

# Influential Factors for the Improvement of Peer Education in Adolescents: A Narrative Review

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## Abstract

**Context:** Peer education is an effective strategy for improving adolescents' health. It focuses on the improvement of knowledge, attitudes and beliefs among adolescents with regards to different healthcare issues and empowers them to make informed decisions. This review study aimed to determine factors that promote peer education among adolescents.

**Evidence Acquisition:** In this narrative review, electronic databases including Google Scholar, Science Direct, PubMed (including Medline), Web of Science, Scientific Information Database, and Scopus were searched. Articles published between 1991 and 2016 were retrieved and undergone abstract and full-text appraisal. Lastly, 53 articles were selected and used to write this review.

**Results:** The factors influencing the promotion of peer education among adolescents were classified as follow: 'characteristics of peer educators': personal, skills and communication characteristics; 'characteristics of the educational program': theoretical foundations, program transparency, program sustainability, adolescents' comprehensive participation, and evaluation and monitoring; and 'structural characteristics of the educational program': supportive structure, and financial-official structure.

**Conclusions:** Taking into account the importance of adolescence and issues surrounding this period, the important role of peer education in the promotion of adolescents' health should be emphasized.

**Keywords:** Peer Education, Peer Educator, Adolescent, Narrative Review

## 1. Context

According to the world health organization (WHO), an adolescent is a person within the age range of 11 to 19 years old (1). More than 1.2 billion people in the world are adolescents (2). Adolescents may encounter many problems and crises during the adolescence period that may endanger their health in all bio-psycho-social aspects (3). For instance, an adolescent may experience changes in their biological system including puberty and physical appearance (4), psychosocial changes such as identity and inclination to socialization, the feeling of belonging to a peer group, replication with peers and a sense of perfection (5, 6). Moreover, adolescents in different societies face problems when attempting to acquire appropriate information about their age-related concerns (6). Therefore, there is a need for designation of appropriate educational programs to meet their needs (7).

Adolescents' educational programs by healthcare professionals, schools and non-profit organizations aim to meet adolescents' healthcare needs and help them choose a healthy life style (8). One of the most important sources of information for adolescents with regards to sexual and reproductive health is their peers. Therefore, peer educa-

tion is recognized as a suitable strategy for improving adolescents' health (9-11).

Peer education is the process of sharing knowledge and experiences among members of a group, who have similar concerns and characteristics, with the aim of achieving positive health outcomes (12, 13). According to another definition, peer education is a series of educational strategies presented by members of a subculture, society, or a group of people for their peers (3). Peer education may involve tutoring, counseling, helping, buddying and support (14, 15).

Peer education can be implemented for different age groups (16) with the aim of improving knowledge, changing attitudes and beliefs (17), and supporting and empowering participants to make informed decisions (7). Many studies have shown that peer education was an acceptable approach of education of adolescents, and could improve their knowledge and attitudes (17). Also, peer education was more acceptable for adolescents compared to the education provided by others. A probable reason is the amount of time spent with peers, which can be used to reinforce behavioral models (18). Since peer education aims to change the behaviors of groups, it could create

a sense of collective action and lead to the progression and empowerment of both the educator and peers (19). Other aims of this approach include sharing positive experiences to help personal development, strengthening the relationship between schools and social communities (20), changing high-risk behaviors (21), and providing access to psycho-social support as well as cost-effective and available preventative services (9, 19).

Peer educational strategies have been shown to be effective in health-related projects such as the prevention of cigarette smoking (14), alcohol and drug abuse, sexually transmitted diseases (STDs), human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) and education on sexual behaviors (12, 22). Moreover, it has been used in different fields of general public health including nutrition education and family planning (9, 23).

While from a historic perspective, peer education stems from theories of behaviorism and primary prevention, peer education interventions have recently been established on cognitive and harm reduction theoretical perspectives (16), prevention and early intervention, and interactive and participative learning (9, 16). It is believed that peer education needs technical framework, education and supervision to meet the needs of volunteer adolescents (9). One of the most important requirements for planning peer education is the necessity of being accountable to peers' needs and concerns (24).

The success of any program depends on the identification of facilitators and barriers to its implementation. Taking into account the importance of adolescence period and the significance of peers in adolescent's quality of life, this study was conducted with the aim of investigating influential factors on the improvement of adolescents' education through peer education.

## 2. Evidence Acquisition

This was a review study with a narrative approach. The steps taken to conduct this study were as follow:

- o. Identification of the research question;
- o. Conducting literature search to identify relevant articles;
- o. Selection of articles;
- o. Ethical considerations;
- o. Data extraction;
- o. Provision of the report in categories (25).

### 2.1. Identification of the Research Question

The question asked in this study was: what are the influential factors for the improvement of adolescents' education through peer education?

### 2.2. Conducting Literature Search to Identify Relevant Articles

Electronic databases including Google Scholar, PubMed (including Medline), Web of Science, scientific information database (SID) and Scopus were searched by the researchers (MA and ZSH) independently. In consultation with a panel of experts and according to the MeSH, the following key search terms were used to retrieve articles published between 1991 and 2016: [peer education OR peer learning OR peer OR peer helping OR peer approach OR peer intervention OR peer educator] AND [adolescent OR adolescence] AND [challenges OR barriers OR disadvantages] AND [advantages OR effectiveness OR improve OR promotion].

### 2.3. Selection of Articles

The literature search retrieved 108 articles. After deleting repeated articles, 92 articles remained. Two researchers (MA and ZSH) independently conducted the screening of titles and abstracts and chose relevant articles according to the following inclusion criteria: empirical studies, published in scientific journals, and focus on peer education. The screening led to the exclusion of 17 articles. During full-text appraisal, articles that did not consider the challenges of peer education (n=12) and had aims other than this study's aim (n = 10) were excluded. After conducting a new round of search in the references' lists of the remaining articles, 53 articles remained for further analysis (Figure 1).

### 2.4. Ethical Considerations

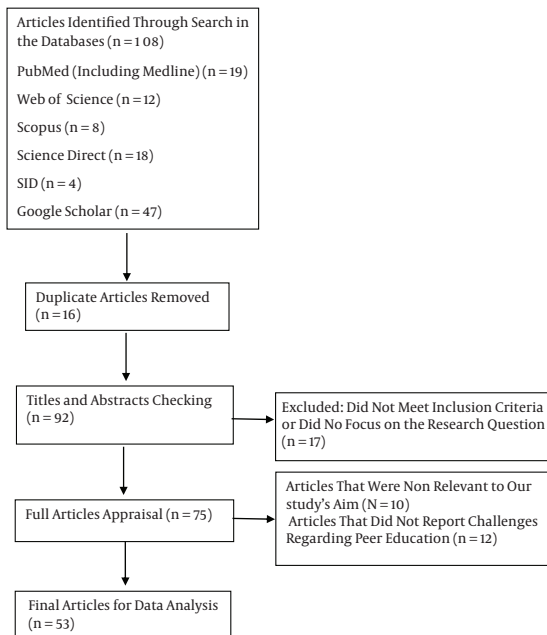
With the consideration of copyright principles in the presentation of findings, the researchers tried to prevent plagiarism through appropriate citation of the articles chosen for the review study.

### 2.5. Data Extraction

The full texts of the articles were read carefully and the data required for the presentation of findings were extracted.

### 2.6. Provision of the Report in Categories

The findings were classified and the details of the factors influencing the promotion of peer education among adolescents were provided.



**Figure 1.** The Process of the Literature Search

### 3. Results

The findings were classified into three categories:

- o. Characteristics of peer educators: personal, skills and communication characteristics;
- o. Characteristics of the educational program: theoretical foundations, program transparency, program sustainability, adolescents' comprehensive participation, and evaluation and monitoring; and;
- o. Structural characteristics of the educational program: Supportive structure and financial-official structure (Table 1).

#### 3.1. Characteristics of Peer Educators

Appropriate identification and selection of peer educators were crucial factors that influenced the educational program by peers (26). In this respect, the selection of a peer educator as a very sensitive aspect affected the effectiveness of educational interventions and efforts made to achieve education goals (27, 28). The process of peer educator's selection depended on the target group's needs and the context of education (29). Some suggested methods were: individual and group interview, volunteer's knowledge test, elections, self-nomination, nomination by the community, target group and project staffs, participatory group activities, and interactive discussions (10). The majority of peer educational projects used the volunteer method and nomination by staffs or their combination

(14). Moreover, people who volunteered for peer education should have had acceptable social activities in their past (18).

##### 3.1.1. Personal Characteristics

Peer educators as members of the same age group received information and education from educational classes. They aimed to bring a positive and durable change to peer groups (30, 31). The peer educator was introduced in different literature reports with various names as peer educator, peer trainer, peer facilitators, peer counselor, peer tutor, peer leader, and peer helper (16). They should be active listeners (9), to be able to make obvious and convincing communication with peers. They should also have a socio-cultural background similar to target audiences (15) and should be respected by them (8). In addition to having a non-judgmental attitude towards others (12), they should have self-confident and the potential of leadership (26). Passing the practical exam at the end of the educational courses, and having the required time and energy to work with peers in irregular hours were other characteristics of the peer educator (32). Some believed that being sensitive and open-minded and having interpersonal skills were other characteristics of the peer educator (8, 32).

##### 3.1.2. Skill Characteristics

Peer educators needed to obtain certain skills before they would be able to take the leadership role (31). Some of the required skills were: the ability to teach and hold educational workshops (7) extract ideas and concerns and find solutions to resolve them (8). Also, they needed to learn consultation skills, present lectures (7) and facilitate open discussions regarding sensitive topics such as sexual issues (22). Other skills were: being positive and healthy role models (23, 33), providing opportunities for peers to share their ideas, feelings, attitudes and perspectives (9, 10), and supervising peers and assessing their needs (10, 21). Finally, they should have been able to become directly involved in planning for designation of programs and identification of information sources as well as consultation centers in the society for peer's referral if required (8).

##### 3.1.3. Communication Characteristics

Peer educators needed communication skills to assess peers' abilities, make appropriate relationships with others and organizations such as healthcare settings (10). They needed to have the required skills for the transmission of messages both verbally and nonverbally and receive messages through active listening, sending feedback and empathy. It was said that the verification of others' ideas and reflection of feelings to others helped the peer educator develop constructive communication. Peer educators

**Table 1.** Factors Influencing the Improvement of Peer Education

Factors	Studies
Characteristics of peer educators	<b>Personal:</b> Harden 1999, Seymour 2013, Mason-Jones 2011, Ebreo 2002, Shiner 1999, Abdi 2013, World Health Organization 2005, Al-Iryani 2013, Flanagan 2008
	<b>Skill:</b> Layzer 2014, Lane C 1997, World Health Organization 2005, Abdi 2013, Medley 2009, Goren 2006, Ebreo 2002, Lane 2004
	<b>Communication:</b> Abdi 2013, Lane 2004, Kaplan-Sadooks 2007
Characteristics of the educational program	<b>Theoretical foundation:</b> Ayaz 2015, Turner 1999, Goren 2006, Mason-Jones 2011, Green 2001
	<b>Program transparency:</b> Goren 2006, Shiner 1999, Lane 2004, Shahhosseini 2014
	<b>Program sustainability:</b> Goren 2006
	<b>Adolescents' comprehensive participation:</b> Lane 2004, Nouri 2010, World Health Organization 2005
	<b>Evaluation and monitoring:</b> Green 2001, Goren 2006, Kim 2008, Allott 1999, Milburn 1995, Webb 2000, Peykari 2011
	<b>Supportive structure:</b> Goren 2006, Flanagan 2008, Lane 2004, World Health Organization 2005
Structural characteristics of the educational program	<b>Financial-official structure:</b> Layzer 2014, Goren 2006, Turner 1999, Goetz 2011, Ramezanzadeh 2010, Abedian 2014

should have the ability to face problems through adaptation, problem solving, and resistance against psychological issues (34).

### 3.2. Characteristics of the Educational Program

The educational program for peer educators aimed to prepare them to make appropriate decisions, clarify values, act according to those values (21, 35) and provide a comprehensive access to required knowledge regarding peer education (36). The content of the educational program that peers received composed of orientation and becoming familiar with the concept, content and aims of the program, educational needs and responsibilities in the group (9, 31). It was noted that the period between education and presentation of knowledge to the target population should not last more than a few weeks (37). After the primary education, peer educators needed continuous supervision and feedback about the program (9).

#### 3.2.1. Theoretical Foundations

Studies showed that peer educational programs had no obvious theoretical justification (18, 38, 39) and peer groups had no appropriate understanding of the theoretical model used for the education (23). The approach of peer education stemmed from theoretical disciplines such as teaching and learning theories, psychosocial theories

of behavior and behavior change (15), and reason for action and diffusion of innovation theories (27). According to the teaching and learning theory, peer education was the process of participant's empowerment (18). Also, learning took place through observation, imitation and modeling. It was noted that learning might occur without any change in the peer's behavior (23). According to diffusion of innovation theory, peers from a special group could play as behavior change agents through the diffusion of information and effect on group norms (29). It was evident that the effectiveness of peer educational program was different (20, 40). Some studies showed that peer education might not be one of the best tools for receiving information regarding healthcare condition (31). For instance, students might prefer to receive information regarding HIV/AIDS from healthcare specialists (41). It was also reported that the peer group not only affected the feeling of health, but also influenced adolescents' behaviors and habits. Therefore, the peer group, directly and indirectly, enhanced their vulnerability (6). Conversely, some others believed that peer educational programs could help with the prevention of HIV through improving knowledge, reducing high-risk behaviors such as sharing drug abuse equipment and unprotected sex, increasing condom use, reducing STDs and improving their knowledge about safe sexual behaviors (19, 21).

### 3.2.2. Program Transparency

The peer educational program needed to be flexible and adapt to the needs of different target groups (23, 42). Messages exchanged between peers should be brief, convincing and simple. They should also be compatible to their language and dialect and empty of jargons. The message should be understandable for all peers (43). For instance, when the program topic was about sexual and reproductive health and HIV/AIDS, messages should be action oriented, and cultural sensitive (10). The comprehensiveness and transparency of the program needed the consideration of the aim and methods and identity of peer involvement in interventions as well as factors that led to the development of the peer group (16).

### 3.2.3. Program Sustainability

The most effective peer educational program could only sustain for a few years. Therefore, the sustainability of the program should be supported through making short term and long term planning (23). Factors such as the determination of a sufficient number of peers in the group, provision of up-to-date information and motivation to the group, designation of suitable evaluation indices, supervision of the progression of the program, high quality interventions, adaptation to the change, and appropriate managerial system and strategic project planning were reported as important (10).

### 3.2.4. Adolescents' Comprehensive Participation

Adolescents' active participation in peer education leads to improvement of the educational program in terms of efficiency and efficacy. Participation should be based on active learning and the utilization of creative methods to attract peers and encourage them to freely share their ideas (10). Participants should be provided with opportunities to have an active role in peer education planning, designing, implementation and evaluation and decisions making and should take various responsibilities (44).

When peers were not interested to participate in the program, identification of reasons was required. Their fears and prejudice, and legal and cultural barriers that hindered their participation should be recognized. Also, their needs and expectations should be met (8). The involvement of peers could change their attitudes towards life and also motivate them to change their behaviors. They would find that the designation of this approach was based on their needs and could be profited from their peers' support (10).

### 3.2.5. Evaluation and Monitoring

In spite of the fairly long history of peer educational programs as an approach in adolescents' health promo-

tion, little knowledge and experience for evaluating and monitoring these programs are available (45). A few studies have evaluated the effect of peer educational programs, mostly focusing on their short-term effects (39). A lack of program transparency in terms of goals and intervention, a lack of control group and comparison of pre-test and post-test results (46) and the presence of confounding variables hindered the accurate evaluation of the program (23). The necessity of program evaluation was for the determination of their effectiveness and sufficiency (47), level of progression and the need for their improvement (24), detection of issues that hindered the implementation of programs and availability of goals, and finally to ensure adolescents' comprehensive involvement in the program (48).

Different indices could be used for evaluating an educational program and its effectiveness based on its goals. The indices should be obvious, realistic, useful and specific. In the process of evaluation and supervision of the program, peer groups found opportunities to change the project achieve knowledge about different issues and lead to the program's improvement (10).

## 3.3. Structural Characteristics of the Educational Program

Appropriate implementation and improvement of the quality of the educational program needed a supportive environment for holding constructive discussions about the quality of the program (49, 50). A lack of appropriate educational environment led to peer's inability to learn information, ideas and achieve self-esteem (10). Suggested strategies for the creation of such an environment included: the consideration of cultural issues in the designation of the program, involvement of local leaders and identification of opportunities for community outreach, and advocating for change in structures and systems of interventional programs (10, 32).

### 3.3.1. Supportive Structure

Peer educators besides continuous education needed personal and professional support (23). They needed parents' support to adopt to their new role, have access to new information regarding their activities in the group, balance between the school and peer group's activities, identify new methods to implement the program, develop communication skills and resistance against personal crises and problems (10). Also, peer educators needed not only financial motivation, but also emotional and social motivation such as appreciation, acknowledgment, respect by community members, and participation in competitions and social events. They also needed educational motivation consisting of access to education and information for improving personal and professional skills,

access to up-to-date facts, and the opportunity to transfer what they learned to others (10, 32). Moreover, access to national support, local policies, support by culture and customs, collaboration with multi-sectional organizations, healthcare clinics and referral systems were suggested as the supportive structures of the educational program (10). In this way, the integration of adolescents' healthcare services into the national healthcare system at the primary level by establishing youth friendly services is recommended. Providing health care services outside the official times as well as using methods such as online phone line and post box for providing consultation to adolescents is suggested (51).

### 3.3.2. Financial-Official Structure

The peer education program could be cost effective and implemented with a limited amount of cost compared to interventions implemented by healthcare providers (23). A lack of financial support from other organizations could be disappointing and lead to stress, discouragement and reduction of efforts by peers. Before implementation of the educational program, financial requirements and environmental facilities should be provided (52). A study on the condition of healthcare centers for adolescents showed that the majority of the centers delivered their services when adolescents were at school, which reduced their access to services. Therefore, an appropriate educational structure needed to take care of the interferences between the times of group activities and school times and the necessity of group activities out of working hours (51). The privacy of the environment in which the group operates, along with confidentiality of peer educators and group members, were emphasized. Adolescents were sensitive to the preservation of their privacy and confidentiality of their information. If adolescents trusted educators in terms of privacy and confidentiality, they easily shared their minds about sensitive issues and remained faithful to the group values (7, 18, 53).

## 4. Conclusions

Compared to traditional educational methods, peer education led to positive outcomes such as improving adolescents' knowledge regarding healthcare issues and providing referral to healthcare settings. In spite of its advantages, this approach could lead to limitations that needed further attention. Taking into account the importance of the adolescence period and issues surrounding this period, the important role of peer education in the promotion of adolescents' health is emphasized. A more comprehensive evaluation of this program is needed in terms of advantages and limitations. Finally, the effectiveness

of peer educational program depended on the method of selection of educators and peer groups, quality of education delivered by educators, the evaluation of the education process, and collaboration of stakeholders, parents and the society (10, 38). To achieve these goals, action plan-oriented programs at regional, national and international levels are proposed.

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