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The ALS-IEC Theory and Its Effect on Persons Living with Human Immunodeficiency Virus

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The visible problems among persons living with human immunodeficiency virus are insufficiency of HIV information about the impact it will bring into their lives and non-compliance to treatment due to fear of disclosure. The need to enhance information about the human immunodeficiency virus (HIV) through extensive health teaching and exemplary education modeling may help persons living with HIV live with dignity and hope as children of God. The purpose of the study is to discover what substantive theory can be used to unearth variables such as active involvement in the society, life change advocacy, life promotion and dignity, one finds oneself, sensitivity to one's knowledge needs, and accountability and commitment to be safe which led to the development of "all loving support-information, education, and counselling theory. A mixed method embedded experimental design was used in testing the theory through a double-blind approach that quantified the grounded explored experiences of the participants. The qualitative participants were 20 in focus group

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discussion and the quantitative participants were 30 college students living with HIV, 18-24 years old, male, Christian, and currently enrolled in a college or university in the Davao region excluding those who are sick and admitted to the hospital. Pretest findings revealed that the participants were moderately informed about facts on HIV and moderately followed the course of treatment but after a series of tests (post-test after two weeks, after one month, and after two months), reported that they were totally informed about the facts on HIV and will strictly adhere to the therapy. The pretest and post-test scores on the level of awareness and medical compliance showed significant differences after a series of tests. Thus, the application of ALS-IEC theory is effective among persons living with HIV in assessing HIV awareness and drug adherence encompassing bio-psycho-sexual-social-cultural-spiritual domains. Continued use of the personalized health assessment will also offer a learning opportunity (information) through reading (education) and nurse-delivered counselling as extended care after HIV screening counseling will address the immediate needs of clients.

Keywords: All loving support; information; education; counseling; persons living with human immunodeficiency virus.

1. INTRODUCTION

The human immunodeficiency virus (HIV) or acquired immunodeficiency syndrome (AIDS) is a worldwide health issue. Around 43.8 million people living with human immunodeficiency virus (PLHIV) from 2017 to 2021, 5.1 million people are not aware that they have the virus, and not all received anti-retroviral treatment (ART) [1]. The Philippines is one of the Asian countries that showed an increase in HIV cases among men [2]. HIV attacks the immune system by glycoprotein replication (CD4) in which an individual is prone to acquire opportunistic infections and may experience behavioral disturbances [3]. However, the Reproductive Health and Wellness Center (RHWC) in Davao City, Philippines; emphasized that an increase in PLHIV is more on risky sexual behaviors and urbanization.

Hence, there are varying levels of understanding about the facts of HIV due to ignorance and myths. Generally, most PLHIV felt helpless, sad, and anxious once they knew that they were infected with the virus, even if others had shown support for their health condition. This is a problem to which nurses will be of help through clear information, education, and counseling (IEC) about HIV. Significantly, the researcher presents this as the central part of the theory being carried out in the nursing practice. To this end, a survey was conducted among twenty males positive for HIV, who expressed that support and self-awareness are vital in life goals. Thus, nurses have a greater opportunity to assess and hear the sentiments and communicate therapeutically.

The visible problems among PLHIV were insufficiency of HIV information about its impact on their lives and non-compliance with treatment due to fear of disclosure. Hence, a spiritual needs assessment is also significant in the information process. Furthermore, the theory formulated from the name initials of the researcher “All-Loving Support (ALS) - Information, Education, And Counseling” theory is built on the premise that information, education, and counseling could be provided by the nurse. It has measures using the components of ALS-IEC after thorough information was given. Education will be acquired through reading some facts about the disease and its harmful effects on the body and mind of the person.

Thus, counseling will enhance life skills and grab learning opportunities that may slowly lead to appreciating the gift of life. This is an opportunity to build a trusting atmosphere between the health care provider and recipients of care and learning opportunities that offer the greatest leverage in extending HIV care. Hence, the visible problems among PLHIV are insufficiency of HIV information about the impact it will bring into their lives and non-compliance to treatment due to fear of disclosure. So, there is a need to enhance HIV information through extensive health teaching and exemplary education modeling that may lead them to live with dignity and hope as children of God.

The purpose of the study is to discover what substantive theory can be used to unearth variables such as active involvement in the society, life change advocacy, life promotion and dignity, one finds oneself, sensitivity to one’s knowledge needs, and accountability and commitment to be safe which led to the development of “all loving support-information,

education, and counselling theory; and aims to determine the effects of ALS-IEC theory among PLHIV through a pre-test-post-test approach and develop a specialized program to extend pre and post-HIV screening test counseling.

2. METHODS

2.1 Design

Mixed method embedded experimental design was used in testing the theory through focus group discussion utilizing a double-blind approach then quantified the grounded explored experiences of the participants through a pretest-post-test one group approach.

2.2 Research Locale

The study was conducted in the first district of Davao City region XI, Philippines. It is one of the local health centers where PLHIV are followed up for medical check-up, medication, series of laboratory tests, and counseling. However, the participants are from 18 schools or colleges in Davao City.

2.3 Sampling Technique

There were 50 college students (regular/irregular) living with HIV who are 18-24 years old, male, Christian, and currently enrolled in a college or university in Davao region, Philippines excluding those who are sick and admitted to the hospital. There were 20 participants for the qualitative study selected through snowball sampling technique and 30 participants for the quantitative study selected through a multistage sampling technique. The participants were not obliged to attend instead of a freely given appearance [4] during the data collection process.

Phase 1 - Qualitative:

Tool Development:

In developing the tool, the ABC Model of Albert Ellis guided the researcher to analyze a person's behavior who developed irrational beliefs by following the ABC scheme: (A) Activating event - Records the situation that ultimately leads to some type of high emotional response or negative, dysfunctional thinking while (B) Beliefs - writing down the negative thoughts that occurred (belief) and (C) Consequence - the negative thoughts that bridge between the situation and the distressing feelings. The model described emotions or negative thoughts that the client thinks are caused by (A), and this could be anger, sorrow, anxiety, etc.

Ellis believed that it is not the activating event that causes negative emotional and behavioral consequences, but rather a person interpreted these events unrealistically due to his belief system [5]. However, the researcher also utilized different concepts from the reviewed literature in developing the variables and used the model of Ellis as a guide in organizing the grounded tool of the proposed module by redefining ABC to IEC (Information, Education, Counseling). Hence, this will break the gap between misconceptions and lack of knowledge about HIV, drug adherence, and personal issues.

The survey tool known as the personal health assessment tool was finalize based on the 6 domains (social-psycho-sexual-bio-cultural-spiritual). Thus, the personal health assessment tool or the grounded tool will assess the different domains. The six (6) variables referred to Active involvement in the society (A1-social), Life change advocacy (L1-psycho-sexual-social), Life promotion and dignity (L2-socio-cultural), One finds oneself (O-psychological), Sensitivity to One's knowledge needs (S-bio-psycho-sexual), and Accountability and commitment to be safe (A2-spiritual). The 6 domains used the acronym ALLOSA which signifies the maiden name of the principal author.

The 6 domains were based on the reviewed related literature. The formulated set of questions tackles about the experiences of PLHIV in the community as HIV advocate, course of treatment, being positive with HIV; importance of love, acceptance, respect; human rights; discrimination; decision in life ways, coping; and knowledge on antiretrovirals. Then, it was validated by academic experts and HIV experts and pretested to 10 participants to check if the participant understands the questions. This is done to know if they have some clarifications. Pre-testing of the tool is needed as the direct evidence for the validity of each item of the questionnaire [6].

Research procedure:

In phase 1, the study used a grounded tool developed from the theory building and grounding stages. It uses a set of procedures to develop an inductively derived grounded theory

about a phenomenon. The built theory is grounded from the researcher's philosophy in life. The flashback of experiences and observations across a diversity of cultures made the researcher believed that God is full of mercy and compassion and a source of forgiveness. As a nurse, through the encountered experiences patients diagnosed with HIV or AIDS and wanted to know their thoughts and feelings of being positive with HIV.

Literature and related studies were reviewed and found out that PLHIV really needs holistic care. The researcher used her maiden initials (ALLOSA) in formulating the six (6) variables. Each variable is defined based on the reviewed concepts encompassing bio-psycho-socio-spiritual behavior. Then, the initial research process began by making the semi-structured questions for focus group discussion.

The questionnaire was validated by a priest, HIV nurse counselor, HIV physician, HIV social worker, and a guidance counselor after approval of the City Health Office and Ethics Committee of Reproductive Health and Wellness Center (RHWC) and San Pedro College. The person of reference (HIV nurse counselor) was the one who chose and helped the researcher in the orientation process. The participants signed and agreed to the scheduled date of focus group discussion (FGD) with emphasis on maintaining privacy and anonymity.

Moreover, the participants were all present during the audio-recorded conversation with the presence of the HIV counselor and documenter. The participants granted the audio-recording if no names will be mentioned, and no picture taking to maintain a safe and respectful group environment and prevent emotional breakdown [7].

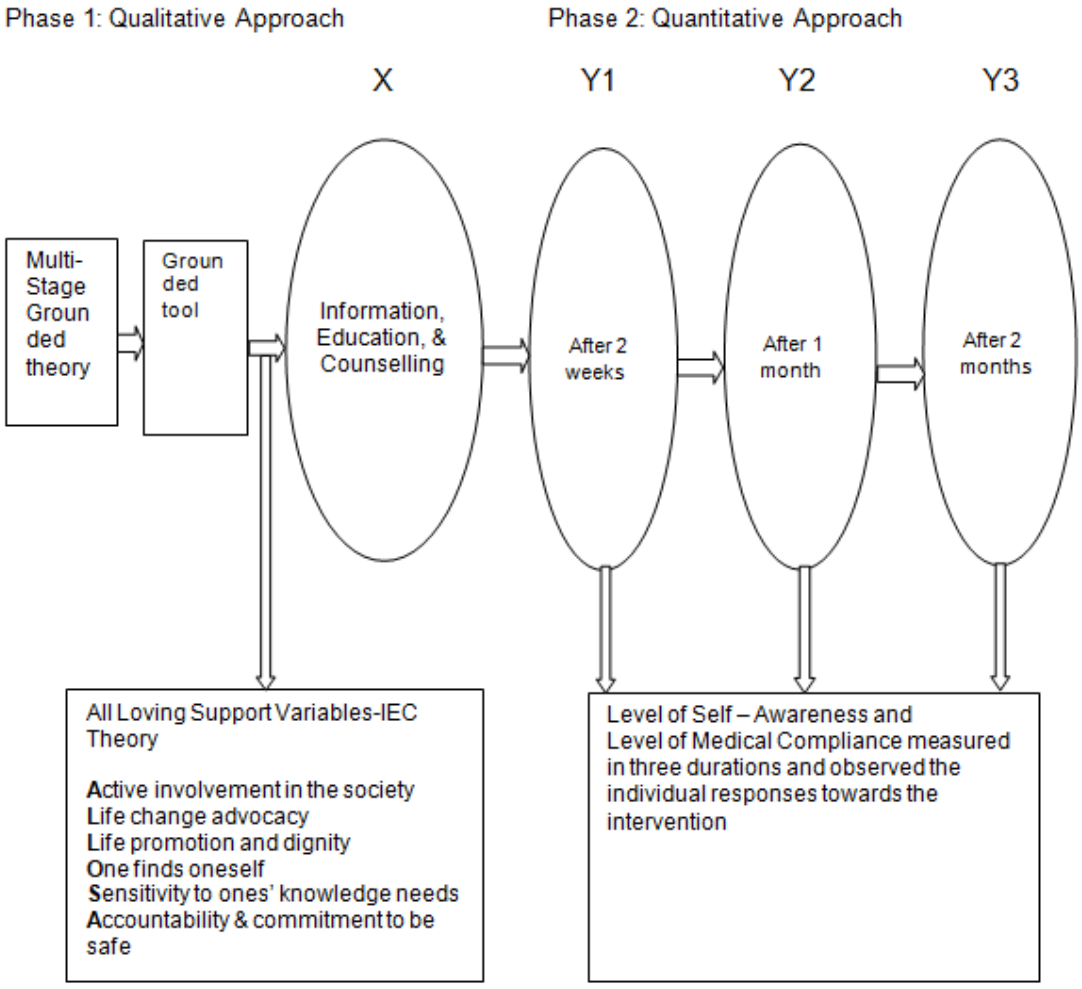

Fig. 1. Conceptual model

During the interview, the participants answered the questions for forty minutes but not more than ninety minutes during FGD. All answers were validated with the participants, but the audio-recorded conversation was deleted after transcription as requested from the president of the PLHIV organization to cover privacy and confidentiality (refer Annex C). The law stipulated the emphasis on human rights vis-a-vis public health and safety among PLHIV. All printed documents were kept in the RHWC to keep the data safe.

Data analysis:

The results were transcribed, translated, interpreted, and analyzed through theoretical sampling method. The data collected followed the process of coding such as open coding, axial coding, and selective coding. The generated data will discover categories and each element to explain interrelationships between constructs. Theoretical sampling in grounded theory approach is based on analytic induction. This is always used to participants with additional diversity of attributes within the same group [8]. The defined statements or emerged themes were coded (open coding), relationships among the open codes were made to see the connections among the codes (axial coding). Then, the core variable included all the data was figured out and reread the transcripts, and selectively coded any data that relates to the identified core variable. Open coding, axial coding, and selective coding or selection of statements led to the emergence of conceptual or theoretical structure [9] (refer Annex A).

The series of open and axial coding techniques finally arrived in selective coding and built the theory. Hence, the researcher postulated that theory X would lead to theory Y, which entails forgiveness and preparedness before the end of life. Then, the constructs determined that theory X is the support system and theory Y is self-awareness. After building the blocks of the theoretical concepts, a theory was developed behind the events stating that support will boost self-awareness and lead to self-help. This means that this is the result of the researcher's "All Loving Support" in support of PLHIV and became ALS signifying Anna Liza Saus' effort in formulating the theory. Thus, the understudy variables provided the explanation of the built theory [10].

3. QUALITATIVE RESULTS

Qualitative results revealed 13 emergent themes: (1) information dissemination, (2) understand prohibitions, (3) solitude, (4) dignity, (5) survival, (6) shame, (7) medical compliance, (8) health promotion, (9) carelessness, (10) self-expression, (11) reaching out, (12) perseverance, and (13) endeavor. A series of open and axial coding techniques finally arrived in selective coding and built the theory.

Chart 1. List of themes and its associate codes

Themes	Open Codes	Axial Codes	Selective Codes
1. information dissemination (ACTIVE INVOLVEMENT IN SOCIETY)	inform, awareness, support	Government agencies encouraged PLHIV to participate as HIV advocate.	Support from the government
2. understand prohibitions (LIFE CHANGE ADVOCACY)	instruction, avoidance, protection	R.A. 8504 empowered people to prevent further HIV transmission.	Support from the government
3. solitude (LIFE PROMOTION AND DIGNITY)	disappointed, stowaway, self-isolation	Every human being has an innate right to be valued, respected, and receive ethical treatment.	Support from the people
4. dignity (LIFE PROMOTION AND DIGNITY)	acceptance, stow away, self-isolation, feeling of indifferent	People are encouraged to show equality among people from all walks of life.	Support from the people
5. survival (ONE	convince, denial,	Self-awareness	Self-awareness

Themes	Open Codes	Axial Codes	Selective Codes
FINDS ONESELF)	weak, readiness	promotes acceptance.	
6. shame (ONE FINDS ONESELF)	faked emotions, silence	Increased self-esteem reflects emotional evaluation of his own worth.	Self-awareness
7. medical compliance (SENSITIVITY TO ONE'S KNOWLEDGE NEEDS)	preventive measures, medical follow-up, vulnerability,	Recognition of negativity entails acceptance of reality and resolution.	Self-awareness
8. health promotion (SENSITIVITY TO ONE'S KNOWLEDGE NEEDS)	prevention, protection, safe sex	Conscious knowledge of one's own character entails self-worth.	Self-awareness
9. carelessness (SENSITIVITY TO ONE'S KNOWLEDGE NEEDS)	difficulty, privacy, Antiretrovirals	Familiarization of new daily routine may help an individual develop self-discipline.	Self-awareness
10. self-expression (SENSITIVITY TO ONE'S KNOWLEDGE NEEDS)	difficulty, abandon, convince	Ventilation of feelings may boosts a better understanding of oneself.	Self-awareness
11. reaching out (SENSITIVITY TO ONE'S KNOWLEDGE NEEDS)	life coaching, caring, understanding, selective trust	Counselling brings forth self-expression.	Self-awareness
12. perseverance (ACCOUNTABILITY AND COMMITMENT TO BE SAFE)	self - threatened faith, hopelessness, counseling	Conscious knowledge and understanding of own character, feelings, motives, and desires will entail inner strength.	Self-awareness
13. endeavor (ACCOUNTABILITY AND COMMITMENT TO BE SAFE)	advocate, overseas worker, health care provider	Self - determination helps an individual achieve life goals.	Self-awareness

Hence, the researcher postulated that theory X would lead to theory Y, which entails forgiveness and preparedness before the end of life. Then, the constructs determined that theory X is the support system and theory Y is self-awareness. After building the blocks of the theoretical concepts, a theory was developed behind the events stating that support will boost self-awareness and lead to self-help. This means that this is the result of the researcher's "All Loving Support" in support of PLHIV and became ALS signifying Anna Liza Saus' effort in formulating the theory. Thus, the understudy variables provided the explanation of the built theory [11].

Finally, the researcher developed the grounded tool or survey questionnaire as part of an information inquiry about the facts of HIV. The second part is the answers to the questionnaire as an educational strategy, and awareness awakening about being one of PLHIV is the last part of the module. It deals with counseling or communication, with listed support groups. So as if they reach out to the organization, it indicates self-help.

4. QUALITATIVE DISCUSSION

Based on the results of the study, the themes or defined statement that emerged are information dissemination, understanding prohibition, solitude, dignity, survival, shame, separation, health promotion, carelessness, self-expression, reaching out, perseverance, and endeavor led to the development of the "All Loving Support-Information, Education, and Counselling" theory that can be used as a basis for positive prevention programs.

In previous studies, the support system was not fully determined when it comes to key health outcomes [12]. However, the study determined the specific support system needed by PLHIV which is from the government, people, and family. Beyond testing, the government program should improve resources in detecting HIV positives and continue giving direct assistance and referral to any nearby HIV center to make sure clients with reactive results should go to the main HIV center [13]. The Philippines lawmakers introduced the approved HIV and AIDS Policy Act of 2018 (Republic Act 11166 former R.A. 8504) which include the protection of PLHIV rights [14] because the dignity and equal rights of these people are at stake. Even though the law prevails there are still underutilized health laws in the fields of health sciences [15]. Support from the people often improves disclosure with potential prevention benefits [16]. Helping them by talking, actively listening, imparting more knowledge about HIV, encouraging drug adherence, asking appropriately, and keeping the talk confidential will build their self-esteem, and trust will be achieved between nurse and client [17]. Family support significantly contributes to a better quality of life among PLHIV [18]. With the support system, self-awareness may develop through the efforts of advocates and peer counselors' encouragement as well as spiritual counseling. PLHIVs really need regular counseling because some of the young PLHIVs mostly choose self-isolation because of feelings of rejection from their families. These people need help to regain self-worth aside from fighting the ill effects of the virus to engage in ART [19].

Phase 2-Quantitative:

Tool Development:

Finally, the researcher developed the grounded tool or survey questionnaire as part of an information inquiry about the facts of HIV. The second part is the answers to the questionnaire as an educational strategy, and awareness awakening about being one of PLHIV is the last part of the module. It deals with counseling or communication, with listed support groups. So as if they reach out to the organization, it indicates self-help. Further, the ALS-IEC theory that emerged in the first phase was experimented in the second phase of the study.

Consequently, IEC stands for information about the facts of HIV, education about HIV, and counseling on health concerns. Thus, the 6 variables became the content of the personalized health assessment tool (grounded tool) that will assess the combined domains of social-psycho-sexual-bio-cultural-spiritual. The six (6) variables are Active involvement in the society (A1-social), Life change advocacy (L1-psycho-sexual-social), Life promotion and dignity (L2-socio-cultural), One finds oneself (O-psychological), Sensitivity to One's knowledge needs (S-bio-psycho-sexual), and Accountability and commitment to be safe (A2-spiritual) were measured in the second phase. The validation process of the survey tool was done in the same manner in doing the qualitative phase. The level of awareness tool is for the primary participants and the level of medical compliance tool is for the secondary participant. Both survey tool utilized the 6 variables encompassing different domains (refer to Annex B).

Research procedure:

In phase 2, the process was conducting the qualitative phase is similar with the quantitative phase when it comes to inclusion and exclusion criteria and sampling technique. In the first stage of phase two (2), the person-in-charge of the records of PLHIV in had summed up all registered PLHIV in RHWC, Region XI, with a total of 234 in October 2018. In the second stage, all males were extracted from the list with a total of 110; in the third stage, all males aged 18-24; in the fourth stage was the identification of schools where they are studying; in the fifth stage was the selection of the participants in fifteen (18) schools or colleges; and in the sixth stage was the selection of two (2) to three (3) participants from each school with a total of 30 participants.

The secondary participant (HIV counselor) who have worked for more than two (2) years oriented the participants and explained some of the benefits and purpose of the study. The intervention was done in one of the HIV hubs centers in region XI. This is the reason why most of them accepted the challenge as part of the study. All participants did not know who the researcher is and did not know each other but aware that they are under study. Double-blind studies are particularly useful for preventing bias due to demand characteristics or effect [20] and is considered the "gold standard" in intervention studies [21]. This is a chain referral process that allows the researcher to reach populations who are difficult to sample when using other sampling

methods [22]. However, the total number of persons positive with HIV was not divulged because it requires a proper review of the documented list before reporting to DOH. Moreover, all of them had an equal chance of participating in the study. Thirty participants were purposively selected from 18 schools or colleges except for those refused to participate in the study. The HIV nurse counselor assisted in explaining how to answer the personal profile forms using the file number as the code name and coded school name. This is done to maintain the confidentiality of information collected from research participants that only the research team can identify the responses and must maintain privacy. Confidentiality, privacy, and anonymity were maintained. Participants' information from the collected data were kept in the RHWC office. Names and school are numbered to keep the participants' identity; because this research is considered a sensitive issue that needs rigid enforcement of ethical procedures [23]. Then, the participants' response was measured from pre-test to 3 post-tests (after two (2) weeks, one (1) month, and two (2) months).

This mixed method is almost similar in the within-subjects design where the data collection during pre-test of the personalized health assessment tool was analyzed and followed by series of post-test. Then, analysis and comparison of the pre-test and post-test results were carried out. Everyone has more than one score in which the effect occurs within each participant. However, the embedded experimental design is really the foundation of the theoretical framework and not on its method, since the researcher needs to quantify the qualitative data by transforming qualitative codes into ratings [24].

Data analysis:

The study aims to determine the effects of ALS-IEC theory on persons living with HIV.

Specifically, it sought to answer the pre-test levels of awareness and medical compliance in terms of active involvement in society, life change advocacy, life promotion and dignity, one finds oneself, sensitivity to knowledge' needs, and accountability and commitment to be safe; post-test levels of awareness and medical compliance after two (2) weeks, after one (1) month, and after two (2) months; the significant difference of both level of self-awareness and medical compliance after two (2) weeks, after one (1) month, and after two (2) months; and the significant difference between the pre-test and post-test scores of both level of self-awareness and level of medical compliance.

The checklist survey form was developed after the grounding stage to measure the level of self-awareness and medical compliance of PLHIV utilizing four (4) point Likert's scale, and the equivalent measurement is reflected below.

Level of Awareness Level of Medical Compliance				
Score	**Scale**	**Description**	**Interpretation**	
4	3.50-4.00	Strongly agree	fully aware	fully compliant
3	2.50-3.49	Agree	partially aware	partially compliant
2	1.50-2.49	Disagree	partially unaware partially non-compliant	
1	0.50-1.49	Strongly Disagree	unaware	non-compliant

SPSS software was used in analyzing the statistical results to get the mean ratings in determining the pre-test and post-test scores of the level of self-awareness and the level of medical compliance through a series of intervention after 2 weeks, after 1 month, and after 2 months. Then, its' significant difference of the three durations was analyzed through ANOVA while the pre-test and post-tests scores of both the level of self-awareness and level of medical compliance was statistically treated with paired t-test.

5. QUANTITATIVE RESULTS

Pretest findings revealed that the participants were moderately informed about facts on HIV and moderately followed the course of treatment but after a series of tests (post-test after two weeks, after one month, and after two months); results showed that they were totally informed about the facts on HIV and will strictly adhere to the therapy. Refer to the series of Tables 3, 4, 5, 6, 7 and 8.

Table 1. Pre-test Level of Awareness among PLHIV

Indicators of Awareness	Mean	SD	Interpretation
Active Involvement in Society	3.71	0.63	Fully Aware
Life Change Advocacy	3.42	0.36	Partially Aware
Life Promotion and Dignity	3.17	0.37	Partially Aware
One Finds Oneself	3.36	0.39	Partially Aware
Sensitivity to One's Knowledge Needs	3.27	0.54	Partially Aware
Accountability and Commitment to be Safe	3.42	0.30	Partially Aware
Overall Mean	3.39	0.32	Partially Aware

Table 2. Pre-test Level of Medical Compliance among PLHIV

Indicators of Awareness	Mean	SD	Interpretation
Active Involvement in Society	2.88	0.93	Partially Compliant
Life Change Advocacy	3.9	0.31	Fully Compliant
Life Promotion and Dignity	2.93	0.69	Partially Compliant
One Finds Oneself	3.63	0.43	Fully Compliant
Sensitivity to One's Knowledge Needs	3.77	0.28	Fully Compliant
Accountability and Commitment to be Safe	3.53	0.51	Fully Compliant
Overall Mean	3.44	0.38	Partially Compliant

Table 3. Post-test level of awareness among PLHIV after 2 weeks, after 1 month, and after 2 months

	after 2 weeks			after 1 month			after 2 months		
Awareness	**Mean**	**SD**	**Interpret**	**Mean**	**SD**	**Interpret**	**Mean**	**SD**	**Interpret**
A1	3.58	0.19	FA	3.66	0.15	FA	3.91	0.1	FA
L1	3.52	0.28	FA	3.42	0.17	PA	3.55	0.06	FA
L2	3.33	0.36	PA	3.75	1.17	FA	3.52	0.16	FA
O	3.45	0.35	PA	3.53	0.16	FA	3.57	0.15	FA
S	3.53	0.32	FA	3.35	0.16	PA	3.41	0.2	PA
A2	3.76	0.28	FA	3.91	0.09	FA	3.82	0.16	FA
Overall mean:	3.53	0.2	FA	3.6	0.19	FA	3.63	0.03	FA

Legend: FA-Fully Aware
PA-Partially Aware

Table 4. Post-test level of medical compliance among PLHIV after 2 weeks, after 1 month, and after 2 months

	after 2 weeks			after 1 month			after 2 months		
Awareness	**Mean**	**SD**	**Interpret**	**Mean**	**SD**	**Interpret**	**Mean**	**SD**	**Interpret**
A1	2.72	0.72	PC	2.72	0.72	PC	2.72	0.72	PC
L1	3.87	0.35	FC	3.83	0.38	FC	3.87	0.35	FC
L2	3.50	0.82	FC	3.50	0.82	FC	3.50	0.82	FC
O	3.82	0.28	FC	3.82	0.28	FC	3.82	0.28	FC
S	3.82	0.23	FC	3.82	0.23	FC	3.82	0.23	FC
A2	3.87	0.35	FC	3.87	0.35	FC	3.87	0.35	FC
Overall mean:	3.60	0.25	FC	3.59	0.27	FC	3.60	0.25	FC

Legend: F.C. - Fully Compliant
P.C. - Partially Compliant

Table 5. Difference of the Level of Awareness among PLHIV after 2 weeks, after 1 month, and after 2 months of Intervention

Awareness	F value	p-value	Wilk's Lambda	p value	Pairwise	Interpret	Decision
A1	73.76	0.008	0.166	0.00*	2w,1m<2m	S	Reject Ho1
L1	0.331	0.569	0.639	0.002*	2w,>1m<2m	S	Reject Ho1
L2	8.074	0.008	0.734	0.013*	2w,<1m2m	S	Reject Ho1
O	2.87	0.133	0.909	0.264	2w,<1m2m	N.S.	Accept Ho1
S	4.587	0.041	0.75	0.018*	1w,2m<2m	S	Reject Ho1
A2	1.099	0.303	0.671	0.004*	2w,<1m2m	S	Reject Ho1

**Significant @p value <0.05*
Legend: 2w-after 2 weeks; 1m-after 1 month; and 2m-after 2 months
NS- Not Significant; S-Significant

Table 6. Difference of the Level of Medical Compliance among PLHIV after two (2) weeks, after one (1) month, and after two (2) months of Intervention

Awareness	F value	p value	Wilk's Lambda	p value	Pairwise	Interpret	Decision
A1	-	-	-	-	-	NS	Accept Ho2
L1	0.022	0.326	0.967	0.326	-	N.S.	Accept Ho2
L2	-	-	-	-	-	N.S.	Accept Ho2
O	-	-	-	-	-	N.S.	Accept Ho2
S	-	-	-	-	-	N.S.	Accept Ho2
A2	-	-	-	-	-	N.S.	Accept Ho2

**Significant @ p value <0.05*
Legend: NS- Not Significant

Table 7. Difference of Level of Awareness between Pre-test and Post-tests Scores

	Pretest		Post-test					
Awareness	Mean	SD	Mean	SD	T value	p-value	Interpret	Decision
A1	3.71	0.63	3.91	0.10	-7.164	0.00*	S	Reject Ho3
L1	3.42	0.36	3.55	0.06	2.043	0.05	NS	Accept Ho3
L2	3.17	0.37	3.52	0.16	-5.159	0.00*	S	Reject Ho3
O	3.36	0.39	3.57	0.15	2.545	0.017*	S	Reject Ho3
S	3.27	0.54	3.41	0.20	-1.414	0.168	NS	Accept Ho3
A2	3.63	0.34	3.82	0.16	2.998	0.006*	S	Reject Ho3
Overall Mean:	3.43	0.30	3.63	0.03	-3.829	0.001*	S	Reject Ho3

Table 8. Difference of Level of Medical Compliance between Pre-test and Post-tests Scores

	Pretest		Post-test					
Awareness	Mean	SD	Mean	SD	T value	p-value	Interpret	Decision
A1	2.88	0.93	2.72	0.72	0.372	0.712	NS	Accept Ho3
L1	3.9	0.31	3.87	0.35	0.841	0.407	NS	Accept Ho3
L2	2.93	0.69	3.5	0.82	3.084	0.004*	S	Reject Ho3
O	3.63	0.43	3.82	0.28	2.362	0.025*	S	Reject Ho3
S	3.77	0.28	3.82	0.23	-0.841	0.407	NS	Accept Ho3
A2	3.53	0.51	3.87	0.35	-2.763	0.01*	S	Reject Ho3
Overall Mean:	3.44	0.38	3.6	0.25	2.223	0.034*	S	Reject Ho3

6. QUANTITATIVE DISCUSSION

Consecutively, the qualitative survey questions were quantified using the 4-point Likert scale to test the ALS-IEC theory among college students living with HIV. It is a personalized health assessment tool for PLHIV encompassing psycho-social-sexual-bio-cultural-spiritual. The pre-test result showed that they are partially aware of the facts of HIV and partially compliant with the treatment regimen. Even when support groups and treatment are available and accessible, retention in care is frequently cited as a key issue in many countries. Students positive for HIV are vulnerable to being lost to follow-up because of different reasons. To mitigate these events, it is important to encourage a positive outlook in life through a support system from medical professionals, lawmakers, and the general population [25].

After two (2) weeks of intervention, A2 shows the highest level of awareness while L2 shows the lowest level of awareness; after one (1) month, A2 shows the highest level of awareness while S shows the lowest level of awareness; and after two (2) months, A1 shows the highest level of awareness while S shows the lowest level of awareness. Overall, the participants are fully aware of the facts of HIV after a series of tests. However, there is a significant difference in the level of awareness when it comes to the numeric value of each variable. This shows that behavior changes if being influenced by a stimulus where a person interacts with the environment; and that stimuli pool to make up a specific internal impact to reach the adaptation level. Hence, the healthcare provider should apply specific interventions after a clear assessment tool to reach the target goal of adopting a new daily routine as one of PLHIV [26].

Meanwhile, the medical compliance showed that after two (2) weeks of intervention, L1 and A2 shows the highest level of medical compliance and A1 has the lowest level of medical compliance; after one (1) month, A2 has the highest level of medical compliance while A1 has the lowest level of medical compliance; and after two (2) months, L1 and A2 have the highest level of medical compliance while A1 has the lowest level of medical compliance. Overall, the participants are fully compliant in following the course of treatment and show that the outcome of the intervention of the program has no significant difference although it decreased after one (1) month and slightly increased after two (2) months. There are factors that may affect experimentation. Environmental and social factors may change the situation. Some factors are visible, while others cannot be seen. In some situations, only the effects of these factor changes are evident. However, a person or the interactive role of these factors may also affect how they execute in time and space [27].

Generally, the entire result shows a significant difference between the pre-test and post-tests of interventions on the level of awareness among college students living with HIV after two (2) weeks, after one (1) month, and after two (2) months. A1 shows the greatest level of significance while S shows no significant numerical value on the level of medical compliance. Consistent monitoring will help them nurture their inner self or realize self-worth. This is the part of their lives that has a slow pace of moving on. They needed authentic support from loved ones and people from all walks of life. Safe-sex education should be provided or taught repeatedly in schools or colleges to realize the love of self, increase self-esteem, and reduce stigma [28].

Furthermore, the entire results of the level of medical compliance show a significant difference between the pre-test and post-tests of intervention among college students positive for HIV after two (2) weeks, after one (1) month, and after two (2) months. A2 shows the greatest level of significance while A1 has the lowest numerical value.

Most of them are encouraged to have regular medical and or psychological consultations along with counseling. Different motivational approaches were used by medical personnel through education about positive prevention. Consistent appearance in medical facilities signifies that an evidence-based psychosocial support program is effective. The existing program can be further enhanced by accommodating another technique in support of better psychological well-being leading to continuous access to medical facilities for drug adherence [29]. The personalized assessment tool may also help assess holistically to address a specific need. On this account, the intervention supports the global plan of action to curb HIV/AIDS. The personalized health assessment tool could be of help in monitoring the different aspects of concerns or issues of PLHIV.

7. CONCLUSION

Both qualitative and quantitative results showed significant impact in the formulation of a specialized program. The concept of the program is systematically arranged in the module entitled "The All Loving Support-Information Education and Counselling Module." This tool may aid the local government unit around the globe in addressing concerns among PLHIV regarding the bio-psycho-socio-spiritual aspects as part of their extended program on pre and post HIV screening test counselling. It is assumed that the personalized health assessment tool which is part of the module is effective among PLHIV. Hence, the study shows the general population that PLHIV needs support from the government, people, and family to nurture individual self-awareness.

ANNEX

Annex available in this link:
https://journalajarr.com/index.php/AJARR/libraryFiles/downloadPublic/4.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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