

## **Application of Theory of Planned Behavior: Intension of Health Care Providers to Initiate Clients for Provider Initiated Counseling and Testing. A Case Study of Gedeo Zone, South Ethiopia**

Authors

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### **ABSTRACT**

*Ethiopia is among the countries most affected by HIV epidemic prevalence. In spite of arrangements made to advance HIV testing and related services, evidences suggest that many opportunities to diagnose individuals at health facilities are still missed because of lack of clients' active seeking for HIV testing, refusal of testing offer and lack of active role of health care providers in initiating HIV testing. The objective of this study is to determine the behavioral intention of health care providers to initiate clients attending outpatient departments for PICT in GedioZone health facility. A facility based cross-sectional study design, supplemented with qualitative study was conducted on to identify Predictors of health care providers' intention among health care provider who were working in outpatient department in Gedio Zone. The theory of planned behavior was used as a conceptual framework for the study. The present research identifies that the Health care provider of Gedio Zone has a high intention to do provider initiated HIV testing and counseling service and there is need to concerned create facilitating conditions to health care provider to realize their high intention of doing provider initiated HIV testing and counseling service into real practice.*

**Keywords-** CDC, HCF, HCP, PICT, TPB, TRA, VCT.

## INTRODUCTION

The emergence of the HIV epidemic is one of the biggest public health challenges the world has ever seen in recent history. In the last three decades HIV has spread rapidly and affected all sectors of society. There are an estimated 34 million people living with HIV/AIDS and 2.7 million new infected with HIV globally. Nowadays, it becomes a major public health problem in sub-Saharan Africa. There were an estimated 22.9 million people living with HIV/AIDS in Sub-Saharan Africa in 2010.

In sub-Saharan Africa, Ethiopia is among the countries most affected by the HIV epidemic with an estimated prevalence of HIV infection in 2011 was 2.4%. There is a significant difference between urban (7.7%) and rural (0.9%) prevalence. HIV related death among adults was also estimated to be 28,000 in 2010 (1).

In order to reduce the epidemic and transmission of HIV/AIDS, many advances have been made in developing effective and affordable interventions that include safer sex education, HIV surveillance, access to condom, HIV treatment and HIV counseling and testing (HCT).

Evidence showed that prevalence of new infections was declined as well as the number of people who were tested for HIV and utilizing treatment have been increased day to day. For example, the number of people tested for HIV annually has increased from forty-thousand in 2005 to nearly ten million by 2011. While the above progress is a reason for hope and encouragement, the fight against HIV/AIDS is far from over. The problem is still huge as nearly 800,000 are living with HIV, more are orphaned, and the rate of new infections is declining but still

high, and possibly expanding to newer population groups and geographic areas. This calls for a more robust and targeted response while at the same time scaling-up existing interventions among high-risk population groups. Despite the importance of this step, most HIV-infected patients globally, and particularly in resource-poor settings including Ethiopia, are unaware of their HIV status and uptake of PICT is relatively limited.

There are studies that have been done on Predictors of refusal of provider initiated HIV testing among clients visiting adult outpatient departments in Ethiopia, but there are no study done on Intension and behaviours of health care providers to initiate clients attending outpatient departments for PICT vip1 desktop. Thus; the present research focuses on cross-sectional study, which aims at identifying predictors of behavioural intention of health care provider to initiate HIV testing and counselling among client attending adult OPD.

## RESEARCH METHODS

The study was conducted in Gedio Zone, which is located about 365 Kms to the south of Addis Ababa, the capital city of Ethiopia, and 85 Kms to Awassa the regional capital city of SNNPR. Gedeo zone has six woredas and two towns namely, Dilla and Yirgachefe. The study was conducted in the above area from the months of April 2012 to May 2012.

Cross-sectional descriptive facility based study design supplemented with qualitative methods was used to describe predictors of Intension of health care providers to initiate clients attending outpatient departments for PICT in Gedeo Zone health facility.

All health care providers who were working at OPD department in Gedeo Zone health facility during the study period were considered as a source Population for quantitative study. For qualitative study health care providers working on OPD as well as head of health facility were included in the study.

All sampled health care providers in Gedio Zone during the study period were used for quantitative study. For qualitative study purposively selected health care providers working at OPD department as well as head of health facility were included in the study.

Sample size for the quantitative part of the study was 347 health care providers who were working in Gedio Zone Health facility at OPD level during the study period were included. For the qualitative study part of the study using in-depth interview; 11 health care provider and 4 facility heads were included in the in-depth interview. Among in-depth interview participants 6 were males and 9 were females.

For quantitative part of the study the sampling procedure was consider all health care provider who were working at OPD department during the study period. While for the qualitative part of the study, convenient sampling technique was used to select health care provider for the in-depth interview by considering both the inclusion and exclusion criteria to assess of health care provider to initiate client for PICT.

Two separate data collection instruments were developed to collect quantitative and qualitative data. Structured questionnaire was originally developed in English and this was translated in to

Amharic language and then back translated into English by another person to ensure validity.

The questionnaires were pre-tested on similar setting and appropriate modifications were made to have the final version. This final version of the questionnaire will be used for data collection.

To reduce the problem of cross loading, if the differences of loadings of any item across factors were less than 0.10 than the items will be deleted. Next reliability testing was applied, to determine the degree to which measures are free from random errors.

Cronbach's  $\alpha$  reliability analysis was applied to identify how well the items grouped are positively correlated to one another. Cronbach's  $\alpha$  value of 0.70 and above is considered to be reliable. An  $\alpha$  value of 0.70 and above indicates items are homogenous and measuring the same construct.

In-depth interview was conducted by the investigator and semi structured questionnaire guide line was employed. These guide lines were given the core guiding points in each topic. At the beginning of the interview, participants were informed about the issues and use of data. During each in-depth interview; we were trying to follow the same flow of order of discussion until saturation of information occurs. The interview was tape recorded after obtaining informed consent from the participants and complement with written notes (i.e. field notes) by the interviewer.

Data were entered and cleaned by using Epi INFO vision 3.5.1. After cleaned by the Epi-INFO was transport to SPSS V-17 for analysis. Binary logistic regression was used for bivariate analysis and finally multiple logistic regressions were used.

Different proportions like descriptive variables were presented as mean or median and Categorical/ discrete variables were described as percentages.

The associations between independent variables and intention were analyzed by linear regression model test.

## RESULTS AND DISCUSSIONS

### Socio-Demographic Characteristics' of the Participants

From the below table-1 , it can be inferred that a total of 347 health care providers were participated

in the study, of which 144 (41.5%) male and 203 (58.5%) female, with the mean age of  $27.8 \pm 5.7$  years. Regarding educational status majority of 243 (70%) participants were diploma nurse whereas the rest 104(30%) were degree. Most of the health care providers profession were nurse 282 (75.1%) followed by 31 (8.2%) health officer and 18 (4.8%) medical doctor were participated in the study. Marital status of the respondent was 163 (47%) single followed by 182(52.4%) married.

**Table 1: Socio-Demographic Characteristics of Health Care Provider of Gedio Zone**

Socio –Demographic (n=347)	Frequency	(%)
<b>Age (Years)</b>		
18-25	142	40.9
26-35	168	48.4
≥36	37	10.7
<b>Total</b>	<b>347</b>	<b>100%</b>
<b>Sex</b>		
Male	144	41.5
Female	203	58.5
<b>Total</b>	<b>347</b>	<b>100%</b>
<b>Marital Status</b>		
Single	163	47.0
Married	182	52.4
Divorced	2	0.6
<b>Total</b>	<b>347</b>	<b>100%</b>
<b>Educational status</b>		
Diploma	163	70.0
Degree and above	182	30.0
<b>Total</b>	<b>347</b>	<b>100%</b>
<b>Profession</b>		
Nurse	282	81.3
Medical doctor	18	5.2
Health Officer	31	8.9
Midwifery	16	6.4
<b>Total</b>	<b>347</b>	<b>100%</b>

### Health care provider intention to initiate PICT service

Majority, 314 (90.4%) of the respondents expect health care provider have to do PITC service and considerable numbers of the study participants, 301(86.7%) wanted to do PITC service in the near future, 298 (85.9%) intended to do PITC service (table 2).

**Table 2: Health care provider intention to PICT in Gedio Zone 2012**

Items (Intention)	Agree	Disagree	Not sure
I expect all patient should initiate for PICT	314 (90.4%)	28 (8.2%)	5 (1.4%)
I want all patient should initiate for PICT	301(86.7%)	40(11.5%)	6 (1.7%)
I Intend all patient should initiate for PICT	298 (85.9%)	31 (10.4%)	18(5.1%)

**Health care provide on Behavioral Belief about PICT service and its evaluations**

The study showed that 305 (87.9%) of the respondents belief that he/she contribute something positive on public health when he/she initiate client for PICT. More than ninety percent, 319(91.9%), of the respondents believed that Initiating client for PICT help to know the distribution of HIV/AIDs in the population. More than half, 206 (59.4%) of the respondent belief that Initiating client for PICT use to start ART drug as early as possible.

**Table 3: Health care provider response to a statement assessing Behavioural Belief towards doing PITC service, Gedio Zone**

Item	Agree	Disagree	Not sure
I feel I contribute something on public health when I initiate client for PICT	305 (87.9)	15(4.3)	27(7.8)
Initiating client for PICT help to know the epidemiology of HIV/AIDs	319(91.9)	20(5.8)	8 (2.3)
Initiating client for PICT help to start ART drug as soon as possible	206 (59.4%)	46(13.3%)	95(27.4%)

**Health care provide on Subjective Norms about initiation of PICT service**

According to direct subjective norm, Majority, working area think I should initiate client for PICT 274(79.0%) of the participants agreed that people in while 21(6.1%) were feel in the contrary. Majority,

313(90.2%) of the respondents felt that It is expected from me to initiate client for PICT whereas 20(5.8%) do not agree with this statement.Likewise, 205(59.1%) of the respondents believed I feel like I am under social pressure to initiate client for PICT However, 117(33.7%) of the

respondent did not favor this statement. More than Half 231(66.6%) of the respondent belief that People who are important to me think that I should initiate client for PICT while 75(21.6%) do not agree with this statement.

**Table 4: Health care provider response to a statement assessing the subjective norm towards doing PITC service, Gedio Zone.**

Items	Agree	Disagree	Not sure
People in working area think I should initiate client for PICT.	274(79.0%)	21(6.0%)	52(15.0%)
It is expected from me to initiate client for PICT.	313(90.2%)	21(6.0%)	14 (4.0%)
I feel like I am under social pressure to initiate client for PICT.	205(59.1%)	117(33.7%)	25 (7.2%)
People who are important to me think that I should initiate client for PICT.	231(66.6%)	75(21.6%)	41(11.8%)

Likewise the salient measures of subjective norm were weighted in a similar way, Less than half, 154 (44.4%) of the health care provider agreed presence of HIV policy influence me to initiate client for PICT. Similarly, 89 (25.6%) of the respondents

agreed that there is influence of boss to initiate client for PICT. Few 104 (30%) of the respondent agreed that there is influence of colloquies to initiate client for PICT.

**Table 5: Health care provider response to a statement assessing the subjective norm towards PITC service, Gedio Zone**

Items	Agree	Disagree	Not sure
Presence of HIV policy influences meto initiate client for PICT.	154(44.4%)	153(44.1%)	40(11.5%)
I feel the influence ofmy boss initiate client for PICT.	89(25.6%)	221(63.7%)	37(10.7%)
I feel the influence of my colloquiesto initiate client for PICT	104(30%)	198(57.1%)	45(13.0%)

**Health care provide on perceived behavioral control of doing PICT service**

Accordingly direct measure, almost 276(79.5%) of the health care provider were confident to initiate client for PICT. Similarly, 282 (81.3%) of the respondents feel it is easy to initiate client for PICT. Fifty six (16.1%) of the respondent initiate client for PICT is not beyond my control.

## DISCUSSION

This study has tried to assess the intention of health care provider to initiate for PITC in Gedio Zone health facilities, Southern National Nationality and People Region. The study respondents' Educational Status was among distal variables which predict health care provider intention. The TPB provides an organizing frame work for studying and explaining health care provider intention to do PICT. From TPB constructs attitude, weighted behavioral beliefs were used as potential direct predictors of health care provider intention. Distal variables (Educational Status) of the respondent explained 2.2% of health care provider intention. Potential direct predictors of TPB construct; together explained 12.6% of health care provider intention of the study participant, of which the highest share was due to weighted behavioral beliefs, which was 8.9%. In general, the constructs of TPB together with distal variables explained 14.8% of the variability in health care provider intention to do PICT service.

From total participants, 247 (71%) Score above the mean value of intention while the remaining 100(29 %) score below the mean value. Mean scores of the direct measures of TPB were computed to explain health care provider intention. Thus, the mean Health care provider intention to PICT of the

respondents was 12.9 (range of possible score=3-15), which shows a high Health care provider intention to PICT. Majority, 314 (90.4%) of the respondents expect health care provider have to do PITC service and considerable numbers of the study participants, 301(86.7%) wanted to do PITC service in the near future, 298 (85.9%) intended to do PITC service.

Most in-depth interviews informants explained that they have higher intention towards doing PICT service and one in-depth-interview informants express intention of health care provider like this "We have a great desire to do PICT since PICT has a tremendous benefit to client"

### **Behavioral Predictors of TPB that influence health care provider intention**

Attitude, weighted behavioral beliefs, subjective norm and perceived control were behavioral predictors of TPB that influenced health care provider intention among these variables Attitude and weighted behavioral beliefs were the significant potential direct predictors of behavioral intention.

**Attitude:** In this study attitude explained 3.7% of the variability of health care provider intention and many studies have shown the significant effect of attitude towards intention Similarly, a study conducted in different part of the world regarding the influence of attitude on intention shows us there is direct correlation between attitude and intention . One female 27 Year respondent said that "I am in favour of PICT service for me PICT is a tool to create HIV free generation"

In current study attitude have significant relation (P=.003) with intention and significantly predict

whether or not health care provider initiated to provide PICT service or not.

**Subjective norm:** The present study revealed that influence from significant other does not have pressure on health care provider to do or not to do PICT at OPD. Studies have shown mixed result regarding subjective norm as a predictor of intention and some studies have shown no significant relationship between subjective norm and intention, where as some other studies have shown significant relationship between subjective norm and intention.

In this study, subjective norm has neither positive nor negative influence to do PICT service because almost all health care provider have motive to provide the PICT to their client regardless of any external influence.

This finding is consistent with in-depth interviews informants one male 32 year old from health facility said that “Observing 2-3 HIV positive individual through PICT motivates HCP to provide PICT service”.

**Perceived behavioral control (PBC):** Researches have shown that PBC accounted for considerable variance in intention and behavior and there is a positive relationship between PBC and intention. Thus, with the given resources, the higher the confidence of his/her ability, the more likely the individual is in doing PICT service. But, the current study revealed that there is no statistically significant relation between Perceived behavioral control and health care provider intention where as the result from in-depth interview from one of the informants showed us that “Most of the time client attending OPD is not psychologically ready to test for HIV thus they refuse to be tested as well as do

not accept the test result specially if they are positive.”

Similarly a studies conducted in Africa revealed that missing of HCT and related services is partly attributed to low acceptance of PIHTC offered in health care settings; which seems touching problem as high HIV positivity detection rate was being observed among acceptors of the testing offer.

## 5. CONCLUSION AND RECOMMENDATION

### Conclusion

In this study respondents’ external variables explained 2.2% of health care provider intention. Potential direct predictors of TPB construct; together explained 12.6% of health care provider intention of the study participant, of which the highest share was due to weighted behavioral beliefs, which was 8.9%. In general, the constructs of TPB together with distal variables explained 14.8% of the variability in health care provider intention to do PICT service. Therefore theory of planned behavior provides excellent frameworks for conceptualizing, measuring and identifying factors that determine behavior. For theory to help drive interventions, it must focus attention on how to select the important factors we can influence from among many factors associated with behavior. Health care provider of Gedio Zone has a high intention to provide PICT service to client attending OPD therefore by targeting and working on the beliefs identified through this finding we can actualize the desired behavioral change in health care provider.



### Recommendation

Considering the variability explained by TPB and the significant effect of external variable on health care intention, the following recommendations are forwarded.

HIV/AIDs testing in Ethiopia at health care facility determined by HCP attitude thus those concerned body should work on attitude of HCP towards HIV testing and HCP with higher educational status should emphasize on doing HIV testing.

#### 1) Minister of health, SNNPR regional health bureau and Gedio Zone health bureau

HIV/AIDs testing in Ethiopia, SNNPR region as well as Gedio Zone health bureau at health care facility determined by HCP attitude thus those concerned body should work on attitude of HCP towards HIV testing and HCP with higher educational status should emphasize on providing HIV testing.

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