

Street Play Method in Improving Knowledge and Attitude of Undergraduate Physiotherapy Students Towards Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome

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ABSTRACT

Background: Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) is a spectrum of conditions caused by infection with the human immunodeficiency virus. An improved life span is experienced by the people living with HIV/AIDS (PLWHA), but they are also experiencing extensive chronic health problems. This gives physiotherapists an opportunity to work with people living with HIV related conditions and comorbidities. A comprehensive approach to the treatment of PLWHA is necessary as the disease has a complex multi system presentation. The maintenance of fitness and range of motion, pain control and rehabilitation, respiratory and palliative care are all aspects in which physiotherapy has a major role to play in PLWHA. It is important to possess adequate knowledge and a positive attitude while caring for people living with HIV/AIDS. The street play method as an educational intervention was applied to use an innovative and creative mode of education rather than the conventional teaching methods to gain maximum interest and attention of the undergraduate students.

Methodology: A total of (N=300) physiotherapy students aged between 17-22 years (mean=19.5 years) among which most of the participants were females completed the pre-test questionnaire.

Results: The analysis of the data revealed that 3rd year and 4th year students had an good to excellent knowledge (International AIDS Questionnaire-English version score<36) and (AIDS attitude scale score<30). The students who had lower scores in the pre-test showed significant improvement in the post-test scores by 50-60%(p<0.001).

Conclusions: Enhancement of knowledge and attitudes towards HIV/AIDS patients is best achieved in situations where the information, education and communication intervention is conceptualized, designed and implemented in a participatory fashion for the optimum professional experience of the students.

Keywords: HIV, street play, students, knowledge, attitude, physiotherapy.

Introduction

Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) is a spectrum of conditions caused by infection with the human immunodeficiency virus (HIV). The prime nucleus of the HIV pandemic is in south and southeast Asia, predominantly in India, there are numerous other nations all over this region which are in the initial stages of the pandemic [1]. In India, the adult human immunodeficiency virus (HIV) (both males and females) occurrence is approximated as 0.32% with uncertainty bounds 0.26–0.41% in 2008 and 0.31% in 2009 with uncertainty bounds 0.25–0.39%. The adult human immunodeficiency virus (HIV) occurrence was approximated at 0.25% for women and 0.36% for men in 2009. The human immunodeficiency virus (HIV) positive women of India accounts for thirty-nine percent of all HIV infections in the nation. In India, approximately 0.93 million women are living with HIV/AIDS [2].

An improved life span is experienced by the people living with HIV/AIDS (PLWHA) while being on anti-retroviral drugs (ARVs) [3], but they are also experiencing extensive chronic health problems [4]. This leads to an increased impairment and disability in people living with HIV/AIDS (PLWHA) [5]. This gives physiotherapists all around the world a huge opportunity as well as responsibility to work with an increasing number of people living with HIV related conditions and comorbidities [6]. The advantageous role of physiotherapy in the treatment of musculoskeletal, neurological, respiratory and painful syndromes amongst the people living with HIV/AIDS (PLWHA) have been suggested in many studies [7-8].

A comprehensive and ingenious approach to the treatment of people living with HIV/AIDS (PLWHA) is necessary as the disease has a complex multi system presentation. The maintenance of fitness and range of motion, pain control and rehabilitation, respiratory and palliative care are all aspects in which physiotherapy has a major role to play in people living with HIV/AIDS (PLWHA). 80% of people living with HIV/AIDS (PLWHA) encounter impairments such as muscle weakness and pain, activity limitation such as lack of independent locomotion, or participation restriction such as inability to work due to their HIV status in a paper that has been published [9]. More than 90% people living with HIV/AIDS experience great impairments, over 80 % with activity limitations and over 90% with participation restrictions according to a British Columbia study.

Physiotherapists play a major role in treating people living with HIV/AIDS (PLWHA) considering the recorded rate of impairments, activity limitations and restrictions encountered by PLWHA [10-12]. Physiotherapists are also competent enough to manage the complications or other diseases that set in or are worsened due to their HIV/AIDS. Physiotherapy rehabilitation and care is progressively important in the continuance of HIV care and can slow the degradation process of the individual's condition and give the person an opportunity to gain and maintain independence.

A diverse method of exercise therapy practiced by physiotherapists such as aerobic exercises, progressive resistance and therapeutic exercise is proved to be very effective by evidence in literature. It is indicated for pain, atrophy, muscle wasting and weakness. Also, a proper home exercise programme should be prescribed by the physiotherapist to successfully achieve goals set for the patient [13]. The management of people living with HIV/AIDS demands a continuum of care for the individual and the family [14]. A multidisciplinary approach is required in the management of PLWHA. The medical staff and professionals may experience stress while providing care to PLWHA due to the presumed dangers of HIV infection.

It is important to possess adequate knowledge and a positive attitude while caring for people living with HIV/AIDS. An adequate knowledge leads to significant reduction in stress levels and can result in better and improved care for PLWHA. Based on the ethical principles of beneficence, non-maleficence and justice. Physiotherapists do not have the right to refuse treatment to PLWHA. Hence, the role of physiotherapist is not to judge or discriminate but to provide excellent care to PLWHA [5]. Physiotherapists and other health care professionals in these nations will have to be enormously caring for patients with HIV/AIDS, Because of the increasing occurrence of HIV/AIDS [1]. This lever ups the question about how knowledgeable our physiotherapists are about HIV/AIDS and what are their attitudes towards PLWHA [1].

The street play method as an educational intervention was applied to use an innovative and creative mode of education rather than the conventional teaching methods to gain maximum interest and attention of the undergraduate students. HIV/AIDS is disease which basically affects stigmatized groups, such as men having sex with men (homosexuals), illegal intravenous drug abusers and sex workers. This infectious disease can arouse unjustifiable emotions and fears in health care providers, inclusive of physiotherapy students [6]. Henceforth, it is of the essence to analyze their knowledge and attitudes, as these two factors could have a profound impact on the quality of services they provide to their patients. The education has a consequential influence on the level of knowledge about HIV/AIDS and the degree of tolerance toward HIV/AIDS related problems as well [6].

The opportunistic infections caused due to the natural course of the syndrome has led to a lot of complications and side effects affecting the quality of life of people living with HIV/AIDS (PLWHA). Physiotherapists do not play an active crucial role in the direct treatment of HIV/AIDS patients but provide an extremely important supportive treatment so as to improve the quality of life of PLWHA. Physiotherapists are reluctant towards treating PLWHA because of the prevalence of fear of contagion and the social stigma associated with the disease. An appropriate knowledge and attitude of physiotherapists towards HIV/AIDS patients can motivate the students in providing treatment and supportive care to such patients. The educational curriculum has only utilized the stereotypical lectures in teaching about HIV/AIDS. Street play method is an off-center teaching method of improving knowledge and attitude on HIV/AIDS. So this study thought of implementing the street play method as a mode of teaching to improve knowledge and attitude of physiotherapy students.

Aims

To improve the knowledge of and attitude towards HIV/ AIDS of undergraduate physiotherapy students through street play method.

Objectives

- To determine the prevailing knowledge of HIV/ AIDS among undergraduate physiotherapy students.
- To evaluate the attitude of undergraduate physiotherapy students towards HIV/ AIDS patients.
- To implement an innovative street play method in improving the knowledge and attitude of undergraduate physiotherapy students towards HIV/ AIDS.
- To evaluate the improvement in the knowledge and positive attitude post street play among undergraduate physiotherapy students.

Methodology

The study was a community based cross- sectional study carried out with 300 undergraduate physiotherapy students. Sampling method used for the study was a purposeful sampling technique. The study was carried over a duration of 3 months in Karad.

Inclusion Criteria

- First to final year physiotherapy students (undergraduates)
- Age group: 17-22 years.
- Students willing to participate
- Informed consent received from the patient
- Both male and female students.

Exclusion Criteria

- Physiotherapy interns
- Post-graduation students
- Repeaters

- Partially filled questionnaires.
- Students absent on the day of the study.

Outcome Measures

- The prevalent knowledge of physiotherapy undergraduates towards HIV/AIDS.
- The attitude of physiotherapy students towards HIV/AIDS patients.

Outcome Tools

- International AIDS questionnaire- English version (IAQ-EV.)
- AIDS attitude scale.

Procedure

The effects of an educational intervention using a street play program on physiotherapy undergraduate student's knowledge and attitude towards people living with HIV/AIDS (2000) were determined using a one-group pre-test and post-test. The recruitment of the participating students is done on the basis of the inclusion criteria mentioned above. The undergraduate students were given an informed consent form prior to conducting the pre-test.

Demographic data of each student was obtained which included basic personal information. The students who submitted a completely filled consent form and the demographic data sheet and were further willing to participate were included in the study. The study was conducted on a regular college day and the absent students were eliminated from the study. The participating undergraduate students were given the international AIDS questionnaire-English version (IAQ-EV) and the aids attitude scale as a pre-test assessment.

Pre-test responses of 300 undergraduate physiotherapy students were recorded on the first day of the study. Evaluation of the scores in the pre-test forms was done over a few days. The International AIDS questionnaire- English version (IAQ-EV) and the AIDS attitude scale were applied with a 5 point likert type scale, which includes strongly disagree (1), disagree (2), don't know (3), agree (4), and strongly agree (5). The lesser the score on the likert type scale, the better was the knowledge of the students and indicating a more positive attitude towards the PLWHA.

Once the scores on pre-test forms were evaluated, percentages were removed and physiotherapy undergraduates scoring more than 90 percentage were considered having adequate knowledge and depicted a more positive attitude towards the PLWHA, hence they were excluded from the second phase of the study which is the educational intervention to improve the knowledge on HIV/AIDS. Hence the physiotherapy undergraduates scoring less than 90% on both International AIDS questionnaire-English version (IAQ-EV) and AIDS attitude scale requires a further educational intervention.

The attempt to make an educational intervention in the mode of street play was done to engage the students completely into the program. The street play included a ten situations displaying the situation about intravenous drug abusers, a pregnant women who is HIV positive being abused by in laws due to lack of knowledge on intra-placental transmission from mother to fetus, a case scenario depicting how a physiotherapist should ideally receive and treat a patient having an HIV positive status, an anganwadi worker spreading awareness about safe sexual practices and a doctor treating a sex worker without any discrimination due to the economic status and not having a stigma due to the HIV positive status and many such situations.

After the street play an informative session on the human immunodeficiency virus/ acquired immune deficiency syndrome was held by qualified doctors and all the undergraduate physiotherapy students who were further included in the study were given the liberty to ask and clear all the doubts or stigmas related to the topic being discussed. Immediately post the street play and informative session was held the participants were given the international AIDS questionnaire-English version (IAQ-EV) and the aids attitude scale as a post-test assessment.

The evaluation of the post test scores were done over the few days and the results were produced. The results produced by difference between the pre-test and the post-test showed the improvement in the knowledge and attitude of physiotherapy students towards HIV/AIDS post street play. The

statistical analysis was done using the paired t test. The lesser the scores, the better was the knowledge of the participating physiotherapy students and vice-versa.

Results

A total of (N=300) physiotherapy students aged between 17-22 years (mean=19.5 years) among which most of the participants were females completed the pre-test questionnaire. The analysis of the data revealed that 3rd year and 4th year students had an good to excellent knowledge (International AIDS Questionnaire-English version score<36) and (AIDS attitude scale score<30). The students who had lower scores in the pre-test showed significant improvement in the post-test scores by 50-60% ($p<0.001$).

Statistical analysis of International AIDS questionnaire- English version

YEAR	IAQ-EV PRE TEST (MEAN)	IAQ-EV PRE TEST (SD)	IAQ-EV POST TEST (MEAN)	IAQ-EV POST TEST (SD)	p VALUE	t VALUE
FIRST YEAR BPT	71.907	5.609	21.120	2.604	<0.0001	75.182
SECOND YEAR BPT	79.613	7.073	24.440	3.554	<0.0001	59.422
THIRD YEAR BPT	21.8	3.188	-	-	<0.0001	59.223
FINAL YEAR BPT	21.347	2.339	-	-	<0.0001	79.023

Statistical analysis of AIDS attitude scale

YEAR	AAS PRE TEST (MEAN)	AAS POST TEST (SD)	AAS POST TEST (MEAN)	AAS POST TEST (SD)	p VALUE	t VALUE
FIRST YEAR BPT	81.693	5.916	25.520	2.882	<0.0001	75.865
SECOND YEAR BPT	84.373	11.032	26.827	3.815	<,0.0001	40.418
THIRD YEAR BPT	25.200	3.357	-	-	<0.0001	59.223
FINAL YEAR BPT	25.40	4.524	-	-	<0.0001	79.023

Discussion

Education about AIDS which included knowledge based information and addressed attitudinal issues, had a positive impact on subjects knowledge on AIDS and their attitude towards PLWHA. Neriman Akansel and others in their study concluded that a two hour power point presentation as education by an AIDS researcher led to improvement in the knowledge of undergraduate nurses but in the post test they still possess negative attitude and reluctance towards providing care to

AIDS patients [15]. Brissette and others in their study found no distinct difference in the level of AIDS knowledge respective to the level of physiotherapy workplace setting or means of education [16]. Sweesy and others mentioned no significant difference in the level of AIDS knowledge compared to years of physiotherapy practice or number of patients with AIDS treated by them [17]. A few studies have shown that physiotherapists, like other health care professionals, have inconsistent knowledge about AIDS and negative attitudes towards PLWHA. There is also a major lack in research articles that indicate the knowledge and attitude of physiotherapy undergraduates towards PLWHA followed by any means of educational intervention. Other authors have recognized the requirement for physical therapy in the team approach to the treatment of PLWHA.

The study carried out by Uwakwe [18] of a systemized HIV/AIDS education for student nurses concluded increased willingness of the participating nurses subsequently to work with and treat HIV/AIDS patients when compared to the pre-test results. Also the study has laid reliance to the fact that the systematized psycho-educational intervention holds promise for the improvement of HIV/AIDS related knowledge and attitudes amongst student nurses [18]. Although considerable insufficient of knowledge and predominantly negative attitudes exist among health care workers required to treat PLWHA, there is proof that educational intervention gains quiet an improvement in both knowledge of AIDS and attitudes toward PLWHA as well as in the willingness to treat PLWHA. A huge number of nurses, technicians, licensed practical nurses and aides, etc from various hospitals were surveyed, prior and post institutional training programs. A marked reduction in stress and anxiety levels, perceived risks associated with providing care and treatment to HIV/AIDS patients and a negative attitude towards PLWHA was considerably improved post the in-service training programs [19]. A study found a significant improvement in the knowledge, attitude and willingness of physical therapy students towards treating people living with HIV/AIDS (PLWHA) post an AIDS educational program, which is similar to this research as well where the educational intervention was in the form of a street play [20].

With low levels of knowledge and poor attitudes, physical therapists and physical therapy students may be imperfectly prepared and at times unwilling to provide treatment care to PLWHA. Thus, establishing the zone in which physical therapists indicate a low level of knowledge and feel uncomfortable towards PLWHA and the effect of educational interventions is an essential step in providing necessary physical therapy treatments to PLWHA. Previous studies using the conventional educational intervention has shown improvement in the knowledge and attitudes, but the innovative street play method has gained much more interest of the undergraduates and had an extreme impact on the attitude towards PLWHA. Each academic year students have been isolated from each other so as to provide a better and precise preview of the prevalent knowledge and attitude and hence helping in producing specific statistical analysis in the results. The PLWHA will benefit from this study as the future practicing physiotherapists will be possessing a better and precise knowledge and an appropriate attitude so as to respect the principles of bioethics and lead to a better ethical practice. The study is limited to the undergraduate students at one institution but should be inclusive of the interns and postgraduate students as they are in immediate contact with patients and should have an excellent knowledge as well as positive attitude. A true determination of how students will treat patients with AIDS cannot be made because of inability to measure clinical behaviour. Based on the findings of the study follow up research is required. Further study of the postgraduates and interns, measurement of actual practice behaviours, and comparisons of different educational interventions are needed.

Conclusion

Enhancement of knowledge and attitudes towards HIV/AIDS patients is best achieved in situations where the information, education and communication intervention is conceptualized, designed and implemented in a participatory fashion for the optimum professional experience of the students.

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