer educators, program managers must address issues causing frustration among these educators. Simple forms of recognition, such as certificates, T-shirts, badges, and financial incentives, are reasonable requests that could boost the morale and effectiveness of peer educators. Stakeholders must invest resources to nurture and acknowledge the development of ideal and effective peer educators.

Aligning with Theories

Several psychological theories can be linked to the study's findings:

1. Theory of Reasoned Action: Adolescents' influence on their peers largely depends on how admirable and influential they appear. This suggests that program managers should provide more support and incentives to make peer educators more admirable and impactful.

2. Social Identity Theory: Peer educators can be seen as in-group members, but this requires them to possess admirable traits. This implies that additional support and resources are needed to cultivate such traits.

3. Diffusion of Innovation Theory: Peer educators' access to current information and resources is vital for effective information dissemination. Stakeholders should invest in communication, information centers, and networking to enhance peer educators' effectiveness.

4. Social Comparison Theory and Cognitive Dissonance Theory: Peer educators can positively influence norms within their target group if they are empowered and exhibit admirable qualities. Addressing frustration factors and empowering peer educators can align their role with these theories.

5. Health Belief Model: Peer educators require more training and skills to address peers' susceptibility and severity perceptions related to health issues. Empowerment and structured intervention strategies are essential.

6. Cooperative Learning: Peer educators should be trained holistically, encompassing various health-related topics beyond HIV/AIDS. Incorporating diverse subjects like drug use, safety, exercise, personal development, and self-esteem can engage adolescents more effectively.

7. Contextualization and Cultural Sensitivity: Peer educators must tailor their messages to suit the cultural context and values of their communities, respecting traditional beliefs and practices. Age-appropriate training is essential in this regard.

This study reinforces the importance of adolescent peer educators in reproductive health education but highlights the need for more extensive support, resources, and recognition to make them effective role models. Addressing the

frustrations faced by peer educators is crucial for their success, and a holistic approach that aligns with various psychological theories can enhance their impact in Zambia's adolescent reproductive health education programs.

Table 2. provides concise insights into the key concepts and literature related to peer education programs, focusing on adolescent health and well-being. It covers various aspects, including the age range of adolescents, the effectiveness of peer learning, the benefits of involving peer educators, knowledge acquisition, cultural contextualization, and more.

- Highlights the age range and diversity within adolescence, with implications for age-appropriate training of peer educators.
- Affirms that adolescents learn best from their peers, a consensus among both peer educators and existing literature.
- Stresses the value of incorporating peer educators in program design and leveraging the potential of youth resources in communities.
- Highlights the personal and trainee benefits experienced by peer educators, emphasizing program effectiveness.
- Advocates for continuous training to enhance knowledge and skills, necessitating more time for learning and practice.
- Recognizes the importance of culturally sensitive messaging and the need to align education with local cultural values.
- Calls for improved supervision, collaboration, and support for peer educators from parents and stakeholders.
- Acknowledges the influence of Christian beliefs on peer education decisions and practices.
- Highlights the debate between peer educators seeking payment and stakeholders viewing their work as voluntary.
- Emphasizes the need to empower trainees for future employment or further education after their peer education roles.
- Underscores the importance of continuous learning throughout the peer education journey.
- Reflects divergent views between peer educators, stakeholders, and existing literature on the effectiveness of peer education programs.

Table 1: Conceptual Framework and Literature Review in Peer Education Programs

CONCEPT	PEER EDUCATORS	STAKEHOLDERS	REVIEWED LITERATURE
Adolescence	- FGD participants: Age range 19-24 years. - Study definition was 10-19 as defined by WHO. - Age as presented by stakeholders for training ranged from 11-25 years	- Peer education - Reported that they counseled persons who were much older or trained with persons who were much younger. - Need to make training sessions age-appropriate so as to prepare peer educators to train fellow peers	- WHO, 1999 - Sikes, 1996 - CSO et al., 2003a - The World Bank, 2004 - UNICEF, 2005 - Svenson, 1998 - Green, 2001 - McDonald et al., 2003 - UNESCO, 2003
Learning	- Adolescents learn best from each other. - Peer educators were aware of this concept. - Were on the same opinion that adolescents learn best from each other.	- - Johnson et al., 1991 - Johnson & Johnson, 1999 - Badura et al., 2003	- - Johnson et al., 1991 - Johnson & Johnson, 1999 - Badura et al., 2003
Benefits of including peer educators	- Hold opinion that their contributions would be useful in program design and development as they know and understand peer needs. - Underutilizing the resources they have in peer educators and youth in the communities.	- - Bullough & Kridel, 2003 - Forrest et al., 2004 - Hirst, 2004 - Jensen, 2004 - Thorkildsen et al., 2004	- - Bullough & Kridel, 2003 - Forrest et al., 2004 - Hirst, 2004 - Jensen, 2004 - Thorkildsen et al., 2004
Benefits of peer education	- Benefited much from training as peer educators - Achieved "benefit" outcome in their trainees.	- - Badura et al., 2000 - McDonald et al., 2000 - McDonald et al., 2003 - Green, 2001 - Mason, 2003	- - Badura et al., 2000 - McDonald et al., 2000 - McDonald et al., 2003 - Green, 2001 - Mason, 2003
Knowledge gain	- Peer educators are advocating for more training so as to obtain more knowledge. What is actually required	- - McDonald et al., 2003 - Hugo, 2005	- - McDonald et al., 2003 - Hugo, 2005

CONCEPT	PEER EDUCATORS	STAKEHOLDERS	REVIEWED LITERATURE
	is more knowledge at the beginning of the training program which then progresses to more skill. - Are adding more components to the training program but need to factor in more time for learning and practicing skills.		
Contextualization: Culture-appropriate messages	- Aware of Zambian cultural values, beliefs, traditions, and practices. - Advocating for contextualization	- - Graeff et al., 1993 - Hubley, 1993 - Helman, 1994 - Maibach & Parrott, 1995 - UNAIDS, 1999 - Manuel et al., 1998 - Hugo & Smit, 1999	- - Graeff et al., 1993 - Hubley, 1993 - Helman, 1994 - Maibach & Parrott, 1995 - UNAIDS, 1999 - Manuel et al., 1998 - Hugo & Smit, 1999
Affirmation by parents and support from stakeholders	- Need for better supervision, collaboration, and support of peer educators	- - Hirst, 2004	- - Hirst, 2004
Christian belief system	- Had influence on peer education. - Some stakeholders made decisions based on their Christian policies	- - Supa, 2005	-
Organizations' Costs	- Peer educators advocating for payment of incentives - Most stakeholders were of the opinion that their (Peer educators) work was voluntary and therefore peers did not have to be paid.	- -	-
"Life after being a peer educator"	- Advocating for more empowering so as to help them get employment or be accepted into training institutions after "ceasing" to be peer educators - Draft training program made provision for future plans - Need to focus on skills that would enable their trainees have valuable experience that would facilitate job-seeking efforts later	- -	- - Badura et al., 2000 - McDonald et al., 2000 - Green, 2001 - Mason, 2003
Lifelong learning	- As above - As above	- - Lubisi et al., 1997 - Gravett, 2001 - UNFPA, 2003	- - Lubisi et al., 1997 - Gravett, 2001 - UNFPA, 2003
Impact of peer education	- Piltzer (2005) reports that peer education is not effective - Peer educators in this study do not hold this opinion. - Stakeholders are of a different view than that presented by Piltzer (2005).	- - Piltzer, 2005 (the study self-reports shortcomings in the training programs of companies reviewed and in their own methodology.	-
Theory of Reasoned Action	- Will model after admirable peer educators - Need to empower their trainees so that they are more admirable	- - Drummond et al., 2002	-
Social Identity Theory	- In-group members are better able to influence others to have behavioral change - Need to empower their trainees to be more socially acceptable.	- - McDonald et al., 2003	-
Diffusion of Innovation Theory	- More interaction with peers would lead to more information dissemination, discussion, and contribute towards behavioral change - Training program to focus on training	- - Rodger 2002 - McDonald et al., 2003	- - Rodger 2002 - McDonald et al., 2003

CONCEPT	PEER EDUCATORS	STAKEHOLDERS	REVIEWED LITERATURE
	peer educators who will be peer educators in any setting.		
Social Comparison and Cognitive Dissonance Theory	- Peer educators similar to the target group will positively influence the target group - Need to empower their trainees so that they are more admirable and socially acceptable.	- - Bond & McConkey, 2001	-

This study emphasizes that peer education should be viewed as a lifelong learning process, equipping peer educators to be effective influencers throughout their lives. It is essential to foster continuous learning and development in these individuals, as they have the potential to influence future generations. Ultimately, the active involvement and input of adolescents themselves are key to the success of these programs.

To assess program effectiveness, a modified evaluation approach has been proposed, building upon the model developed by Green and Simons-Morton (1984). This adapted approach categorizes the various groups targeted at different stages of program evaluation to ensure a comprehensive assessment of outcomes.

By implementing these recommendations, program managers and coordinators can create more tailored, effective, and sustainable adolescent peer education initiatives.

DISCUSSION

The results of this study offer a comprehensive view of the training programs for adolescent reproductive health peer educators in Zambia, shedding light on their origins, structures, and unique challenges. This discussion will delve into the implications and recommendations based on these findings, drawing upon insights from other relevant studies in the field.

One noteworthy observation is the significant variability in the duration of training programs among different organizations, ranging from just a few days to several weeks. This finding aligns with previous research in the field of peer education. For example, a study by Ajuwon [22] on peer education programs in sub-Saharan Africa highlighted the diversity in training program lengths and emphasized the need for standardized guidelines to ensure the consistency and effectiveness of training. This echoes the findings in Zambia, where a lack of standardization raises questions about the adequacy and depth of training received by peer educators.

To address this issue, it is crucial to refer to existing research on best practices in peer education program design. The study by Finala et al. [23] emphasized the importance of evidence-based program planning, which includes defining clear learning objectives and aligning training duration with the complexity of the topics covered. Standardized guidelines should be developed, drawing on international recommendations like those provided by the World Health Organization (WHO) for adolescent health programs [24]. These guidelines can serve as a reference for organizations involved in peer education.

The variations in age inclusion criteria for peer educators, with some organizations targeting adolescents as young as 12 and others focusing on those up to 25 years old, raise questions about the appropriateness of training content for different age groups. This finding is in line with the broader discussion on defining adolescence and the age range it encompasses. The WHO defines adolescence as the period between 10 and 19 years [25], providing a clear framework for age criteria.

Research by Yakubu [26] emphasized the importance of aligning the content and approach of adolescent reproductive health programs with the developmental stage of the target audience. In light of this, organizations in Zambia should consider adopting the WHO definition of adolescence and tailoring their training content to suit the specific needs and characteristics of adolescents within this age range. Additionally, age-appropriate materials and teaching methods should be employed to engage and educate adolescents effectively [27].

The study's findings revealed that many organizations in Zambia adopted training programs originally developed in the USA but faced challenges related to content accuracy and cultural relevance. This issue highlights the importance of culturally sensitive and contextually relevant training materials, as emphasized by De Sinclair et al. [28]. They argued that peer education programs should be culturally tailored to resonate with the local

context and values, ensuring that the content is relatable and meaningful to the target audience.

Furthermore, the need for regular curriculum review, as identified in this study, is supported by the research of Kwon et al. [29]. They found that curriculum updates and revisions were essential to keep peer education programs aligned with evolving health priorities and emerging challenges. Organizations should consider collaborating with local experts and communities to conduct thorough curriculum reviews and adaptations, addressing any inconsistencies or inaccuracies [26].

The discussion on recognizing and compensating peer educators aligns with the broader literature on motivation and incentives for peer educators. Research by Deci et al. [30] highlighted the significance of acknowledging the contributions of peer educators through non-financial incentives like certificates, badges, and educational opportunities. These forms of recognition can boost the morale and commitment of peer educators, as mentioned in this study.

However, it's important to acknowledge the complex dynamics of compensation. Study by Kullgren et al. [31] suggested that while monetary compensation can be motivating, it should be balanced with a genuine passion for the cause and a sense of altruism. Further research in the Zambian context could explore the motivations and experiences of peer educators to inform compensation strategies that align with local preferences and realities.

The findings of this study provide valuable insights into the training programs for adolescent reproductive health peer educators in Zambia. By addressing the issues of standardization, cultural sensitivity, curriculum review, and recognition, organizations can enhance the quality and impact of these programs, ultimately contributing to improved adolescent reproductive health outcomes in Zambia. The program's introductory activities play a crucial role in creating a supportive learning environment [33]. These icebreaker activities, such as "Find someone who..." and group contracts, help participants get to know each other, fostering trust and open communication [34]. Additionally, building a sense of community is known to enhance learning outcomes [35]. The session on values is integral to understanding the role of personal values and cultural norms in shaping behavior [36]. Values clarification exercises, such as "Values voting," promote self-reflection and awareness [31]. Cultural sensitivity is essential, and understanding cultural norms specific to Zambia aligns with the literature on culturally tailored health interventions [30]. Acknowledging physical, social, and emotional changes during adolescence is consistent with research emphasizing the importance of addressing these changes in reproductive health education [37]. Developing self-awareness is a key component of promoting positive adolescent development (UNFPA, 2003).

The session on decision making aligns with research highlighting the need for adolescents to develop decision-making skills [26]. Adolescents often face complex decisions related to sexual behavior and reproductive health. Teaching strategies for resisting peer pressure is critical, as peer influence can strongly impact decision making (Johnson et al., 1991). HIV and AIDS: The extensive coverage of HIV and AIDS aligns with the literature emphasizing the significance of HIV education in reducing transmission [21]. Interactive activities, such as "HIV transmission game," are effective in enhancing understanding and retention of HIV-related information. Providing information on voluntary counseling and testing (VCT) services is consistent with research promoting HIV testing among adolescents [32].

Addressing abuse and violence is crucial, as adolescents may be at risk of various forms of abuse [35]. Recognizing signs and prevention measures, as covered in the program, aligns with research on preventing violence against adolescents [27]. The program's focus on substance uses and abuse is in line with research highlighting the need to address substance use among adolescents [32]. Equipping participants with skills to resist peer pressure aligns with studies emphasizing the role of peers in substance use [16]. Preparing adolescents for the future, including employability skills and entrepreneurship, is consistent with research on youth development and empowerment [25]. Developing skills such as project proposal writing is valuable for future endeavors [38].

The inclusion of advocacy skills is supported by research emphasizing the importance of youth engagement and advocacy in addressing youth-related concerns [19]. To ensure the success of the program, it's essential to consider the factors mentioned earlier, including training quality, resource availability, continuous support, monitoring and evaluation, community engagement, and cultural sensitivity. These factors are supported by existing literature on

effective adolescent reproductive health education programs [26]. The study underlines that adolescents indeed possess valuable insights into the training needs of their peers, in line with findings by Horigian et al., [39, 40]. However, it is evident that these ideas require guidance and affirmation, particularly from parents and stakeholders, as emphasized by Dashion et al., [40].

The reviewed literature consistently highlights that adolescents learn most effectively from their peers, a finding corroborated by this study. Adolescents are more likely to embrace training when they can choose peer educators they admire and respect, which underscores the power of positive peer influence [26,29]. Therefore, the effectiveness of peer educators in Zambia hinges on their ability to be exemplary role models. However, the study also reveals that peer educators face frustration due to various negative factors attributed to program managers and coordinators. This tension between the potential for positive peer influence and the need for better support and recognition raises important implications [41,41, 43].

Adolescents tend to model themselves after individuals with admirable attributes rather than those deemed as failures. For Zambian adolescents to emulate trained peer educators, it is crucial that program managers address the issues causing frustration among these educators. The simple forms of recognition advocated by peer educators, such as certificates, T-shirts, badges, and financial incentives, are reasonable requests that could boost the morale and effectiveness of peer educators. It is vital for stakeholders to invest resources in nurturing and acknowledging the development of ideal and effective peer educators.

The study's findings align with several psychological theories that shed light on the dynamics of peer education:

Theory of Reasoned Action: Adolescents' influence on their peers largely depends on how admirable and influential they appear. This suggests that program managers should provide more support and incentives to make peer educators more admirable.

Social Identity Theory: Peer educators can be seen as in-group members, but this requires them to possess admirable traits. This implies that additional support and resources are needed to cultivate such traits.

Diffusion of Innovation Theory: Peer educators' access to current information and resources is vital for effective information dissemination. Stakeholders should invest in communication, information centers, and networking to enhance peer educators' effectiveness.

Social Comparison Theory and Cognitive Dissonance Theory: Peer educators can positively influence norms within their target group if they are empowered and exhibit admirable qualities. Addressing frustration factors and empowering peer educators can align their role with these theories.

Health Belief Model: Peer educators require more training and skills to address peers' susceptibility and severity perceptions related to health issues. Empowerment and structured intervention strategies are essential.

Cooperative Learning: Peer educators should be trained holistically, encompassing various health-related topics beyond HIV/AIDS. Incorporating diverse subjects like drug use, safety, exercise, personal development, and self-esteem can engage adolescents more effectively.

Contextualization and Cultural Sensitivity: Peer educators must tailor their messages to suit the cultural context and values of their communities, respecting traditional beliefs and practices. Age-appropriate training is essential in this regard.

This study reinforces the importance of adolescent peer educators in reproductive health education but highlights the need for more extensive support, resources, and recognition to make them effective role models. Addressing the frustrations faced by peer educators is crucial for their success, and a holistic approach that aligns with various psychological theories can enhance their impact in Zambia's adolescent reproductive health education programs.

Implications and Recommendations

Based on the findings and insights from existing literature, several implications and recommendations emerge:

- Organizations in Zambia should work collaboratively to develop standardized guidelines for the duration and content of training programs. These guidelines should consider the complexity of topics and align with international definitions of adolescence.
- Curriculum development should prioritize cultural sensitivity and relevance. Collaboration with local experts and communities is essential to ensure that training materials resonate with the local context and values.
- Ongoing curriculum reviews and updates are necessary to keep training materials aligned with evolving health priorities and emerging challenges. This process should

involve feedback from peer educators and program beneficiaries.

- Organizations should implement a mix of non-financial incentives, such as certificates and badges, to recognize and motivate peer educators. Compensation strategies should be informed by research on local motivations and preferences.
- Organizations should adhere to the WHO definition of adolescence (10-19 years) and tailor their training content and methods to suit the developmental stage of the target audience.
- Program planning should be evidence-based, with clear learning objectives and outcomes. Organizations can refer to existing research on best practices in peer education program design.
- Gain a deep understanding of the community or site where the program will be implemented, considering factors such as location, demographics, and specific adolescent needs.
- Conduct a thorough situation analysis, clearly defining program objectives, strategies, and evaluation methods to address prevalent health issues.
- Engage the community, especially adolescents and peer educators, in addressing identified health issues, seeking their input on potential solutions.
- Repackage the training program to align with the specific needs and characteristics of the community, allowing for customization and flexibility.
- Emphasize peer education as a lifelong learning process, nurturing continuous development in peer educators to ensure their effectiveness throughout their lives.
- Implement a modified evaluation approach, categorizing the various groups targeted at different stages of program evaluation to comprehensively assess outcomes.
- By implementing these recommendations, program managers and coordinators can create more tailored, effective, and sustainable adolescent peer education initiatives that address the unique challenges and dynamics observed in Zambia.
- Community Involvement: Engage the community, particularly adolescents and peer educators, in addressing the identified health issues. Seek their input on potential solutions.
- Repackage the training program to align with the specific needs and characteristics of the community. The program should be adaptable and flexible, allowing for customization to suit various settings and target audiences. This may involve breaking down the program into modules rather than fixed sessions, as suggested in the developed training model. For example, if the health issue is prevalent in schools within a community, leverage the education sector as a channel for intervention. Utilize engaging forums like sports, dance, and plays to convey information, employing communication methods preferred by youth. This approach ensures that education and training are effective while being culturally relevant and aligned with the interests of young people. This concept is further explained in the Peer Z Model, developed specifically for Zambia.
- Program stakeholders should also plan for desired outcomes within their education programs. They can consider questions such as:
    - o How is a "community" defined within their training program?
    - o What level of effectiveness does the training program currently achieve?
    - o What outcomes are expected from peer educators in one-on-one sessions with peers and at the community level?
    - o How will the impact of the training program be measured, both on peer educators and within the community?
    - o What desirable traits should adolescent peer educators carry into adulthood?
    - o Does the role of peer educators cease after their formal training, or do they continue as peer learning facilitators?

DECLARATION

Author contribution EMN conceived and designed the study while KK supervised this study MMM collected data. EMN, MMM and BCC analysed and interpreted the results. All authors drafted the manuscript. All the authors except KK had input in the manuscript read and approved the final manuscript.

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