

## Approaching the Subject of Substance use in a peer-to-peer Education Project

Anusandhan-NDIM's Journal of Business and Management Research  
Vol.6, Issue 1, February - 2024  
<https://qtanalytics.in/journals/index.php/ANUSANDHAN>  
<https://doi.org/10.56411/anusandhan.2024.v6i1.40-50>

**Dr. Alina Costin**

Aurel Vlaicu University of Arad

### Abstract

*Background.* Substance use is on the political agenda in Romania now more than ever. A new national plan regarding the prevention of consumption among teenagers has been drawn up. Training them in prevention programs is not easy, especially for those teenagers who are difficult to educate, coming from environments where dialogue is not encouraged. There is evidence that participatory education, in the form of peer education, can be a very effective way of preventing substance use among young people (Perry, 1989; Jarvis, 1993). *Purpose:* The purpose of this study was to probe the perceptions of some teenagers participating in peer education prevention programs about the effectiveness of this education model.

*Methods:* 20 peer educators and first-year students in Psychology and Social Work were trained by anti-drug specialists to prevent substance abuse. The activities carried out within the framework of a program called From Peer to Peer in the Prevention of Substance Use, took place in informal environments (headquarters of some associations, youth clubs, in nature). 4 focus groups of 10 teenage participants were held. After analyzing the answers, the results were integrated into a questionnaire applied to several 400 teenagers.

*Results:* The overwhelming majority of participants (98%) considered this type of intervention to be attractive, and interesting; the participants were relatively easy to co-opt, although they initially expressed their reservations regarding the trainers' potential to surprise them with new information or approaches. Their assessments concern the naturalness of the meetings that took place in the form of discussions, the informal character, the lack of pressure exerted by the status, the freedom of expression, the fact of being understood and looked at with respect, and the psychological closeness. However, they highlighted some conditions, risks, and limitations related to the efficiency of the development of these programs known by peer educators.

*Conclusions:* The group discussions and those obtained through the questionnaire confirm previous research (Diao et al., 2020; Nawi et al., 2021; Dodd et al., 2022).

**Keywords:** peer education, teenagers, substance use, prevention, empowering.

### Theoretical Background

A series of social problems exert extraordinary pressure on young people (Hart, 2009; Bottrell, 2007; Nawi et al., 2021). A lot of policies and measures implemented by professionals are being sought and elaborated, however, a problem such as that of substance use, remains current. Peer-to-peer education has become a very effective strategy for promoting healthy behaviour among young

people in recent years (Topping, 2022; Walters, 2020). The transformative power of young people is a natural phenomenon because it is exercised in natural spaces, through free discussions, from peer to peer. Shiner (1999) finds considerable ambiguity around the concept of peer education and to clarify the method, he distinguishes between peer development and peer delivery. Another lack of clarity concerns the theoretical basis of the peer

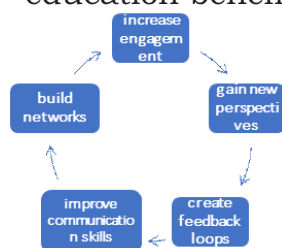
education method, which does not seem to have its roots in a specific school of thought (Turner & Shepherd, 1999). Peer-to-peer education is an intervention that is growing in popularity, perhaps due to the ease with which teenagers speak, take over, and reveal themselves to peer groups (Dodd et al., 2022). However, a series of theories substantiate the importance and logic of this type of education. Carrying out a brief history of peer-to-peer education in the field of health, the cited authors identify actions of this kind in ancient history, including Aristotle's writings; he then finds that in the 1800s teachers created a monitoring network by training monitors who teach the younger children what they were learning. This method has been applied in health projects with high efficiency in reducing the incidence of smoking among young people (Morgan and Eiser, 1990; Abernathy and Bertrand, 1992) and in the field of substance abuse (Rhodes, 1994; Klee and Reid, 1995). The method was widely used in the field of HIV prevention. In recent years, peer education has been used in communities (schools, informal networks, humanitarian associations, youth centers, clubs, etc.). Peer-to-peer education is achieved by using one or more methods such as formal tutoring, group discussions, tutoring in unstructured environments, counselling, one-on-one discussions, camps, theatre, workshops, and exhibitions (Turner & Shepherd, 1999). In a review-type analysis regarding the arguments for the implementation of peer education, the above-mentioned authors mention the following considerations:

- Peer education is more effective (Peers et al., 1993);
- Peers are more credible than professionals (Clements and Buczkiewicz, 1993) because they already use as a method the exchange of information or suggestions/advice (Jarvis, 1993);
- Peer educators act as positive role models (Perry and Sieving, 1993);
- It is beneficial, especially in situations where there is no formal education in a certain field (Hea, 1993);
- The effectiveness is very high among children who are difficult to educate through classical, formal methods (King, 1993);
- Colleagues constantly reinforce what is learned through permanent contact (Kelly et al., 1991).

Degreed (2016) believes that peer educators are a very important resource for social workers/specialists, also successful educational institutions use this resource having a much greater impact on learning by up to 13%, says McLeod (2012). Many universities delegate to a final-year student responsibilities regarding the coordination, information, and support of lower-year students. Associations and organizations for youth have this asset, that is, they constantly work with groups of peers, managing to successfully address the most difficult problems such as addictions, mental health problems, behavioural disorders, etc. Young people learn from each other, share common experiences, and empower each other, thus becoming an extraordinary form of support.

Constantly working with peer educators indicates some great advantages such as: increasing communication skills and commitment which gives new perspectives and building relationships. The feedback in the loop that is built between educators and the "educable" stimulates reasoning skills and the learning process and empowerment, two important conditions for any change process.

Figure no.1 . Peer-to-peer education benefits.



**Source:** Instructional design Peer Learning/Shared Learning - Instructional Design Australia

### **Description of the project: From peer to peer in the prevention of substance use**

Adolescence is the stage of age when habits and lifestyles are consolidated, and also during this period, peer groups exert a particularly great influence on how teenagers represent their lives. The peer educators were trained during a weekend, respectively 6 hours each during the three days. The first team of peer educators was composed of 20 students in the psychology and social assistance study programs, the first year of study. The trainer, a specialist in drug prevention, organized the training to transmit basic information regarding the types of substances, the impact on health, information about the psychological mechanisms involved in addiction; the development of communication skills was followed by learning

interactive games and exercises. After providing the basic information, the 20 peer educators grouped into teams of two and built their prevention program, following their own strategy. They organized prevention activities with groups of 20 teenagers, going to select future peer educators from among them.

The three-day program implies:

1. Practical activities with role-playing games, getting to know each other, practical activities Game of addiction, Circle of control.
2. Sending the body of information: Drugs - a problem that concerns us all; From occasional use to addiction
3. Practical ways to prevent consumption, counter-indications, and Practical activities. Strategy and implementation role-playing game

The peer-to-peer program in the prevention of substance use is based on the social influence model, which postulates that within the relationships between them, individuals influence each other in all dimensions of their lives, intellectual, emotional, and behavioural. Taking principles from the fields of social psychology, education, developmental psychology, and behavioural epidemiology (Hansen, 1988), the programs based on this theory seem to have the greatest success. Therefore, starting from the hypothesis that the consumption of substances is undoubtedly a public health problem, we understand the considerable efforts that are being made in the direction of the development of effective prevention programs. It is considered that the most effective interventions target teenagers at the beginning of this

age stage and have in mind the development of the skills of resistance to temptations and bad behaviours.

Within the peer-to-peer program in the prevention of substance use, the educators aimed for the interventions to take place over two days and to alternate self-knowledge, introspection exercises with the provision of information regarding the following:

1. Who am I? What desires do I have? Who do I want to become?

2. What are the mechanisms of addiction? What are the pitfalls of the certainty that we can control consumption?

3. Discovery of coping strategies

The provision of this information alternated with exercises and thematic games such as Role-playing about practicing self-control, Role-playing - the skills to refuse

Some of the educators were accompanied by former users who managed to get out of the state of addiction and others who did not succeed and are still in the process of giving up drugs. The impact of these meetings was significant and the interest of the participants was obvious. The content of the program aimed at achieving the three fundamental dimensions: the cognitive dimension (acquiring information), the affective dimension (motivation, empowerment), and the behavioural dimension (changes/concrete steps towards change). In shaping the prevention program, the educators had the freedom to construct the interventions according to their own vision. In establishing the objectives of the program, they started from the following premises:

Willingness to try a substance is linked to the specifics of a particular period of development, namely, the beginning of adolescence when the peer group has a dominant role in shaping their choices;

Exactly during this period, parents do not know how to manage the tendency of children to become independent, often a break occurs in the parent-child relationship; The child frequently rebels against the authority of the parent or teachers, so they can lose control;

At this age, the influence of a powerful person can convince both in the sense of participating in risky behaviours and refusing to participate in risky behaviour; it is essential, therefore, to have in the group, their entourage, and people with positive influence.

The willingness to use substances is related to the need for acceptance and belonging; therefore, it is necessary to empower and create contexts in which to find and identify.

The program outlined by the educators focused on identifying the type of pressure exerted by the group and training resistance. Participants are helped to discern between the different types of peer pressure, namely friendly pressure, silent pressure, threats or tricks, and lies (exercises taken from the SMART project, Hansen, 1988). The program run by peer educators was based on the social influence model that focuses on strategies for identifying and resisting social pressures to use drugs. The social influence model is recognized as one of the most impactful strategies to prevent the onset of tobacco, alcohol, and drug use.

### **Peer-to-peer education theories**

The effectiveness of peer education has been confirmed in a lot of research; for example, there is much greater responsiveness to peer-led HIV prevention programs (Kelly, 1995, Valdeserri et al., 1989). Tudiver et al., (1992) found that a session led by a gay man is more successful in promoting involvement in protected sexual acts than those led by professionals, hence the huge credibility and trust of the peer group.

At the base of the theories that are the basis of peer education is the learning theory proposed by Bandura (1977) which claims that in the learning process, the individual observes, analyses the behavior of peers, and adopts similar behaviors when connecting to their peers and depending of the modelled behaviour attributes; therefore, modelling is a very important component of learning within which individuals are influenced and strengthen and consolidate their behaviors. The relevance of the theory in the context of peer education consists in ensuring credibility, empowerment, modelling, and reinforcement, say Turner & Shepherd (1999).

For the innovation theory (Rogers and Shoemaker, 1971), peer educators are the agents of change, the leaders who will disseminate the innovation in the fields closer to them so that it will eventually be adopted by the majority. Adapting the theory of differentiated association proposed by Sutherland and Cressy (1960) according to which association with others constitutes learning opportunities, we deduce that young people can easily teach each other habits that promote health (Morgan and Eiser, 1990). This theory verifies four of the assertions listed above, namely that

the peer group is a very valuable source of information, that they are credible, and that they exercise this role of information and advice in a natural and natural manner especially when on a certain segment there is no information or no education. Especially in the issue of drug use, the theory has great applicability, as a large body of scientific works shows that the consumption behaviors of young people begin or take place in the peer group. The subculture theory (Cohen, 1955, Miller, 1958) postulates that belonging to a certain group/subculture is defining for the formation of a vision of life in general and some protective or risky behaviors. The theory indirectly supports the role of peer education by emphasizing the role that the group has in shaping behavior. Turner & Shepherd (1999) summarize the benefits that each theory brings, namely, credibility and empowerment, acceptability and reinforcement, and cost efficiency.

#### **Objectives**

- Evaluating the Perception of Teenagers Regarding Peer Education Interventions
- Identifying the benefits of peer education in behavioral, cognitive, and affective terms

#### **Methods**

The current study aims to capture the perception of some teenagers about the prevention activities carried out by peer educators. The work is mixed research that uses the focus group as a qualitative research method and the questionnaire as a quantitative method.

#### **Participants**

40 of the participants in the prevention activities, teenagers, 9th

and 10th-grade high school students were included in 4 focus groups. The results were subjected to a thematic analysis and the main items that appeared were included in the content of the questionnaire applied to the 400 adolescent participants. at the consumption prevention programs supported and coordinated by 20 peer educators trained by anti-drug specialists.

## Results

The results indicate increased receptivity of the participants to this model of education between equals, which they evaluate as natural, efficient, and credible.

Trust in the trainers, the conviction that they are interested in their problems because they do this activity voluntarily, relevant because many of them have experienced consumption, relaxed and free, they agree to the training in informal spaces, they have acquired important information about the addiction algorithm, which always works at kind, etc. Only 4 participants out of the 400 declared themselves less confident in peer education, preferring the trainers to be experienced teachers or specialists. The results obtained from the focus groups were grouped into three categories of data, namely the cognitive, affective, and behavioural dimensions. Of the 400 participants, 42 expressed their interest in training as peer educators.

The participants made positive evaluations of this type of education, identifying a lot of benefits or advantages. They appreciated that the educators brought new information in a format different from the one in the classroom; this way of discussing this topic caught the attention of most of them. I think that the educators were well

prepared but also willing to let themselves be guided by their (participants') interests.

They shared experiences with us, we spoke freely without a precise agenda, it didn't seem like we were participating in any prevention activity.

There are many challenges between us that adults do not understand and for which they cannot offer pertinent solutions. Sometimes it's classified as weird if you withdraw from a group just because you don't approve of them consuming. How do I remain in the group but faithful to my beliefs? Well, I received some excellent solutions from educators only 4 years older. Peer-to-peer education is how the education of the future should look.

Thematic analysis of the focus groups

Some outputs following the thematic analysis of the focus groups highlight the following:

From the thematic analysis of the focus groups, the following directions were highlighted:

High receptivity or students' preference for non-formal learning activities

The importance given to the real interest expressed by the educator for the assigned subject and the participants themselves

The need to be connected to the educator and to perceive him as authentic and credible, to be treated as an equal

Increased willingness to integrate or reconsider information related to consumption risks

Recognition of authority when it is associated with competence, tolerant, empathetic, and assertive attitude

Initially, the participants cataloged the topic of the discussion with humour, cataloguing it as an "expired" topic, boring, too often addressed. Indeed, in recent months, schools in Romania have been co-opted in extensive prevention activities aimed at both students and teachers to document the problem of consumption, to learn some work techniques, and to develop some communication skills with the students. In the FG, the participants declared that the prevention activities led by specialists from different fields, although well documented, did not have the expected effect, being organized in large groups.

Strictly speaking, consumption has deep causes; these activities cannot have too great an impact on teenage students who have already started to consume.... there is a need for interventions in small groups, some that allow a deeper dialogue with each participant.

The discussions revealed a strongly expressed need to have another type of contact with teachers, with trainers, and educators, in general. Many of their appreciations follow some stereotypes that they take from each other.

For example, the following reply was repeated within the 4 FGs> those who do prevention are paid for it, and the psychologist is paid, so they don't care about us, they just do their job.

Also, I think either that adults don't understand them, or that adults consume themselves, so in both situations, they are not the best suited to prevent.

Things have changed, and parents and teachers do not understand this. They would like us to live exactly like in their times. Or those times no longer exist.

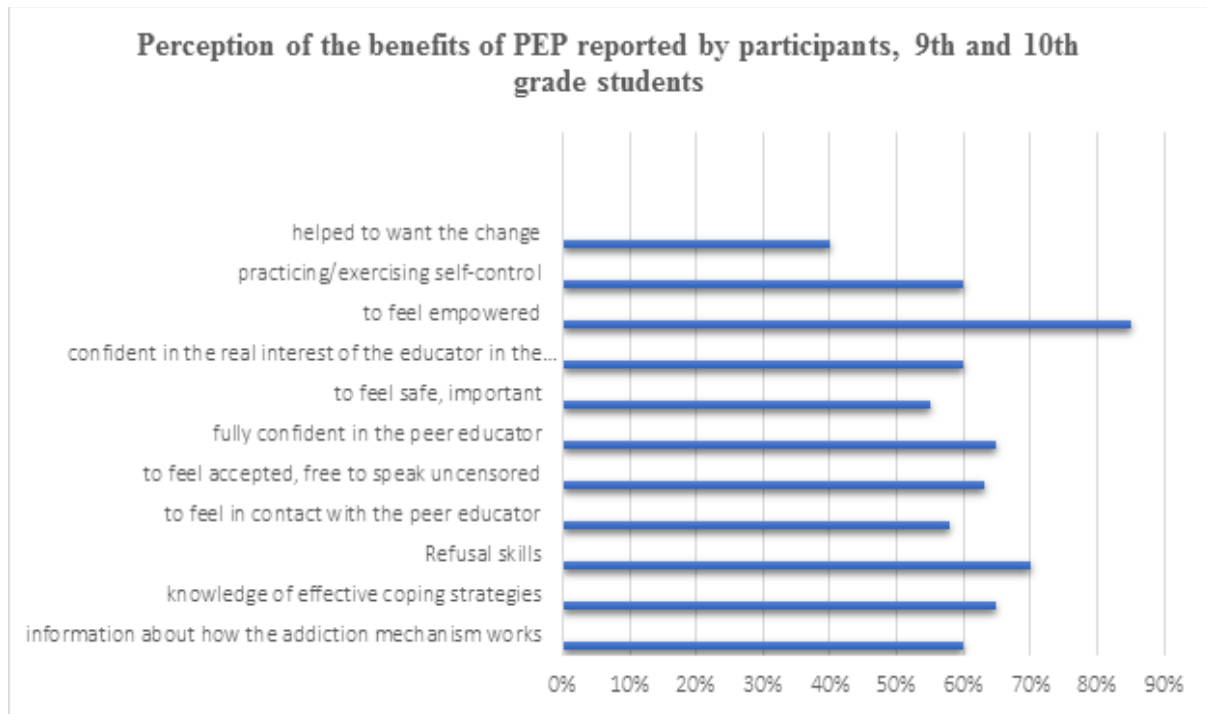
Favorable feedback was given by the participants with reference to the pressure identification exercises carried out by colleagues. They were asked to find the reasons behind the challenges to engage in consumption behaviors and to label these pressures to then learn practices for rejecting these offers.

In the table below, we have grouped the categories of benefits of the program run by peer educators reported by the participants.

Benefits category	Reported benefits
The cognitive dimension	<ul style="list-style-type: none"> <li>Information about how the addiction mechanism works</li> <li>Understanding denial and false control</li> <li>Knowledge of effective coping strategies</li> <li>Refusal skills</li> </ul>
The affective dimension	<ul style="list-style-type: none"> <li>to feel in contact with the peer educator</li> <li>to feel accepted, free to speak uncensored</li> <li>fully confident in the peer educator</li> <li>to feel safe, important</li> <li>confident in the real interest of the educator in the program he runs</li> <li>to feel empowered</li> </ul>
The behavioral dimension	<ul style="list-style-type: none"> <li>practicing/exercising self-control</li> <li>helped to want the change</li> <li>encouraged to take the first steps towards change</li> </ul>

The emphasis fell on the comfort and benefits resulting from the safe built environment which resulted to a large extent from the closeness of age and the sharing of a common reality. Some participants felt inspired by these activities, stating that it would be necessary to organize them constantly in the form of support groups. The self-control game and their training in identifying and evaluating the intentions of the peer group, the fact that they were listened to without haste and with real interest were perceived as empowerment.

The 13 items were included in a questionnaire applied to the 400 students participating in the peer education program to prevent substance use. Of these, only 24 participated in peer-led activities.



One can observe the evaluations of the participants and the very high agreement regarding the feeling of empowerment, interest and for the skills to refuse, and for the practice of self-control exercises. Understanding the mechanisms of addiction and identifying coping strategies and alternatives to consumption were two topics that caught their attention and invited them to reflect.

### **Other benefits**

- I know the reality that we cannot talk about with a teacher
  - they are not far apart in age, we use the same language and the same symbols
  - they are not accusers, they understand our reactions, our lives
  - does not position itself from a position of superiority
  - they trust us, they treat us as potential equal educators
- the manner in which the information is delivered is much more attractive and interesting

Consumption among the groups of participants was either a new topic, or a well-known one, or a tabu topic. In other words, some of the participants never experienced consumption, others occasionally, others, the fewest, admitted that quite often, very light drugs.

The consistency of the discussions, the real involvement of the teenagers, and the evaluations they made regarding this education model suggest the success of the program. The educators' inclusive and holistic approach to the issue of consumption had positive feedback and emphasized the need for the participants to freely discuss life issues that concern them. Stimulating long-term positive behaviours, especially in the field of health and substance use, could be possible through constant involvement in such activities. Youth suggested the organization of support groups for subjects who already consume and need support in regaining control.



## Discussions

Peer-to-peer education is perceived as a natural learning environment in which the participants do not perceive the pressure determined by the rigors of the institutionalized framework, in which the distance between the educator and the educated is considerably smaller, and the information is assimilated spontaneously and diffusely in an informal and attractive. The increased receptivity of young people to the peer-to-peer education model leads us to reconsider this particularly useful tool in providing information on choosing a healthy lifestyle and raising awareness of the dangers of substance use. This education model allows the distribution of information to a wider segment of the population than prevention programs supported by specialists would do.

The participants perceived the educators' messages as credible even though the same messages were provided by teachers or other specialists. At least, they said, they reflected on the truth of this information, especially related to the seriousness of the addiction. Although the promotion of effective education specific to the early efforts to prevent substance abuse was considered totally ineffective, these participants emphasized the importance of the environment created by the open and informal dialogue.

In many cases, taking over the task of prevention by teachers or authority figures could be counterproductive, suggesting programs based on discussions guided by peers.

The peer-to-peer program in the prevention of drug use was implemented with enthusiasm and genuine interest of educators for its

success. The main objective was not limited to information, but aimed at capturing teenagers in authentic discussions and sending a clear message, namely that substance use can destroy lives, slowly but surely. The active participation of teenagers and the positive assessments made show that this type of education is one they approve of and peer educators are perceived as real agents of change.

## Conclusions

The significant increase in the global adolescent population (Siddiqui, Kataria, Watson, Chandra-Mouli, 2020) and the emphasis on social problems such as drug use, are two very important reasons to find out if peer education is received with receptivity by teenagers and if it allows the promotion of a healthy life. Indeed, this type of education is increasingly widespread (McKeganey, 2000). Teenagers are receptive to this type of education, but they signalled their need to be in constant contact with this information and this type of support provided by educators close to their age. It results from the discussions with the teenagers that they recognize the experience of the educators; in this sense, it is recommended to support self-development and to strengthen the capacity of educators to motivate participants towards change and supporting a healthy lifestyle. The result is also confirmed by Nurmala et al., (2021) and Tang et al., (2022). Educators understood that there are different categories of teenagers who will respond differently to prevention programs; teenagers who are not oriented towards achievement and at high risk of consuming would rather respond to interventions led by people/personalities of their age or older whom they admire, or who are role models for them.

The study supports the fact that peer-to-peer education has a high potential to produce the desired changes, therefore such structures can be developed at the level of educational organizations, which would have many benefits not only on the participants of these sessions but also on educators and with indirect benefits on the vision that young people develop about themselves and about life. The example of the situation in England, where peer-to-peer interventions were taking place in over 62% of schools in 2009, can be taken up early when there is certainty that it is effective (Houlston, Smith, Jessel, 2009).

We conclude that the popularity of these interventions is determined by the natural framework in which peers naturally influence each other, and the authority of educators is recognized and not imposed or suggested. Another argument consists in the fact that, in general, teenagers look admiringly and take the model of their older colleagues, from whom they ask for help, rather than adults.

The study reinforces the results provided by Diao et al. (2020) regarding the potential of peer education to improve the quality of life through emotional growth and the diversification of social life.

## References

- Abernathy, T. J. and Bertrand, D. B. (1992) Preventing cigarette smoking among children: results of the four-year evaluation of the PAL Programme. *Canadian Journal of Public Health*, 83, 226–229.
- Bottrell, D. (2007). Resistance, resilience and social identities: Reframing 'problem youth ' and the problem of schooling. *Journal of Youth Studies*, 10(5), 597-616.
- Clements, I. and Buczkiewicz, M. (1993) *Approaches to PeerLed Health Education: A Guide for Youth Workers*. London, Health Education Authority.
- Cohen, A. K. (1955) *Delinquent Boys: The Culture of the Gang*. New York, Free Press.
- Degreed (2016). How the workforce learns in 2016. Retrieved from: [https://get.degreed.com/hubfs/Degreed\\_How\\_the\\_Workforce\\_Learns\\_in\\_2016.pdf](https://get.degreed.com/hubfs/Degreed_How_the_Workforce_Learns_in_2016.pdf)
- Diao, H., Pu, Y., Yang, L., Li, T., Jin, F., & Wang, H. (2020). The impacts of peer education based on adolescent health education on the quality of life in adolescents: a randomized controlled trial. *Quality of Life Research*, 29, 153-161.
- Dodd, S., Widnall, E., Russell, A. E., Curtin, E. L., Simmonds, R., Limmer, M., & Kidger, J. (2022). School-based peer education interventions to improve health: a global systematic review of effectiveness. *BMC Public Health*, 22(1), 2247.
- Hart, S. (2009). The 'problem'with youth: young people, citizenship and the community. *Citizenship studies*, 13(6), 641-657.
- Hansen, W. B. (1988). Theory and implementation of the social influence model of primary prevention. *Prev Res Findings*, 3, 93-107.
- HEA (1993) *Peers in Partnership: HIV/AIDS Education with Young People in the Community*. Health Education Authority, London
- Houlston C, Smith PK, Jessel J. (2009). Investigating the extent and use of peer support initiatives in English schools. *Educ Psychol*. 29(3):325–44.
- Jarvis, M. (1993) *Peering into health*. Youth Clubs, September, 26–28.
- Klepp, K. I., Halper, A. and Perry, C. L. (1986) The efficacy of peer leaders in drug abuse prevention. *Journal of School Health*, 56, 407–411
- King, E. (1993) *Safety in Numbers*. London, Cassell
- Kelly, G. A. (1955) *A Theory of Personality—The Psychology of Personal Constructs*. Norton, New York
- Kelly, J. A., St Lawrence, J. S., Diaz-Yolanda, E., Stevenson, L. Y., Hauth, A. C., Brasfield, T. L., Kalichman, S. C., Smith, J. E. and Andrew, M. E. (1991) HIV risk behavior reduction following intervention with key opinion leaders of population: an experimental analysis. *American Journal of Public Health*, 81, 186–171.
- McKeganey SPN. (2000). The rise and rise of peer education approaches. *Drugs*.7(3):293–310.

- McLeod, S., (2012). Zone of Proximal Development. Retrieved from <https://www.simplypsychology.org/Zone-of-Proximal-Development.html>
- Miller, W. B. (1958) Lower class culture as a generating milieu of gang delinquency. *Journal of Social Issues*, 14(2), 5–19.
- Morgan, M and Eiser, R J. (1990) Smoking, education and peer group influence. In Foot, H. C., Morgan, M. J. and Shute, H. R. (eds), *Children Helping Children*. John Wiley, London, pp. 307–325.
- Nawi, A. M., Ismail, R., Ibrahim, F., Hassan, M. R., Manaf, M. R. A., Amit, N., ... & Shafurdin, N. S. (2021). Risk and protective factors of drug abuse among adolescents: a systematic review. *BMC Public Health*, 21(1), 1-15.
- Nurmala, I., Pertiwi, E. D., Muthmainnah, M., Rachmayanti, R. D., Devi, Y. P., Harris, N., ... & Li, C. Y. (2021). Peer - to - peer education to prevent drug use: A qualitative analysis of the perspectives of student peer educators from Surabaya, Indonesia. *Health Promotion Journal of Australia*, 32, 206-211.
- Perry, C. L. (1989) Prevention of alcohol use and abuse in adolescents: teachers versus peer-led intervention. *Crisis*, 10, 52–61.
- Peers, I. S., Ledwith, F. and Johnston, M. (1993) *Community Youth Project HIV/AIDS*. University of Manchester School of Education Report to the Health Education Authority
- Rhodes, T. (1994) HIV outreach, peer education and community change: developments and dilemmas. *Health Education Journal*, 53, 92–99
- Rogers, E. M. and Shoemaker, F. F. (1971) *Communication of Innovations*. New York, Free Press
- Sutherland, E. H. and Cressy, D. R. (1960) *Principles of Criminology*. Lippincott, Philadelphia.
- Shiner, M. (1999). Defining peer education. *Journal of Adolescence*, 22(4), 555-566.
- Tang, Y., Diao, H., Jin, F., Pu, Y., & Wang, H. (2022). The effect of peer education based on adolescent health education on the resilience of children and adolescents: A cluster randomized controlled trial. *Plos one*, 17(2), e0263012.
- Topping, K. J. (2022). Peer education and peer Counselling for health and well-being: a review of reviews. *International Journal of Environmental Research and Public Health*, 19(10), 6064.
- Tudiver, F., Myers, T., Kurtz, R. G., Orr, K., Rowe, C., Jackson, E. and Bullock, S. (1992) The Talking Sex Project: results of a randomized trial of small-group AIDS education for 612 gay and bisexual men. *Evaluation and the Health Professions*, 15, 25–42.
- Turner, G., & Shepherd, J. (1999). A method in search of a theory: peer education and health promotion. *Health education research*, 14(2), 235-247.
- Valdeserri, R. O., Lyter, D. W., Leviton, L. C., Callahan, C. M., Kingsley, L. A. and Rinaldo, C. R. (1989) AIDS prevention in homosexual and bisexual men: results of a randomized trial evaluating two risk reduction interventions. *AIDS*, 1, 21–26
- Walters, G. D. (2020). Prosocial peers as risk, protective, and promotive factors for the prevention of delinquency and drug use. *Journal of youth and adolescence*, 49, 618-630.