TINGIM LAIP

Periodic Survey

Round 2

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June 2015

IHRG International HIV Research Group
Providing the evidence base to respond effectively to HIV

UNSW The University of New South Wales
School of Public Health and Community Medicine

Cardno Shaping the Future

AIDS Projects Management Group

National AIDS Council Papua New Guinea
Program of PNG's National AIDS Council

Australian Aid

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
APMG	AIDS Projects Management Group Pty Ltd (APMGlobal Health)
ART	Antiretroviral Therapy
DAC	District AIDS Committee
DFAT	Australian Government Department of Foreign Affairs and Trade
FO	Tingim Laip Field Officer (paid part-time peer worker)
GIPA	Greater Involvement of People Living with HIV
GoPNG	Government of Papua New Guinea
HBC	Home Based Care
HHISP	Health and HIV Implementation and Services Provider
HIV	Human Immunodeficiency Virus
IRM	Independent Review Mechanism
M&E	Monitoring and Evaluation
MMM	Mobile men with money
MSM	Men who have sex with men
NACS	National AIDS Council Secretariat
NDoH	National Department of Health
NHS	National HIV and AIDS Strategy, 2011–2015
PAC	Provincial AIDS Committee
PDA	Personal Digital Assistant
PLHIV	People living with HIV
PNG	Papua New Guinea
PNG IMR	PNG Institute of Medical Research
PO	TL Project Officer
RC	TL Regional Coordinator
STI	Sexually Transmitted Infection
TL	Tingim Laip
TL2	Second Phase of Tingim Laip (2010 – 2015)
VCT	Voluntary Counselling and Testing
WES	Women who exchange sex

ACKNOWLEDGMENTS

We would like to thank all of the participants in this study who freely gave their time and shared their knowledge and experiences with the research team. A special thanks goes to the data collectors who have made this study possible: Angelyn Amos, Martha Kupul, Nelson Siddy, Richard Nake Trumb and Natasha Uri. We would also like to extend our thanks to the Tingim Laip field teams and volunteers in Western Highlands, Eastern Highlands, Northern and Madang provinces for their support in coordinating field logistics and recruiting participants. We thank the TL National Support Team for their assistance in logistics arrangements for the study and for contribution to the study design. Last but not least we would like to acknowledge the beneficiaries of Tingim Laip who took the time to participate in the study. Their participation will contribute to improved programming and a more supportive environment for key populations.

EXECUTIVE SUMMARY

Introduction

This is the second and final Periodic Survey to be conducted as part of the research program of the Tingim Laip Project (TL). Tingim Laip is PNG's largest peer-led HIV prevention and care project. The study aims to build on the baseline-findings of the first Periodic Survey (2012-13) to provide TL and its partners with information about the risk for HIV in locations in which it works and to ascertain the impact of its intervention on HIV prevention and care for key populations. (Further details on Round 1 Periodic Survey can be found in Tingim Laip Periodic Survey: Round 1[i]).

Methods

This study was a quantitative behavioural survey administered using a Tablet. The survey was an abbreviated behavioural survey using standardised sexual behaviour, mobility and alcohol and drug use questions. The study was conducted in four TL locations: Popondetta, Northern Province; Goroka, Eastern Highlands Province; Mt Hagen, Western Highlands Province; and, Madang, Madang Province. Ethical approval for the study was granted by the Research Advisory Committee of the PNG National AIDS Council Secretariat and the Human Research Ethics Committee (HREC) of the University of New South Wales.

Data was collected between November 2014 and February 2015. All participants were aged 15 years and over and had at least one contact with a TL field officer. Descriptive analysis and cross-tabulation were carried out using the Statistical Package for Social Science (SPSS v.22).

Data analyses are based primarily on comparing responses from Rounds 1 and 2, and further examining data from Round 2 in select areas of relevance to the project; in particular exploring any differences between male and female participants at Round 2. The Results section starts with an examination of similarities and differences in participant characteristics, to help contextualise the results that follow. A combination of descriptive and bivariate statistics was used to analyse the data. The latter included chi-square tests of independence and where appropriate Fishers Exact tests.

Results

Demographics

The samples at Round 1 and Round 2 were significantly different in a number of important ways. There were significantly more female participants in Round 2 (54.8%) than in Round 1 (38.2%) while the reverse was true for male participants (45.2% vs 61.8% respectively). Although the mean age of participants and highest level of education remained similar across the two rounds, other significant differences were evident such as in employment. For example, there was a significant increase in the proportion of participants who reported living of the earnings of transactional sex at Round 2 (10.1%) compared to Round 1 (1.2%) and there was a significant decrease in the proportion of participants who reported being unemployed at Round 2 (25.8%) compared to Round 1 (54.4%).

Knowledge of HIV

There was a significant increase from Round 1 (36.4%) to Round 2 (49%) in the proportion of participants who had correct HIV knowledge and could reject major misconceptions about HIV. At Round 2 significantly more male (53.6%) than female (45.3%) participants reported correct HIV Knowledge.

HIV Testing

A significantly higher proportion of participants at Round 2 compared to Round 1 knew where to receive an HIV test (91.5% vs 74.5% respectively), had ever had an HIV test (73.3% vs 56.3%) and knew their HIV test result (98.5% vs 90.5%).

Sexual behaviour

Significantly more participants at Round 2 (97.1%) than Round 1 (91.5%) reported ever having sex. The majority of participants at both rounds reported between 1 and 5 vaginal sex partners in the last twelve months. The majority of participants in both rounds reported not having had anal sex in the preceding six months.

Sex with regular non-paying partners: Amongst participants with one or more regular non-paying partners with whom they had vaginal sex in the last twelve months, there was a significant difference in reported condom use in the last six months between participants in Round 1 and Round 2. Proportionally more participants at Round 2 (16.3%) compared to Round 1 (10.9%) reported always using a condom during vaginal sex with a regular non-paying partner in the last six months. There was also a significant increase in the proportion of participants in Round 2 (61.5%) compared to Round 1 (53.1%) who reported using a condom at last vaginal sex with a regular non-paying partner. Of those who had anal sex with a regular non-paying partner in the last six months there was a significant difference in condom use between Round 1 and Round 2. More than double the proportion of participants in Round 2 (24.4%) compared to Round 1 (9.1%) reported 'always' using a condom during anal sex with a regular non-paying partner. Equal proportions of participants in both rounds used a condom at last anal sex with a regular non-paying partner.

Sex with casual non-paying partners: There was no significant difference between the two rounds in the proportion of participants who reported having had one or more casual non-paying partners in the last six months. In Round 2 significantly more male (36.4%) than female (27.7%) participants had sex with a casual non-paying partner. There was a significant difference in condom use during vaginal sex with a casual non-paying partner between the two rounds, with 54.3% in Round 2 reporting 'always' using a condom compared to 31.4% in Round 1. There was no significant difference in condom use at last vaginal sex with a casual non-paying partner between Round 1 and Round 2. There was a significant difference between the two rounds in the number of partners participants had anal sex with; those in Round 1 reporting a greater number of casual non-paying partners with whom they had anal sex. There was a significant difference in reported rates of condom use during anal sex with a casual non-paying partner, with 43.8% of those in Round 2 reporting always using one while only 19.5% did in Round 1. There was a significant increase in condom use at last anal sex with a casual non-paying partner, with 83.8% of participants at Round 2 compared to Round 1 where 62% reported condom use on that occasion.

Transactional sex: There was a significant increase from 20.6% in Round 1 to 40% in Round 2 of participants who reported ever having exchanged sex for money, goods or services. Significantly more female (45.7%) than male (33.4%) participants in Round 2 reported having ever exchanged sex for money, goods or services. There was no significant difference in the proportion of participants who *gave money* in exchange for sex between the two rounds but significantly more participants in Round 2 compared to Round 1 reported having ever *given goods or favours* in exchange for sex. Significantly more participants in Round 2 compared to Round 1 reported having ever received money (29% vs 12.2% respectively) and goods or favours (28.6% vs 11.8% respectively). Significantly more female than male participants in Round 2 received money (30.4% vs 12.8% respectively) or goods and favours (30% vs 12.3% respectively). There was a significant difference

between the two rounds in the number of transactional sex partners participants reported having had vaginal sex with in the last six months, with greater numbers in Round 1. Condom use for male and female participants in Round 2 were similar with 87.5% of males and 84.9% of females reporting using a condom at the last occasion of vaginal sex with a transactional sex partner from whom they received money, goods or favours. Very few participants reported anal sex with a transactional sex partner.

Sexually transmitted infections

Significantly higher proportions of participants in Round 2 compared to Round 1 reported having had unusual genital discharge (12.4% vs 3.2% respectively), lower abdominal pain during sex (11% vs 3.2%) and stinging and burning pain during urination (11.7% vs 2.4% respectively). There was no significant difference between the two rounds in seeking medical treatment for an STI, however there was a significant difference between the two rounds in having sought medical treatment and receiving an STI referral or having attended an STI awareness session.

Alcohol and other drug use

Those who participated in Round 2 (73.8%) were significantly more likely than those in Round 1 (65%) to drink alcohol. There was a significance difference in the average number of alcoholic drinks consumed per drinking session in the last six months between those in Round 1 and those in Round 2. Almost 70% of participants who drank in Round 2 consumed 11 or more drinks per session compared with approximately 55% of those in Round 1 who drank alcohol. While the majority of participants in both rounds identified SP Beer as their preferred alcoholic drink, around 20% less in Round 2 reported SP Beer compared to Round 1 and almost 40% reported Spirits in Round 2 while only 3.3% did in Round 1. In Round 2 significantly more male (23.2%) than female (13%) participants reported drinking alcohol on a weekly basis during the previous six months. Significantly more participants in Round 1 (94.6%) compared to Round 2 (49.3%) reported smoking tobacco. Conversely a significantly higher proportion of those in Round 2 (60%) compared to Round 1 (30.4%) reported using marijuana.

Tingim Laip activities

The means by which participants first came to know about TL changed significantly between the two rounds. In Round 1 friends were the most common source (34.9% vs 6.9% respectively) while in Round 2 TL staff were (57.2% vs 0% respectively). In Round 2 a significantly greater proportion of male (18.3%) than female (11.3%) participants reported having had contact with a TL officer between 7 and 12 times in the last twelve months. In Round 2, HIV awareness sessions remained the most common first contact activity with TL (72.4%). A significantly higher proportion of male than female participants reported receiving free condoms (79.3% vs 64.6% respectively) and watching condom demonstrations (76% vs 61.3% respectively) in the last twelve months in Round 2. There were a number of statistically significant associations between various types of participation in TL activities and having correct HIV knowledge. These included participation in: STI awareness session; condom demonstration; VCT referral; STI referral; Love Patrol screening; TL training program; community education and ART referral. Having attended an HIV awareness session in the last twelve months was significantly associated with knowing where to get an HIV test (91.8%) in Round 2. In Round 2, having attended a condom demonstration was significantly associated with condom use at last vaginal sex with a transactional sex partner where the participant received money, goods or favours (88.8%).

Summary

The results contained in this report also indicate that there is no room for complacency amongst these key populations. There is a need, for example, to maintain if not increase access to condoms and condom use, continue to support referral pathways and reduce sexually transmitted infections. Our hope is that this report will provide both the evidence to direct programmatic responses in the near future as well as the impetus to make it happen in a sustainable way.

INTRODUCTION

This is the second and final Periodic Survey to be conducted as part of the research program of Phase 2 of the Tingim Laip Project (TL). The study aims to build on the baseline-findings of the first Periodic Survey (2012-13) to provide TL and its partners with information about the context of HIV risk and impact among TL beneficiaries in TL's implementation locations.

Tingim Laip (TL) is Papua New Guinea's largest targeted peer-led HIV prevention and care project, operating in 20 locations over 10 provinces. It is a joint PNG National AIDS Council and Australian aid project, funded by the Australian Government and managed in its second phase (2010 – 2015) by Cardno Emerging Markets in collaboration with APMGlobal Health.

The objective of TL is to engage with key populations, assist them to: adopt safer sex practices by using condoms regularly; access regular STI diagnosis and treatment; know and understand their HIV status; and access HIV clinical monitoring and treatment if living with HIV. To achieve this, TL works where there is a higher convergence of HIV risk and impact. Tingim Laip engages more than 150 volunteers and staff from key populations, and supports them to implement a range of peer-led activities to increase: knowledge; condom use and accessibility; STI and VCT services uptake; knowledge of HIV status; access to support for people living with HIV; and access to a supportive living environment.

From late 2012 to early 2013 TL consolidated its program and returned the focus of its HIV prevention and care interventions to key populations. To achieve this transition, TL used a range of strategies including: a detailed social mapping exercise to better understand key populations in PNG context; stakeholder mapping to learn more about the situation of service provision and to explore strategic partnerships; location-specific micro-mapping to ascertain the environments of risk and impact, and to develop location-specific intervention strategies; affirmative action to increase the representation of people from key populations in all levels of the project team, and their role in guiding the work; training to ensure the field workforce had the information, skills and attitudes to support key population outreach; and, advocacy with community decision-makers on the needs of key populations and benefits of a public health approach.

The Periodic Survey was first conducted in 2012/2013 to provide a baseline for TL and to inform the restructure and transition of the project to reinvigorate its mandate to focus on key populations. This second Round, carried out towards the end of project implementation, was conducted to measure progress in engaging with key populations and to guide future HIV program design in PNG. Because the populations at both Rounds are different in important ways, Round 1 can no longer be considered a baseline. Round 2 could become a baseline for future studies with this population. At both rounds the survey explores factors that contribute to vulnerability to HIV transmission, and examines the experiences and preferences of members of key populations regarding health and support services seeking behaviour, as well as behaviours to reduce HIV prevention, including condom use. The aim of these surveys has been to provide TL with the necessary information to understand HIV risk amongst key populations in select communities, specifically: to examine key populations' knowledge and attitude towards unsafe sexual behaviour; to identify the preventative measures that key populations practice and identify factors that determine and influence these behaviours; and, to identify the services and activities provided through TL that are used by key populations.

The value of periodic behavioural surveys is that they provide important information about trends in knowledge, attitudes and practices, as well as data that can be analysed at a single data point to explore risk and safer sex behaviours. Additionally, periodic survey findings can indicate the effectiveness of

interventions as demonstrated by changes in knowledge, attitudes and health-seeking behaviours over a period of time.

This is the first time that any behavioural research has been undertaken in a systematic and regular fashion amongst TL intervention locations. As PNG's largest community based program this strategic information will form an important resource for TL and for all organisations working in HIV prevention and care for key populations.

Aim and Objectives

The study aims to provide TL with the necessary information to monitor HIV risk in the locations in which it works and to ascertain the impact of its interventions on HIV prevention and care among target populations. The primary purpose of this research is to collect information on the knowledge, attitudes, and behaviours of the population most affected by HIV in locations where TL works. This periodic cross-sectional survey also acts as an important reference point to guide and inform future prevention and care interventions for key populations in PNG.

Relevance to Tingim Laip project design log frame	
Objective 4	To generate and use research to guide improvements in the quality of TL responses
Outcome 4.1	TL workforce using research findings to inform design of interventions and activity implementation

METHODOLOGY

Survey design: This study was a quantitative behavioural study administered using an electronic tablet device. The survey – the same one used for Round 1 - was an abbreviated behavioural survey using standardised sexual behaviour, mobility, and alcohol and drug use questions utilised in PNG in the work of the PNG Institute of Medical Research, the National Research Institute, and UNSW Australia. The final questions were determined in consultation with key staff at TL. In addition, several short questions were developed to address contact with TL interventions.

Study locations: The study was conducted in the same four TL locations studied in Round 1: Popondetta, Oro Province; Goroka, Eastern Highlands Province; Mt Hagen, Western Highlands Province; and Madang, Madang Province. These locations were identified in consultation with TL.

Participants in both Round 1 and Round 2 were people who had received TL services and or participated at least once in TL activities.

Sampling: In Round 1, sample size was determined using extant behavioural data from the four locations identified (Popondetta, Goroka, Mt Hagen and Madang). Using the general population size and the key population estimates for each of the study areas provided by TL, the sample was calculated at a 95% confidence level and at a 0.05 confidence interval. The Round 1 survey aimed to enrol 1100 participants.

A benefit of having conducted a previous round of data collection is that sampling targets were based on previous experiences from the field, and power calculations were based on actual proportions of target populations rather than estimates. Based on findings from Round 1 it was realistic to expect to achieve similar sample sizes in Round 2 regardless of variation in sample populations. Calculations are based on the levels of statistical power that would be available to detect a ten percentage-point difference in a key indicator between both samples with a significance level of 0.05, and with equal sample sizes on both

occasions. Statistical power was calculated for each of the study locations as well as for the overall sample and is shown in Table 1.

Table 1 shows that for the purpose of detecting a ten percentage-point difference in the chosen indicator, statistical power is high for the overall sample (0.99) and is close to or above an acceptable level (0.80) for all locations, except Madang. The latter is low because of the relatively smaller sample size achieved in Round 1, and because the proportion is close to the 0.50 mark. It is important to note that the study would need to have increased the Round 1 sample size in Madang ten times (i.e. to a sample size of 1680) in Round 2 to have statistical power of 0.80. While a sample size in Madang in Round 2 of 840 (five times the size of Round 1) would provide statistical power of 0.77, based on TL Social Mapping, Micro-mapping and operational experience, it was considered unlikely that there would have been sufficient numbers of TL beneficiaries in that location to achieve a sample size of 840.

Table 1: Statistical power to detect a ten percentage-point difference in the proportion of the sample provided with free condoms in the six months preceding the survey

Location	Actual proportion at Round 1	Proportion for which a difference is to be detected at Round 2	Sig. level	Actual sample size Round 1	Target sample size Round 2	Statistical power
Madang	0.43	0.53	0.05	168	168	0.58
Popondetta	0.61	0.71	0.05	261	261	0.78
Mt. Hagen	0.55	0.65	0.05	346	346	0.85
Goroka	0.74	0.84	0.05	234	234	0.85
All	0.59	0.69	0.05	1009	1009	0.99

This study is different from a traditional repeated cross-sectional survey in that, there was variation between population samples from the two study Rounds (Rounds 1 and 2), as will be described further in Key Findings. The variation in population samples between Rounds 1 and 2, is a result of TL's efforts to restructure its work to focus on those most at risk for and affected by HIV, leading to a sharper focus on key populations. This included the implementation of affirmative action policies to employ staff and volunteers from key populations and efforts to strengthen the focus of its HIV prevention and care interventions ton key populations. Previously the population targeted by TL in Round 1 was mixed, rather than exclusively general population or key population.

Recruitment: In both survey rounds, convenience sampling methods were used to recruit people who matched the survey eligibility criteria:

- Participants had to be over the age of 15 years; and
- Have participated in at least one TL activity or received at least one TL service

All survey participants were identified by TL volunteers in Round 1 and by TL Field Officers or volunteers in Round 2. Field Officer positions (peers who were paid part-time TL staff) did not exist in Round 1. All participants were made aware that their involvement in the study was voluntary and that all information provided would be kept confidential. They were provided with a K5 Digicel flex card and refreshments (Round 1) or TL refreshment pack (K5) as well as K3 Digicel flex card and bus fare (Round 2) to acknowledge their inputs and reimburse them for their time and any expenses incurred.

Data collection: Personal Digital Assistant (PDA) electronic devices were used to administer the survey in Round 1, while Tablet devices were used in Round 2. In both rounds, trained interviewers administered the

questionnaire, which was available electronically in both English and *Tok Pisin*. Use of electronic data collection tools provided several advantages, including: automatic routing of questions based on participant responses; greater privacy of participant responses; greater security of data as it was emailed from the field each day and backed up on a secure server; reduced cargo in the field by negating the need to carry and store boxes of paper surveys, and; no need for data entry thereby minimizing data entry errors and expediting time between data collection and dissemination of findings. For Round 2, data were collected between November 2014 and February 2015.

Field research team: In Round 2, the data collection team consisted of five researchers: a Research Coordinator to coordinate and manage all data collection in select project locations (who was also the main data analyst), and four Field Researchers. Three of the five team members (Research Coordinator and two Field Researchers) were experienced researchers who had worked at research institutions in PNG, and the remaining two Field Researchers were skilled TL team members with previous qualitative research experience. The TL staff members were based in the TL National Office in Madang and had no regular direct contact with TL beneficiaries at selected study locations.

Data analysis: The data was analysed using the Statistical package for Social Science (SPSS v.22). Detecting a statistical difference between two time periods in a repeated cross-sectional survey design will ordinarily enable inferences to be made about changes that have occurred over time in key indicators for the target population. This is not possible in this survey due to the variation in sample (overlapping but not identical) populations between the Round 1 and 2 of the study. *Any statistical differences between Rounds 1 and 2 must therefore be interpreted as reflective of differences that exist in the two populations from which the samples were recruited rather than to changes that have occurred in either population.* As such, the primary purpose in positioning data from both time periods alongside each other and analysing for statistical significance is to show how these two populations (and hence TL constituencies) were different in both survey rounds and the extent of those differences.

Data analyses are based primarily on comparing responses from Rounds 1 and 2, and further examining data from Round 2 in select areas of relevance to the project. The Results section starts with an examination of similarities and differences of participant characteristics, which will help the reader contextualise the results that follow. A combination of descriptive and bivariate statistics was used to analyse the data. The latter included chi-square tests of independence and where appropriate Fishers Exact tests. Statistical notation is provided in the text for statistically significant findings only.

Ethical consideration and informed consent: All participants were informed about the nature of the study and their right to withdraw without penalty from the study at any time. All participants gave informed consent to the researcher and an electronic tick on the tablet was used to identify that the participant had read the information sheet (or had had it read to them), had any queries answered, and provided informed consent to participate in the survey. Ethics approval was granted by the Research Advisory Committee of the PNG National AIDS Council Secretariat and from the Human Research Ethics Committee (HREC) of UNSW Australia.

KEY FINDINGS

1 BASIC DEMOGRAPHIC INFORMATION

1.1 Description of the sample: age and sex

A total of 2,035 TL beneficiaries participated in the two Rounds of the periodic survey, 1,010 participated in Round 1 and 1,025 in Round 2. The study did not track whether any participants had taken part in both Rounds. The data have been analysed as though both samples were completely independent. Significantly more male TL beneficiaries participated in Round 1 than in Round 2; the situation was the opposite for female beneficiaries (X^2, (1) =56.092, p<0.001). See Figure 1.

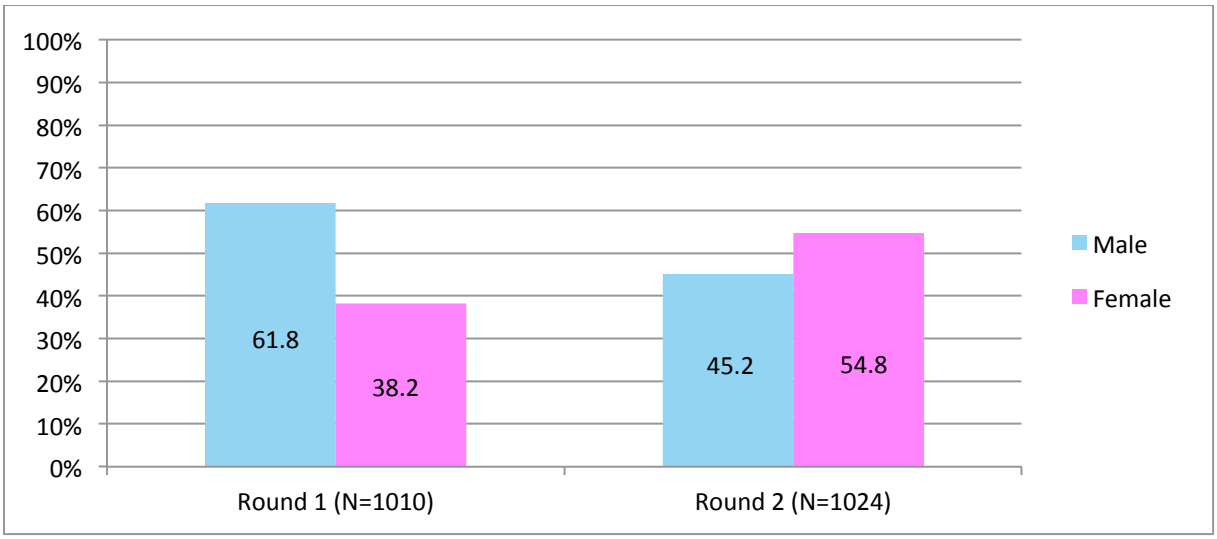

Figure 1: Sex of participants by Study Round

*Missing=1 at Round 2.

The mean age of respondents in Round 1 (M=27.99 years; SD, 9.028) was similar to the mean age at Round 2 (M=27.56 years; SD=8.267). See Figure 2.

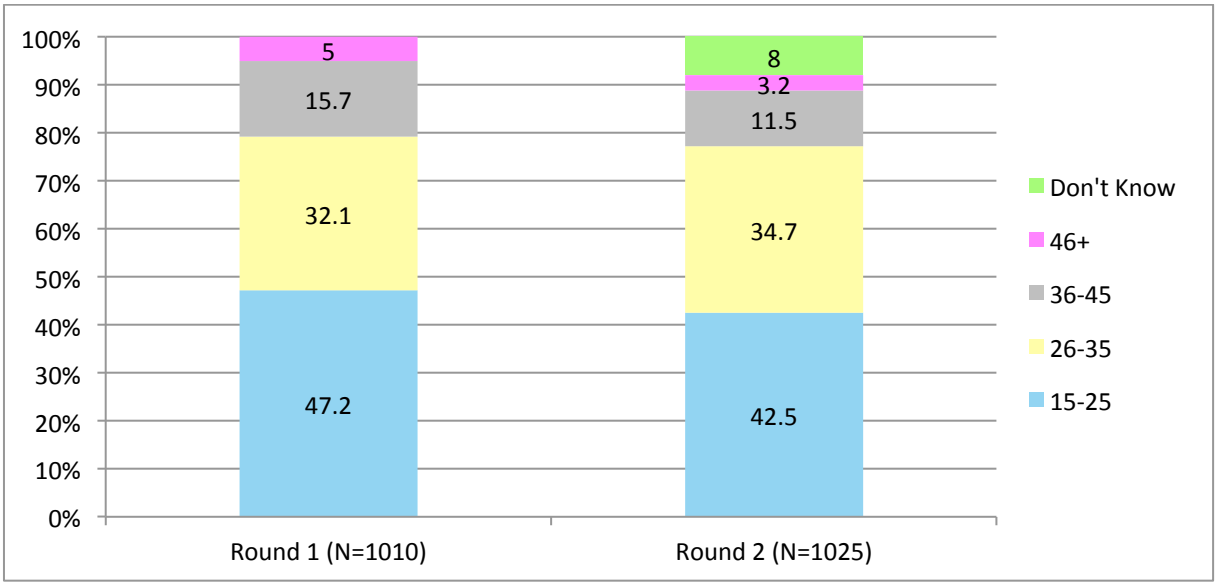

Figure 2: Age of participants by Study Round

There was a significant difference in the age of male and female participants in Round 2 (X^2, (4) =34.629, p<0.001). Female participants were generally younger than male participants, with over 80% for female participants younger than 36 compared with about 70% for male participants. See Figure 3.

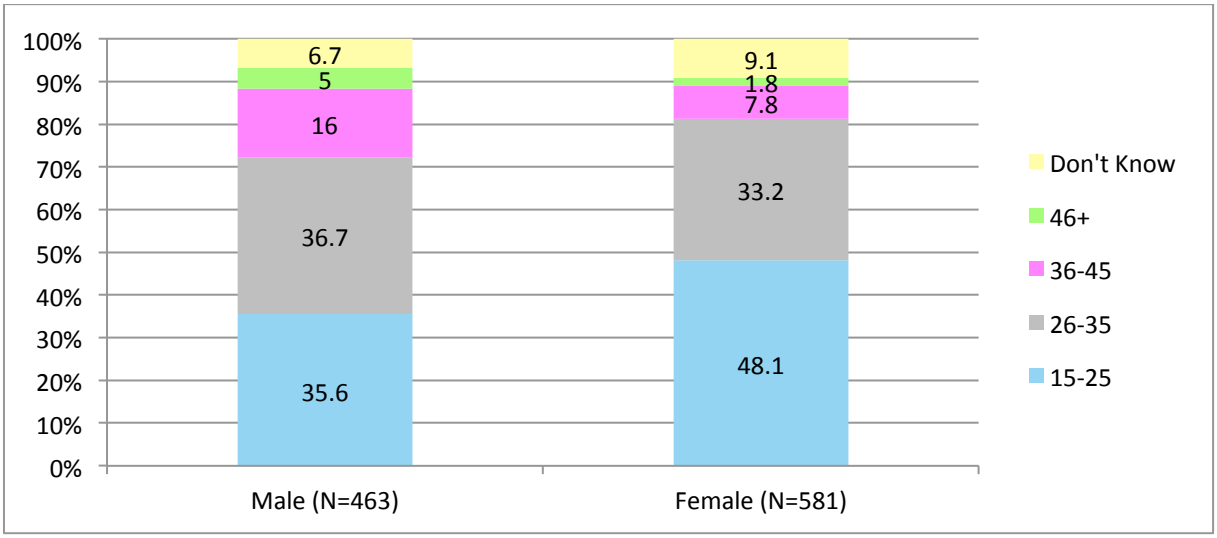

Figure 3: Age of participants by sex of participant in Round 2

*Missing=1 participant in Total

1.2 Description of the sample: education and employment

Education levels of participants were similar in both Rounds (Figure 4). Less than 60% of participants in both Rounds had attended Secondary School. Only a very small proportion of participants (<2%) had obtained undergraduate or post-graduate university qualifications (Figure 4).

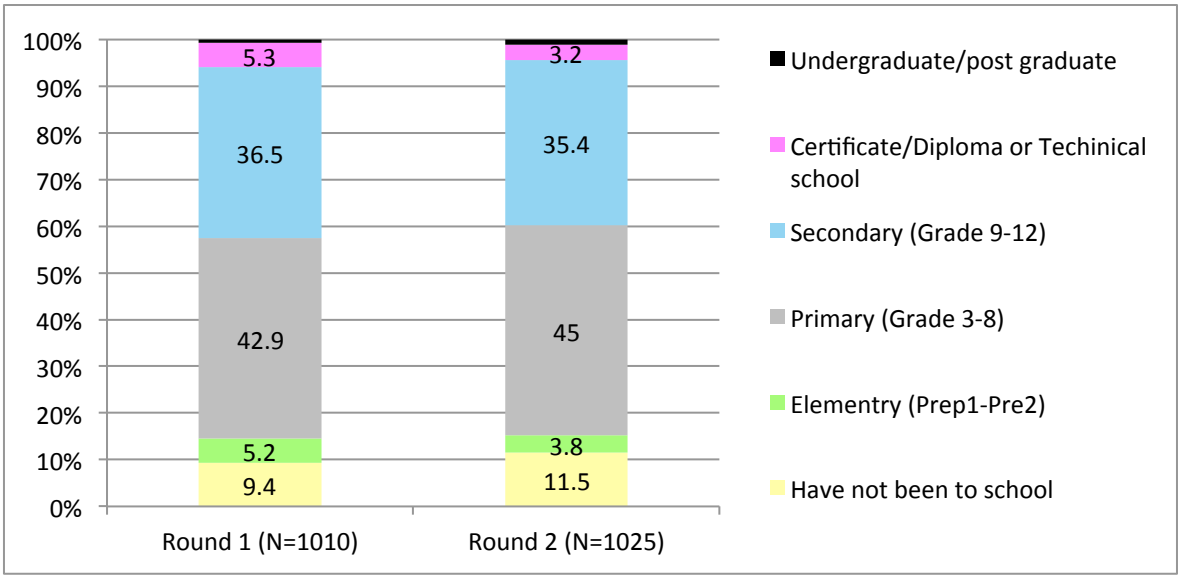

Figure 4: Highest form of education by Study Round

There was a significant difference in the level of education achieved by male and female participants in Round 2 (X^2, (5) =21.566, p=0.001). A larger proportion of female participants had not received any education, and a greater proportion of male participants had completed secondary school education or higher (Figure 5).

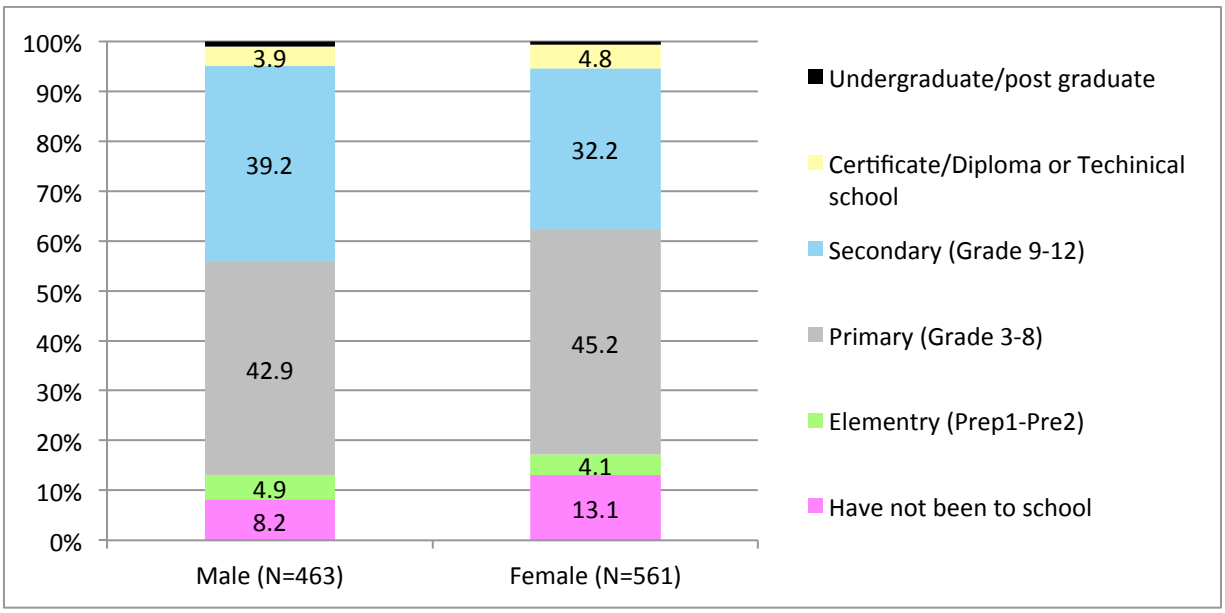

Figure 5: Highest form of education by sex of participant in Round 2

There was a significant difference in the types of work participants were engaged in between the survey Rounds (X^2, (7) =384.386, p<0.001) (Table 2):

- A higher proportion of participants in Round 1 than Round 2 reported being unemployed (54.4% vs 25.8% respectively).
- A higher proportion of participants in Round 2 than Round 1 reported that they were living off the earnings from exchanging sex (10.1% vs 1.2% respectively).
- A higher proportion of participants in Round 2 than Round 1 reported that they were a roadside seller (16.5% vs 0.4% respectively) of, for example, cigarettes, cooked food, betel-nut (a common nut that some Papua New Guineans chew with mustard and lime) and other items.

TL's successful transition to exclusively working with key populations is reflected in the differences in employment types reported in the two survey Rounds. Although not significantly different in overall proportions of the samples, those employed by a private company constituted the largest group in Round 2, in contrast to Round 1, where those employed by a private company constituted the second largest group. In Round 1 those who were unemployed constituted the largest group at 54.4% while in Round 2 the proportion that was unemployed was 25.8%. This is reflective of TL's transition to work with clients of women who exchange sex, including security guards and truck drivers.

There was a statistically significant difference between the type of employment and sex of participant in Round 2 (X^2, (7) = 302.355, p<0.001). A larger proportion of male (48.8%) than female (7.8%) participants reported currently working in a company. Conversely, a larger proportion of female than male participants reported being a self-employed road-side seller (18.7% vs. 13.8%) as well as earning their income through exchanging sex (18.2% vs. 0.4% respectively) (Table 3).

Table 2: Type of employment by Study Round

Type of employment	Round 1 N (%)	Round 2 N (%)
Unemployed	549 (54.4%)	264 (25.8%)
Work for the company	229 (22.7%)	270 (26.3%)
Roadside seller (betel-nut/smoke)	4 (0.4%)	169 (16.5%)
Student	105 (10.4%)	50 (4.9%)
Other	41 (4.1%)	94 (9.2%)
Earn money through sex	12 (1.2%)	104 (10.1%)
Sell vegetables at the market	37 (3.7%)	58 (5.7%)
Work for the government	33 (3.3%)	16 (1.6%)
TOTAL	1010 (100%)	1025 (100%)

Table 3: Type of employment by sex of participant at Round 2

Type of employment	Male N (%)	Female N (%)
Unemployed	84 (18.1%)	180 (32.1%)
Work for the company	226 (48.8%)	44 (7.8%)
Roadside seller (betel-nut/smoke)	64 (13.8%)	105 (18.7%)
Earn money through sex	2 (0.4%)	102 (18.2%)
Student	28 (6%)	21 (3.7%)
Sell vegetables at the market	4 (0.9%)	54 (9.6%)
Other	45 (9.7%)	49 (8.7%)
Work for the government	10 (2.2%)	6 (1.1%)
TOTAL	463 (100%)	561 (100%)

*Missing=1 participant

1.3 Description of the sample: relationship and marital status

There was a statistically significant difference in marital status between the study Rounds (X^2, (8) =138.256, p<0.001). A greater proportion of participants in Round 1 reported being married and living with a spouse, or being married but not living with a spouse (Table 4). In contrast, a greater proportion of participants in Round 2 reported having experienced a change in their marital status by means of separation, divorce or becoming widowed (Table 4).

There was a statistically significant difference in marital status between male and female participants in Round 2(X^2, (8) =209.149, p<0.001). Proportionally more male (51.2%) than female (31.4%) participants reported being married and living with a spouse. Conversely, a higher proportion of female than male participants had experienced a change in marital status in the form of separation (3.2% vs. 21.7% respectively) and divorce (1.5% vs. 14.6% respectively) (Table 5).

Table 4

Marital status	Round 1 N (%)	Round 2 N (%)
Married and living with spouse	457 (45.2%)	413 (40.3%)
Married but not living with spouse	68 (6.7%)	33 (3.2%)
Married with multiple wives & living with spouse(s)	24 (2.4%)	29 (2.8%)
Married with a husband who has multiple wives	7 (0.7%)	16 (1.6%)
Not married but living with a partner	98 (9.7%)	8 (0.8%)
Separated	84 (8.3%)	137 (13.4%)
Divorced	37 (3.7%)	89 (8.7%)
Widowed	15 (1.5%)	28 (2.7%)
Never married	220 (21.8%)	272 (26.5%)
TOTAL	1010 (100%)	1025 (100%)

Table 5: Marital status by sex of participant in Round 2

Marital status	Male N (%)	Female N (%)
Married and living with spouse	237 (51.2%)	176 (31.4%)
Married but not living with spouse	12 (2.6%)	21 (3.7%)
Married with multiple wives & living with spouse(s)	28 (6%)	1 (0.2%)
Married with a husband who has multiple wives	1 (0.2%)	15 (2.7%)
Not married but living with a partner	3 (0.6%)	5 (0.9%)
Separated	15 (3.2%)	122 (21.7%)
Divorced	7 (1.5%)	82 (14.6%)
Widowed	4 (0.9%)	24 (4.3%)
Never married	156 (33.7%)	115 (20.5%)
TOTAL	463 (100%)	561 (100%)

*Missing=1 participant

2 KNOWLEDGE OF HIV AND ACCESS TO SEXUAL HEALTH PROMOTION PROGRAMS AND SERVICES

Relevance to Tingim Laip log frame	
Objective 2	To deliver effective prevention and care responses in project locations
Outcome 2.1	At least 75% of targeted KAPs in project locations knowledgeable on and have correct understanding of HIV and SRH
Outcome 2.3	At least 80% of targeted KAPs in project locations regularly use STI services (screening, testing, treatment)
Outcome 2.4	At least 80% of targeted KAPs in project locations use VCT services (tested and know their HIV status)
Outcome 2.5	At least 80% of targeted PLHIVs in project locations use HIV care (clinical) services regularly

2.1 Knowledge about HIV

Significantly more participants in Round 2 than Round 1 (49% vs 36.4%) had correct HIV knowledge and could reject misconceptions about HIV (X^2, (1) =32.686, p<0.001) (Table 6). Further, proportionally more male than female participants (53.6% vs 45.3%) in Round 2 had correct knowledge of HIV and could reject major misconceptions about HIV (X^2, (1) =6.971, p<0.001) (Table 7).

Table 6: Correct knowledge of HIV by Study Round

	Round 1 N=1010(%)	Round 2 N=1025(%)
Had correct knowledge of HIV and rejected major misconceptions	368 (36.4%)	502 (49%)

Table 7: Correct Knowledge about HIV by sex of participant in Round 2

	Male N=463 (%)	Female N=561 (%)
Had correct knowledge of HIV and rejected major misconceptions	248 (53.6%)	254 (45.3%)

*Missing=1 participant

2.2 HIV testing

Significant differences were observed between Round 1 and Round 2 in relation to:

- Knowing where to receive an HIV test (χ^2, (1) =103.765, p=0.001) (Table 8).
- Ever having had an HIV test (χ^2, (1) =64.043, p<0.001) (Table 9).
- Knowing their HIV test result (χ^2, (1) =50.992, p<0.001) (Table 10).

A higher proportion of participants in Round 2 than Round 1 knew where to receive an HIV test (91.5% vs. 74.5% respectively); had had an HIV test at one point in their life (73.3% vs. 56.3% respectively) and, knew their HIV test results (98.5% vs. 90.5% respectively) (Tables 8 – 10).

Table 8: Knew where to receive an HIV test by Study Round

	Round 1 N=1010 (%)	Round 2 N=1018* (%)
Knew where to receive HIV test	752 (74.5%)	931 (91.5%)

*Missing=7 at Round 2

Table 9: Had an HIV test by Study Round

	Round 1 N=1010 (%)	Round 2 N=1022* (%)
Had an HIV test	569 (56.3%)	749(73.3%)

*Missing=3 at Round 2

Table 10: Knew HIV result by Study Round

	Round 1 N=558*(%)	Round 2 N=749 (%)
Knew HIV test result	505 (90.5%)	740 (98.5%)

*Missing= 11 at Round 1

There was no significant difference in knowing where to have an HIV test between male and female participants in Round 2 (X^2, (1) =0.016, p=0.899). There was also no significant difference in knowing one's HIV test result between male and female participants in Round 2 (X^2, (1) =0.348, p=0.555). There was a statistical difference between male and female participants in whether they had ever had an HIV test (X^2, (1) =26.664, p<0.001), where higher proportions of female participants reported having had an HIV test (n=450; 80.6%) compared with male (n=299; 64.6%) participants at Round 2 (Table 11).

Participants in Round 2 were asked about the result of their most recent HIV test. This question was not asked in the Round 1. Among the 73.3% (n=749) of participants in Round 2 who reported ever having had an HIV test almost all reported a result (n=737). Of those who reported a result, the majority (90.8%) reported that the result of the test showed they were HIV negative. Of the remaining participants who reported having had an HIV test, 5.8% (n=43) reported they were living with HIV (Table 11).

Table 11: Self-disclosed HIV status of participants at Round 2 by sex of participant

Type of HIV status	Male n (%)	Female n (%)	Total in Round 2 N (%)
Negative	281 (94.9%)	388 (88%)	669 (90.8%)
Positive	6 (2%)	37 (8.4%)	43 (5.8%)
Indeterminate	5 (1.7%)	11 (2.5%)	16 (2.2%)
Don't know	4 (1.4%)	5 (1.1%)	9 (1.2%)
TOTAL	**296 (100%)**	**441 (100%)**	**737 (100%)**

*Missing=12 (3 – males and 9 – females)

3 SEXUAL BEHAVIOUR - GENERAL

Relevance to Tingim Laip log frame	
Objective 2	To deliver effective prevention and care responses in project locations
Outcome 2.1	At least 75% of targeted KAPs in project locations knowledgeable on and have correct understanding of HIV and SRH
Outcome 2.2	At least 50% of targeted KAPs in project locations use condoms consistently and correctly

3.1 Ever had sex

A significantly larger proportion of participants in Round 2 (97.1%) than in Round 1 (91.5%) reported ever having sex *(X^2,* (1)=29.436, *p*<0.001) (Table 12). Almost equal proportions of male (97.6%) and female (96.6%) participants in Round 2 reported ever having sex.

Table 12: Ever had sex, by Study Round

	Round 1 N=1010(%)	Round 2 N=1023*(%)
Ever had sex	924 (91.5%)	993 (97.1%)

*Missing=2 at Round 2 and Total

3.2 Vaginal Sex

Among those who had ever had sex, there was a significant difference in the number of partners that participants reported having vaginal sex with in the previous twelve months between Rounds 1 and 2 (χ^2, (3) =47.341, *p*<0.001) (Figure 6). Compared with participants in Round 1, fewer in Round 2 reported having between 1 and 5 partners while the reverse was true for those who reported more than 5.

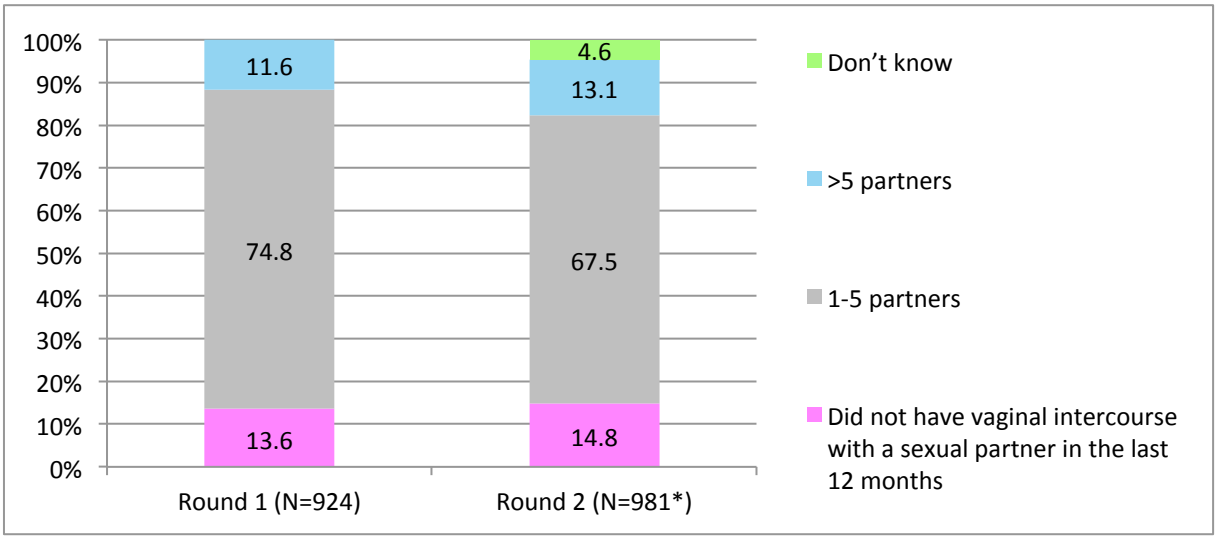

Figure 6: Number of partners with whom participants had vaginal sex in the last twelve months by Study Round

*Missing=14 at Round 2 and Total

In Round 2 there was a significant difference in the number of vaginal sex partners that male and female participants had in the last twelve months *(X^2,* (3) =20.970, *p*<0.001). Almost double the proportion of male (20%) to female (10.5%) participants in Round 2 reported not having had vaginal sex with a partner in the preceding year (Figure 7).

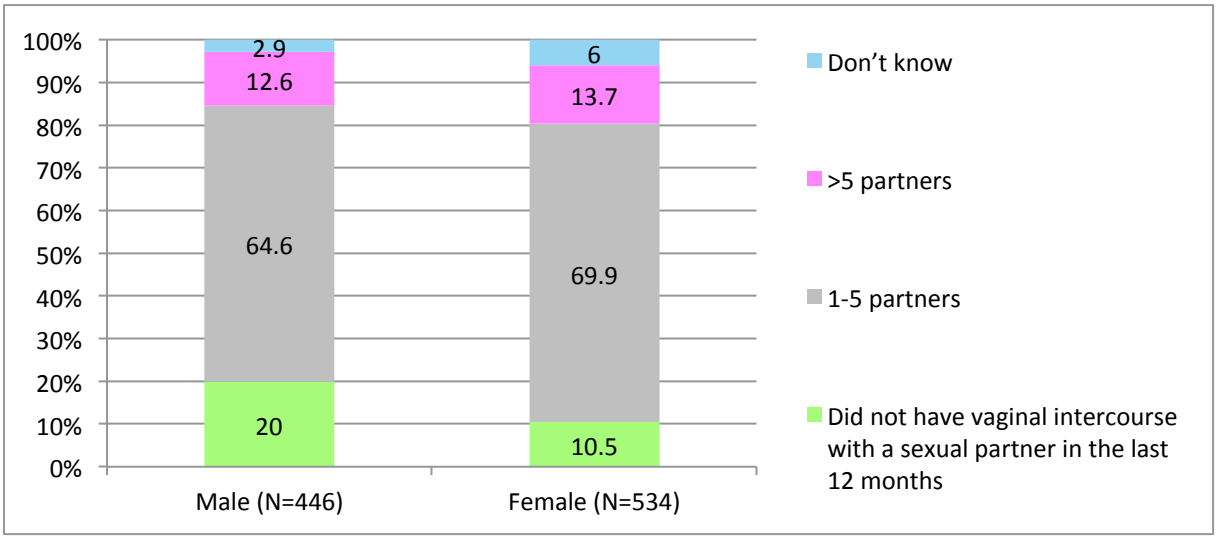

Figure 7: Number of partners with whom participants had vaginal sex in the last twelve months by sex of participant in Round 2

*Missing= 15 participants in Total (6- Male, 6- Female and 2 sex not stated)

3.3 Anal sex

The vast majority of participants in both Rounds had not had anal sex in the preceding six months. There were proportionally more participants in Round 2 who had not had anal sex (83.9%) compared with Round 1 (63.5%) (χ^2, (3) =111.140, *p*<0.001) (Figure 8). Of those who reported anal sex in either survey, most reported having between 1 and 5 anal sex partners in the six months preceding the survey.

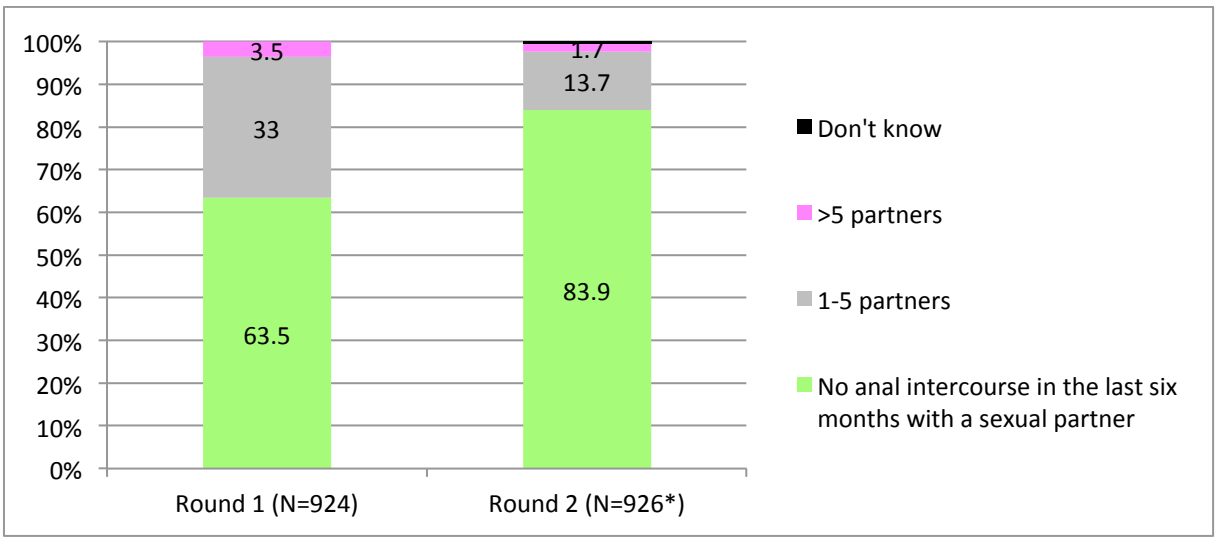

Figure 8: Number of partners with whom participants had anal sex in the last six months by Study Round

*Missing=69 at Round 2 and Total

In Round 2 there was a small yet non-significant difference in the proportion of male and female participants who had one or more sexual partners with whom they had anal sex in the last six months (Figure 9). Amongst male participants in Round 2 who had anal sex in the preceding six months (n=62), only eight (12.9%) reported having had anal sex with another man.

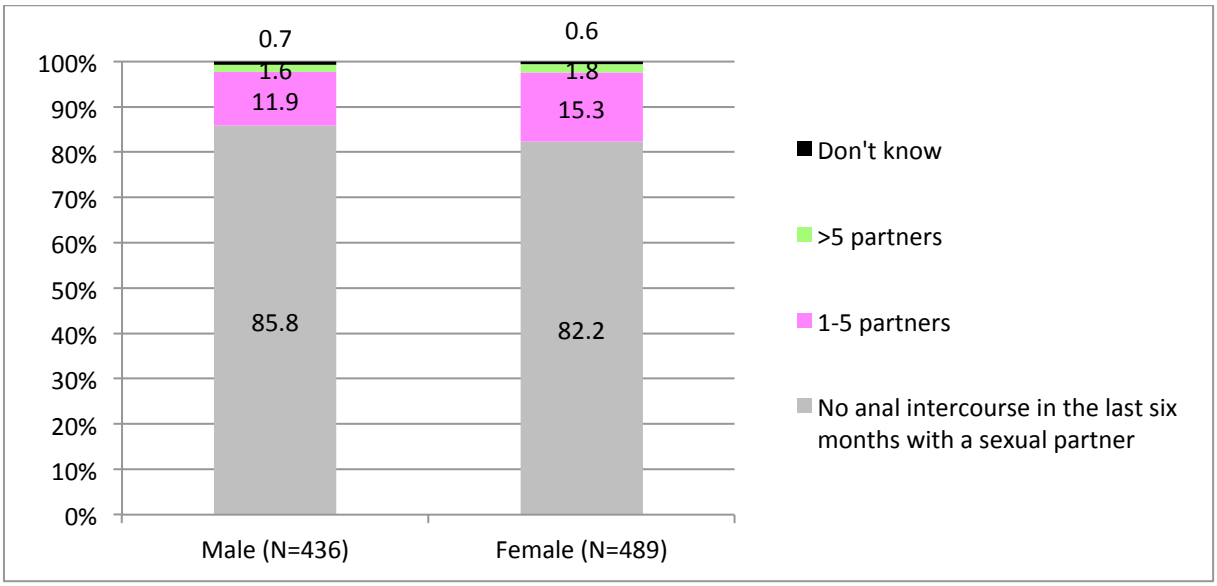

Figure 9: Number of partners with whom participants had anal sex in the last 6 months by sex of participant at Round 2

*Missing=16 Male; 51 Female; *Missing=66 participants in total

4 REGULAR NON-PAYING SEXUAL PARTNERS

Relevance to Tingim Laip log frame	
Objective 2	To deliver effective prevention and care responses in project locations
Outcome 2.1	At least 75% of targeted KAPs in project locations knowledgeable on and have correct understanding of HIV and SRH
Outcome 2.2	At least 50% of targeted KAPs in project locations use condoms consistently and correctly

4.1 Number of regular non-paying sexual partners

A significantly larger proportion of participants in Round 1 (53.5%) than in Round 2 (46.7%) reported having one or more current regular non-paying sexual partners (χ^2, (1) =29.820, p<0.001) (Table 13). In Round 2 a significantly larger proportion of female (60.7%) than male (47.9%) participants reported having one or more current regular non-paying sexual partners (χ^2, (1) =16.180, p<0.001) (Table 14).

Table 13: Had one or more current regular non-paying partners amongst participants who had sex, by Study Round

	Round 1 N=924 (%)	Round 2 N=991* (%)
Had regular partners	619 (53.3%)	543 (46.7%)

*Missing=4 in Round 2

Table 14: Had one or more current regular non-paying partners amongst participants who had sexual intercourse by sex of participant at Round 2

	Male N=451* (%)	Female N=539* (%)
Had regular non-paying partners	216 (47.9%)	327 (60.7%)

*Missing= 1 Male and 1 Female

4.2 Vaginal sex with regular non-paying sexual partners

4.2.1 Number of regular non-paying sexual partners

Of those who reported having one or more regular non-paying sexual partners in the twelve months preceding the survey, Round 1 participants were more likely than those in Round 2 to have had no non-paying sexual partners with whom they had vaginal sex in that time (χ^2, (2) =61.825, p<0.001). The majority of participants in both survey rounds reported having vaginal sex with their regular non-paying partners (Figure 10).

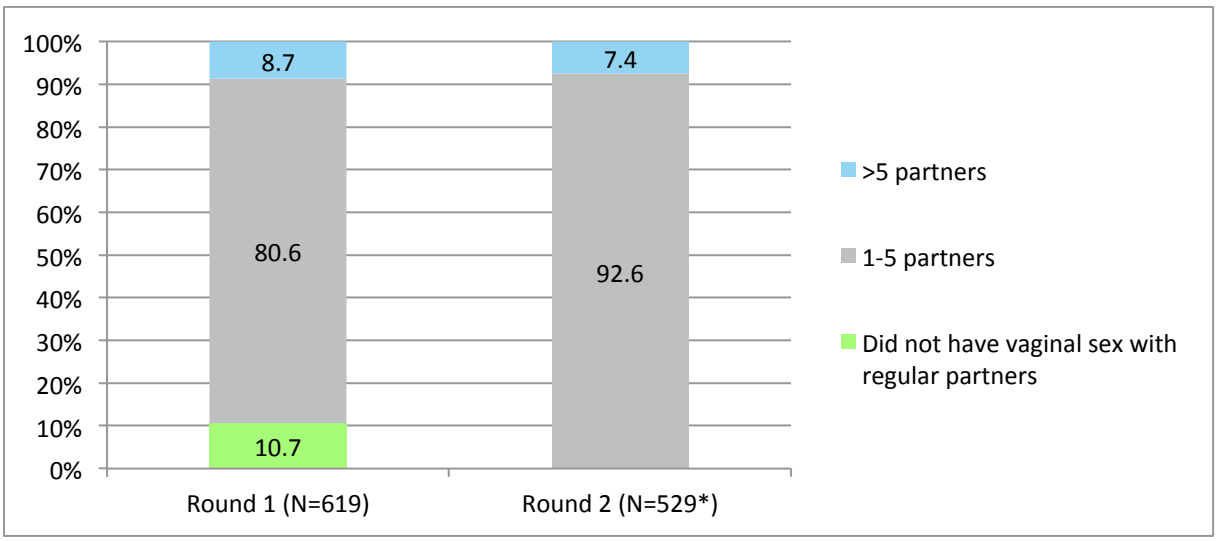

Figure 10: Number of regular non-paying partners participants had vaginal sex with in the last twelve months by Study Round, amongst those who had a regular non-paying partner during the recall period

*Missing=14 participants in Round 2 and in Total

In Round 2, of those participants who had reported having a regular non-paying sex partner, proportionally more male (10.4%) than female (5.4%) participants had greater than five regular non-paying partners with whom they had vaginal sex in the preceding twelve months (χ^2, (2) =4.678, p<0.031) (Figure 11).

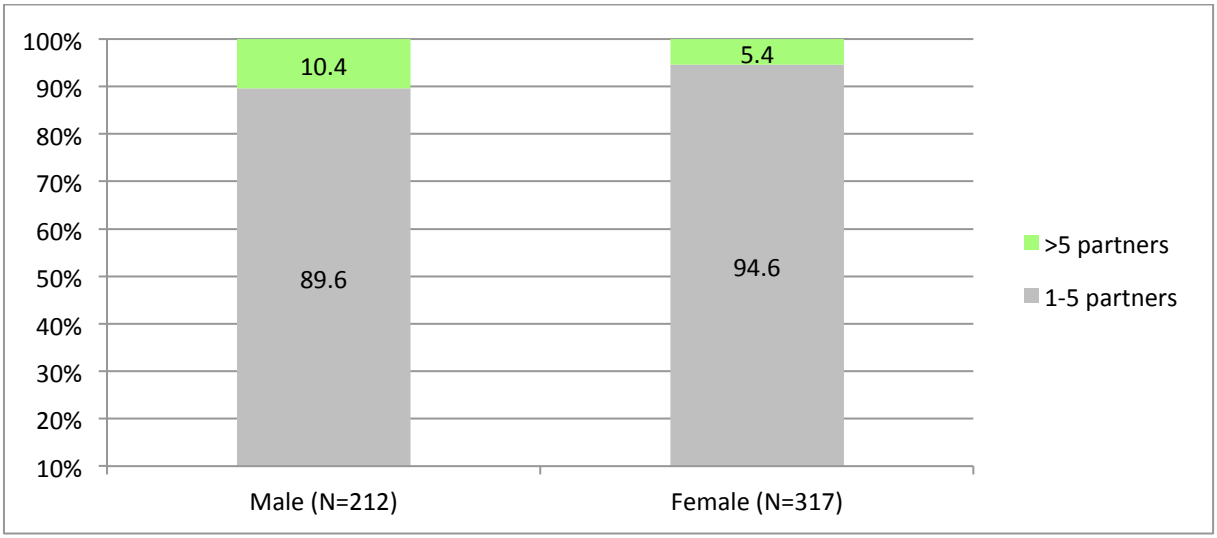

Figure 11: Number of regular non-paying partners participants had vaginal sex with in the last twelve months by sex of participant, amongst those who reported having current, regular non-paying partners in Round 2

*Missing= 14 (4-Male and 10-Female)

4.2.2 Condom use in the last six months with regular non-paying sex partners

Amongst participants with one or more regular non-paying partners with whom they had vaginal sex in the last twelve months there was a significant difference in reported condom use in the last six months between Round 1 and Round 2 (χ^2, (3) =54.386, p<0.001). Proportionally more participants at Round 2 than Round 1 (16.3% vs 10.9%) reported having always used a condom during vaginal sex with regular non-paying partners in the last six months, while a larger proportion at Round 1 used condoms 'most of

the time' (Figure 12). In Round 2 there was no difference in frequency of condom use for vaginal sex between male and female participants with regular non-paying sex partners.

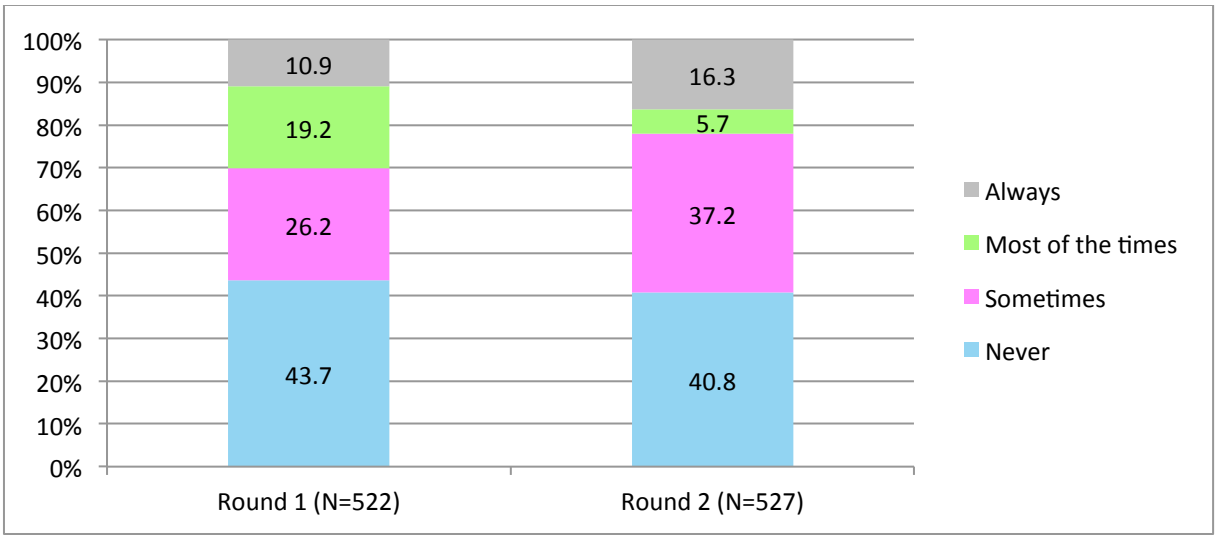

Figure 12: Frequency of condom use during vaginal sex in the last six months with regular non-paying partners, amongst those who had vaginal sex with a regular non-paying partner in the last twelve months

4.2.3 Condom use at last vaginal sex with regular non-paying partners

A significantly larger proportion of participants in Round 2 (61.5%), compared to Round 1 (53.1%), reported using a condom at last vaginal sex with a regular non-paying partner in the last six months (χ^2, (1) =4.4495, p=0.03) (Table 15). There were no differences between male and female participants in condom use at last vaginal sex with a regular non-paying partner in Round 2.

Table 15: Condom use at last vaginal sex with a regular non-paying partner, among participants who used a condom in the last six months, by Study Round

	Round 1 N=294 (%)	Round 2 N=312 (%)
Used a condom at last vaginal sex with regular non-paying partner	156 (53.1%)	192 (61.5%)

Participants at Round 2 compared with Round 1 were more likely to endorse the following reasons for not using a condom at last vaginal sex with a regular non-paying partner: Trusting a regular partner (χ^2, (1) =48.875, p=<0.001); Other reasons not stated (Fishers Exact Test, p<0.001); Wanting to have a child (Fishers Exact Test, p<0.001) and; Condoms reduce sexual pleasure (Fishers Exact Test, p=0.001). However, significantly higher proportions of participants at Round 1 than Round 2 reported the following as the reasons for not using condom at last vaginal sex with such a partner: Lack of condom availability (χ^2, (1) =5.035, p=0.025); Not feeling comfortable (χ^2, (1) =11.999, p=0.001) and; Condoms being too expensive (Fishers Exact Test, p<0.001) (Table 16).

Table 16: Reasons for not using a condom at last vaginal sex with a regular non-paying partner by Study Round, amongst those who did not use a condom at last vaginal sex with a regular non-paying partner

Reasons for not using condom at last vaginal sex with regular non-paying partner	Round 1 N=138 (%)	Round 2 N=119* (%)
Not available	45 (32.6%)	24 (20.2%)
Partner objected	31 (25.5%)	27 (22.7%)
Trust partner	7 (5.1%)	49 (41.2%)
I was drunk/stoned	22 (15.9%)	10 (8.4%)
Not comfortable	25 (18.1%)	5 (4.2%)
Other	2 (1.4%)	25 (21%)
Want to have a child	0 (0%)	16 (13.4%)
Too expensive	13 (9.4%)	0 (0%)
Condoms reduce pleasure	1 (0.7%)	12 (10.1%)
Don't need contraceptive	4 (2.9%)	3 (2.5%)
Don't trust condoms	2 (1.4%)	1 (0.8%)

*Missing=1 participant in Round 2 and in Total.
1=Participant could give as many reasons as applicable

There were some notable differences between male and female participants in their reasons for not using a condom at last vaginal sex with a regular non-paying partner in Round 2. Significantly more female (32%) than male participants (6.8%) reported 'partner objection' as a reason for not using condom at last vaginal sex with a regular non-paying partner (Fishers Exact Test, p=0.001). Other notable, but not significant differences, included: male participants were more likely than females to cite 'trusting a regular partner' (45.5% vs. 38.7%), a 'lack of condom availability' (25% vs. 17.3%) and 'being drunk or stoned' (11.4% vs. 6.7%). Male participants were less likely than female participants to cite 'wanting to have a child' as a reason (6.8% vs. 17.6%) (Table 17).

Table 17: Reasons for not using a condom at last vaginal sex with a regular non-paying partner by sex of participant at Round 2

Reasons for not using condom at last vaginal sex with regular partner	Male N=44 (%)	Female N=75 (%)
Trust partner	20 (45.5%)	29 (38.7%)
Partner objected	3 (6.8%)	24 (32%)
Other	8 (18.2%)	17 (22.7%)
Not available	11 (25%)	13 (17.3%)
Want to have a child	3 (6.8%)	13 (17.6%)
Condoms reduce pleasure	2 (4.5%)	10 (13.3%)
I was drunk/stoned	5 (11.4%)	5 (6.7%)
Don't like condoms	4 (9.1%)	2 (2.7%)
Not comfortable	2 (4.5%)	3 (4%)
Don't need contraceptive	0 (0%)	3 (4%)

*Missing=1 participant in Total
1=Participant could give as many reasons as applicable
2= Variables with superscript 1 has significant differences.

4.3 Anal sex with regular non-paying sexual partners

4.3.1 Number of regular non-paying sexual partners

There was a significant difference between the two Rounds in the number of regular non-paying partners that participants reported having had anal sex with in the preceding 6 months, with a higher number of partners reported in Round 1 (χ^2, (2) =8.326, p=0.016). A sizeable majority of participants in both survey rounds who had a regular non-paying partner reported not having anal sex with them (Figure 13).

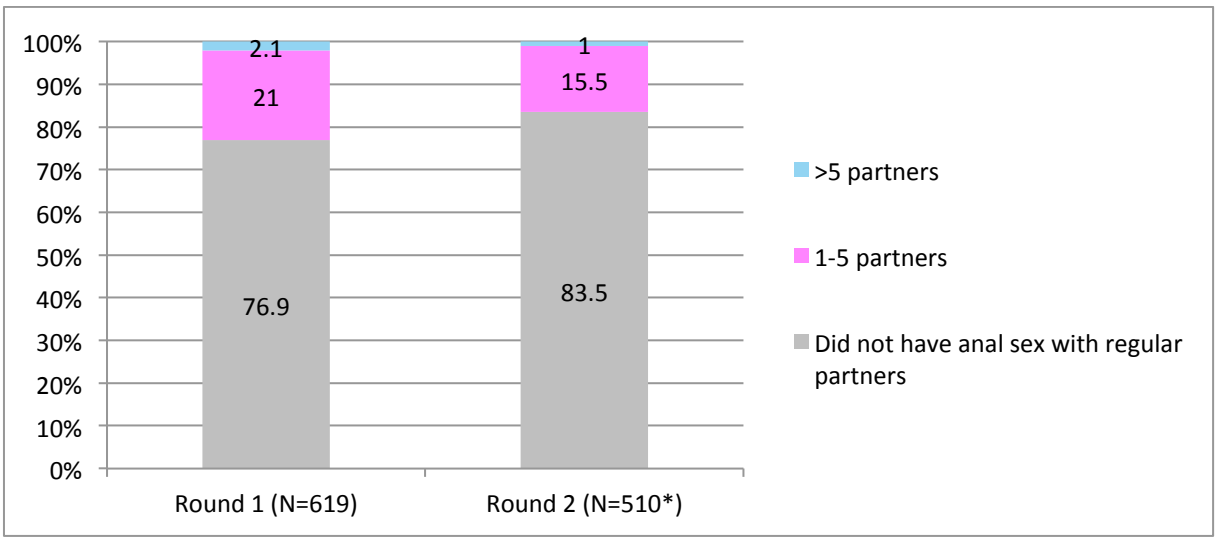

Figure 13: Number of regular non-paying partners who participants had anal sex with in the last six months, by Study Round, amongst those who in a regular non-paying partners in the last twelve months.

*Missing=33 participants in Round 2

4.3.2 Sex of regular non-paying anal sex partner

In Round 2, amongst participants who reported having had regular non-paying partners, a majority of male (80.4%) and female (79.3%) participants reported not having had anal sex with regular non-paying partners in the last 6 months (Figure 14). There were no differences between male and female participants in the number of anal sex partners.

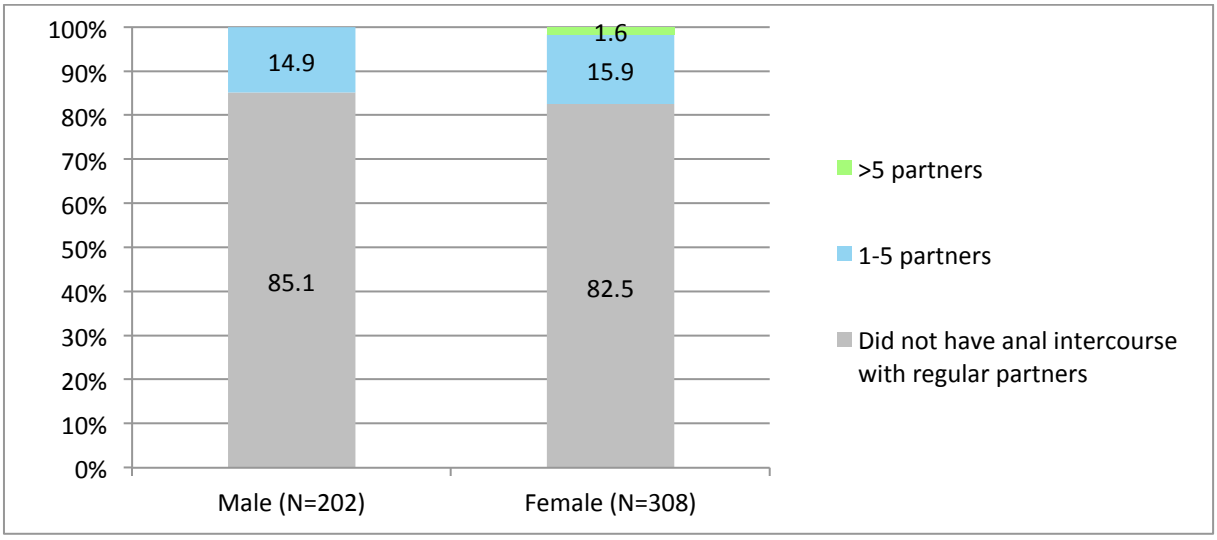

Figure 14: Number of regular non-paying partners who participants had anal sex within the last 6 months by sex of participant, amongst those with regular non-paying partners

*Missing=14 Male, 19 Female

4.3.3 Condom use in the last six months with non-paying sexual partners

There was a significant difference between Rounds 1 and 2 in the frequency of condom use amongst participants who had anal sex with a regular non-paying partner in the last six months (χ^2, (3) =22.214, p<0.001). More than double the proportion of participants in Round 2 (24.4%) than in Round 1 (9.1%)

reported always using a condom during anal sex in the last six months with regular non-paying partners – (Figure 15). A greater proportion of participants in Round 2 compared to Round 1 (45.1% 'never used' vs. 31.5%) 'never used' condoms for anal sex with a regular non-paying partner. While anal sex with regular non-paying partners was practiced by a smaller proportion of participants compared with vaginal sex (refer to Figure 11), it carries a higher risk of HIV transmission if condoms are not used. There were no differences between male and female participants in their frequency of condom use for anal sex with regular non-paying partner(s) in Round 2.

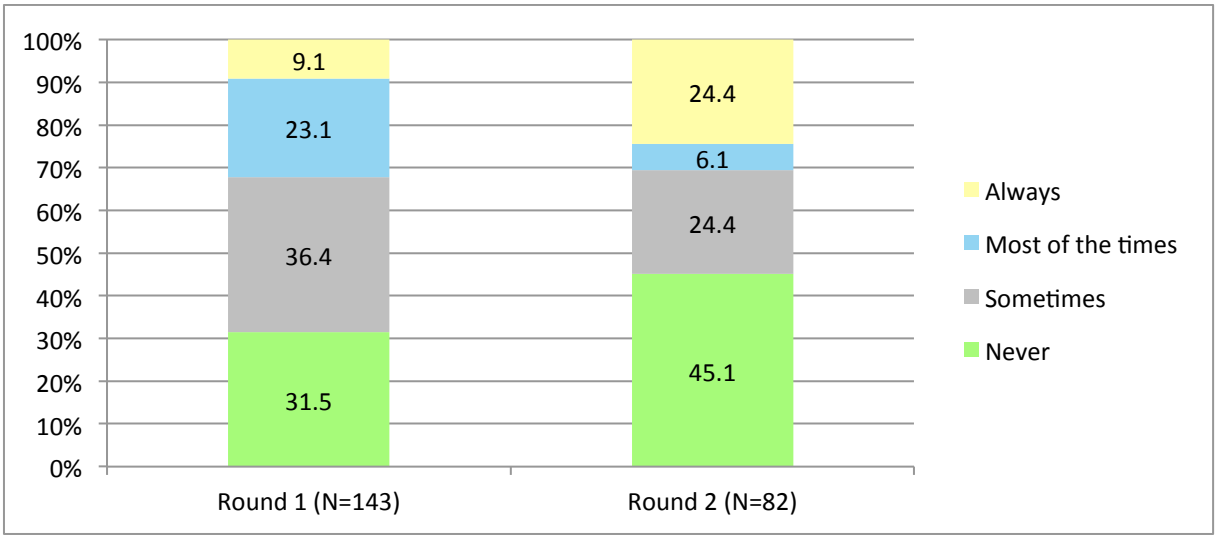

Figure 15: Frequency of condom use in the last six months during anal sex with regular non-paying partners, amongst those who had anal sex with a regular non-paying partner

*Missing=2

Almost equal proportions of participants in Round 1 (61.2%) and Round 2 (64.4%) used a condom at last anal sex with a regular non-paying partner (Table 18). Also, close to equal proportions of male (64.7%) and female (64.3%) participants at Round 2 reported having used a condom during their last occasion of anal sex with these partners. Very few people reported reasons for not using a condom at last anal sex with a regular non-paying partner. At Round 2 the most common reason given was 'condoms not comfortable' (n=7).

Table 18: Condom use at last anal sex with a regular non-paying partner, amongst those who reported using a condoms during anal sex with regular non-paying partners in the last six months by Study Round

	Round 1 **N=98 (%)**	**Round 2** **N=45 n (%)**
Used a condom at last anal sex with a regular non-paying partner	60 (61.2%)	29 (64.4%)

A significantly larger proportion of participants in Round 2 (42%) than Round 1 (2.8%) reported using lubricant at last anal sex with a regular non-paying partner (Fishers exact test, $p<0.001$). There was no difference in lubricant use between male and female participants in Round 2.

5 CASUAL NON-PAYING SEXUAL PARTNERS

Relevance to Tingim Laip log frame	
Objective 2	To deliver effective prevention and care responses in project locations
Outcome 2.1	At least 75% of targeted KAPs in project locations knowledgeable on and have correct understanding of HIV and SRH
Outcome 2.2	At least 50% of targeted KAPs in project locations use condoms consistently and correctly

5.1 Number of casual non-paying partners

There was no significant difference in the proportion of participants who had sex with one or more casual non-paying partners in the preceding six months between study Rounds (X^2, (1) =3.356, p<0.067) (Table 19). In Round 2, male participants were significantly more likely than female participants to have had sex with a casual non-paying partner in the preceding six months (X^2, (1) =8.409, p<0.004 (Table 20).

Table 19: Sex with a casual non-paying partners in the last six months, by Study Round, amongst those who reported have had sex

	Round 1 N=924 (%)	Round 2 N=989* (%)
Had sex with casual non-paying partners in the last six months	329 (35.6%)	313 (31.3%)

*Missing= 6 at Round 2

Table 20: Sex with casual non-paying partners in the last six months, amongst those at Round 2 who reported having had sex, by sex of participant

	Male N=451 (%)	Female N=537 (%)
Had casual non-paying partners in the last six months amongst participants in Round 2	164 (36.4%)	149 (27.7%)

5.2 Vaginal sex with casual non-paying sexual partners

5.2.1 Number of casual non-paying sexual partners

There was a significant difference between study Rounds in the number of casual non-paying partners that participants had had vaginal sex with in the preceding six months (χ^2, (2) =31.831, p<0.001). A much higher proportion of participants in Round 1 (12.8%) than Round 2 (1.7%) had not had vaginal sex with casual non-paying partners (Figure 16). There was also a difference in the number of participants reporting more than five casual non-paying partners who they had had vaginal sex with in the last six months (Figure 16). There were no differences between male and female participants in Round 2 in the number of casual non-paying partners they had had vaginal sex with in the preceding six months.

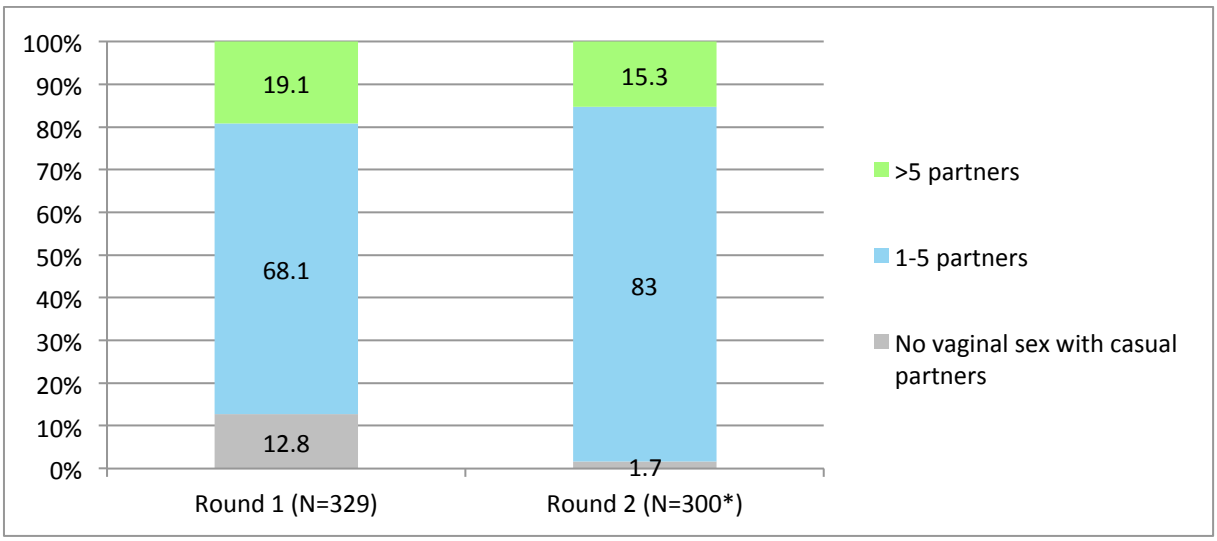

Figure 4: Number of casual non-paying partners who participants had vaginal sex with in the last 6 months, by Study Round, amongst those with at least one casual non-paying partner in the last six months

*Missing=13 in Total

5.2.2 Condom use with casual non-paying partners in the last six months

There was a statistically significant difference between participants in Rounds 1 and 2 in the frequency of condom use during vaginal sex with casual non-paying partners in the preceding six months (χ^2, (3) =31.273, p<0.001). Just over half (54.3%) of Round 2 participants who reported having had casual non-paying partners always used a condom, compared to less than a third in Round 1 (31.4%) (Figure 17). This result may reflect stronger male and female condom promotion and negotiation activities for Round 2 participants. In Round 2 there was no difference between male and female survey participants in the use of condoms with casual non-paying partners.

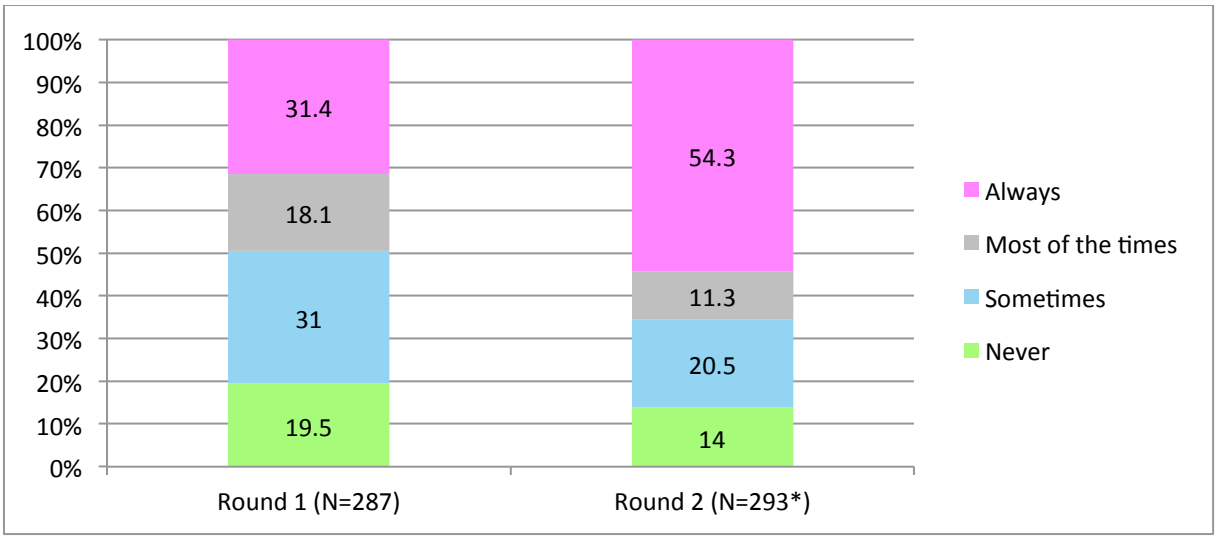

Figure 5: Frequency of condom use during vaginal sex with casual non-paying partners in the lasts six months, amongst those who had sex with at least one casual non-paying partner in that period

*Missing=2

In Round 2, male participants were more likely (46.1%) than female participants (38.9%) to report always using a condom for vaginal sex with casual non-paying partners (Figure 18). For both males and females, almost 60% used condoms with their casual non-paying partners 'always' or 'most of the time'.

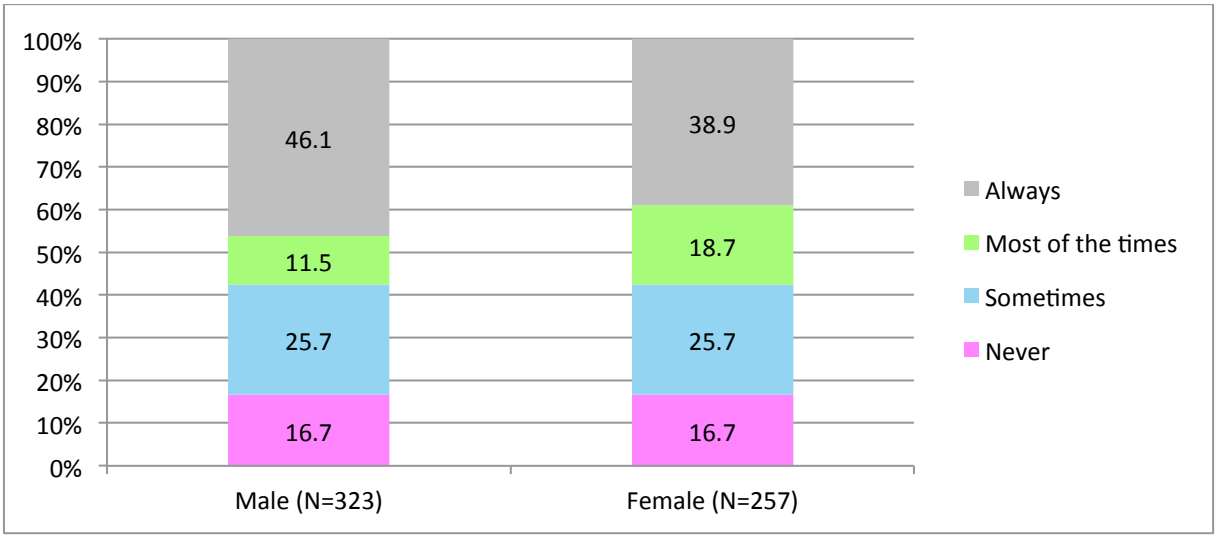

Figure 6: Frequency of condom use during vaginal sex with non-paying partners in the last six months, amongst those who had sex with at least one casual non-paying partner in that period, by sex of participant

*Missing=2

5.2.3 Condom use with casual non-paying sexual partners at last vaginal sex

Among participants who used condoms during vaginal sex with casual non-paying partners in the last six months, over three quarters (83%) used a condom at last occasion of vaginal sex with no significant difference between survey Rounds (X^2, (2) =2.708, p=0.100) (Table 21). There was no difference between male and female participants in the reported use of a condom at last vaginal sex with a casual non-paying partner in Round 2.

Table 21: Condom use at last vaginal sex with a casual non-paying partner by Study Round amongst those who used condom with casual non-paying partner in the last six months by Study Round

	Round 1 (N=231)	Round 2 (N=252)
Used a condom at last vaginal sex with casual non-paying partner	185 (80.1%)	216 (85.7%)

Amongst participants who did not use a condom during last vaginal sex with a casual non-paying partner, the majority of participants did not give reasons for not using a condom on that occasion. Of the 14 participants who did answer this question (n=1 Round 1; n=13 Round 2), lack of condom availability was the most common reason given.

5.3 Anal sex with casual non-paying sexual partners

5.3.1 Number of casual non-paying sexual partners

There was a significant difference between the two survey Rounds in the number of casual non-paying partners participants had anal sex with in the preceding six months (χ^2, (2) =31.343, p<0.001). Although high in both survey Rounds, the proportion of participants in Round 2 (83.7%) who did not have anal sex with casual non-paying partners was significantly higher than at Round 1 (64.1%) (Figure 19). There was no difference between male and female participants in Round 2 in the number of casual non-paying partners participants had anal sex with.

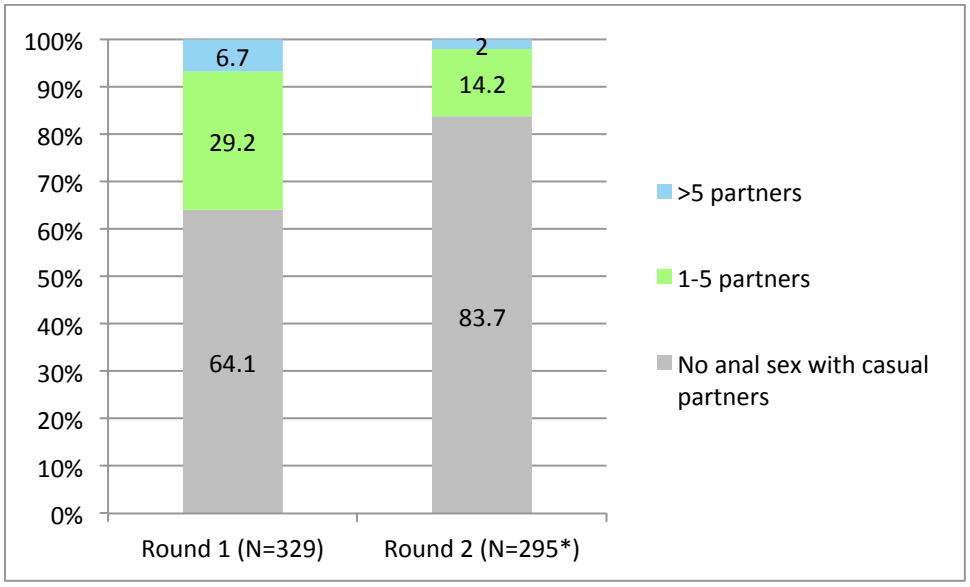

Figure 19: Number of casual non-paying partners had anal sex with in the last 6 months by Study Round amongst those who had causal non-paying partners in the last six months by Study Round

*Missing=18 participants in Round 2

5.3.2 Condom use during anal sex in the last six months with a casual non-paying partner

There was a significant difference between survey Rounds in the frequency of condom use during anal sex with casual non-paying partners in the last six months (X^2, (1) =11.10, p=0.011). More than double the proportion of participants at Round 2 (43.8%) compared to Round 1 (19.5%) reported always using a condom during anal sex with casual non-paying partners (Figure 20). In Round 2 there was no difference between male and female participants in condom use during anal sex in the last six months.

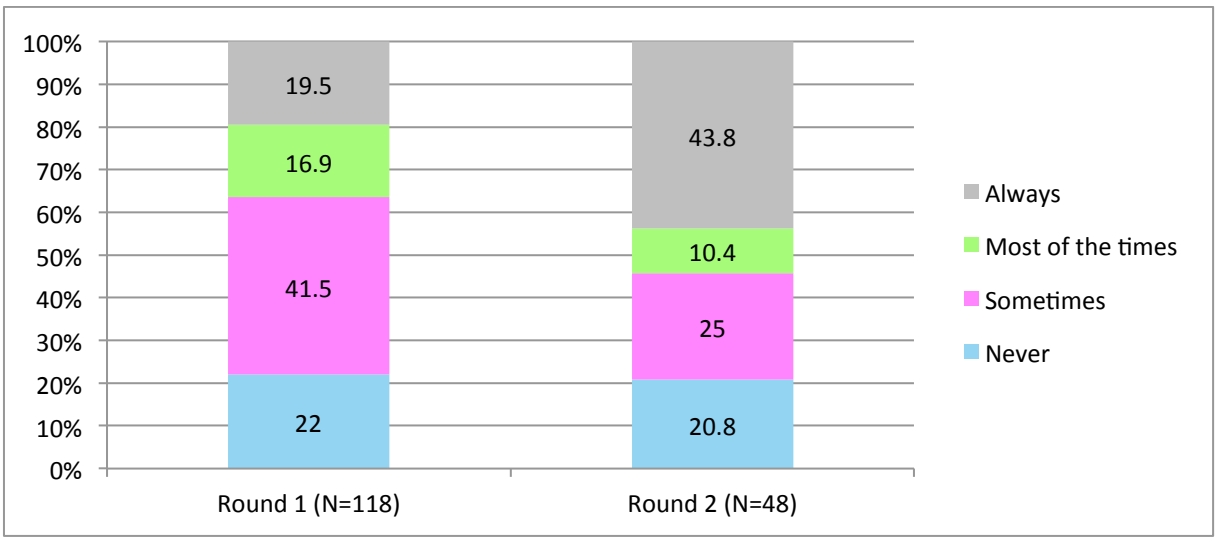

Figure 20: Frequency of condom use during anal sex with casual non-paying partner in the last six months amongst those who had anal sex with casual non-paying partner by Study Round

5.3.3 Condom use at last occasion of anal sex with a casual non-paying partner

Amongst those who had anal sex with casual non-paying partner(s) (n=130), a significantly larger proportion of participants in Round 2 compared to Round 1 reported using a condom during the last occasion of anal sex with a casual non-paying partner (X^2, (1) 5.798, p=0.02) (Table 22). In Round 2 there was no difference between male and female participants in condom use at last occasion of anal sex.

Table 22: Condom use at last anal sex with casual non-paying partner amongst those who had anal sex with casual non-paying partner by Study Round

	Round 1 N=92(%)	Round 2 N=38* (%)
Used a condom at last anal sex with casual non-paying partner	57 (62%)	31 (83.8%)

*Missing=1

Of participants who reported not using condoms at last anal sex with casual non-paying partners, 'partner objection' was the most frequently reported reason with almost equal proportions of participants citing it as a barrier in Round 1 (45.8%) and Round 2 (50%). There were too few people to statistically analyse differences by male and female participants in Round 2.

5.3.4 Lubricant use at last anal sex with casual non-paying partners

Amongst participants who reported having one or more casual non-paying partners with whom they had anal sex in the last six months (n=166), there was no difference in lubricant use at last anal sex between Round 1 and Round 2 participants (X^2, (1) =0.915, p=0.339) (Table 23) nor between male and female participants in Round 2.

Table 23: Used lubricant at last anal sex with a casual non-paying partner, amongst those who had anal sex with casual non-paying partner in the last six months by Study Round

	Round 1 N=118 (%)	Round 2 N=48 (%)
Lubricant use at last anal sex with casual non-paying partner	47 (39.8%)	23 (47.9%)

6 TRANSACTIONAL SEX

6.1 Ever exchanged, purchased or sold sex

Approximately double the proportion of participants in Round 2 (40%) compared to Round 1 (20.6%) reported having ever exchanged sex (given and/or received) for money, goods or services and this difference was significant (X^2, (1) =85.169, p<0.001) (Table 24). There was also a significant difference in the proportion of male (33.4%) and female (45.7%) participants in Round 2 who reported ever having exchanged sex (given and/or received (X^2, (1) =20.599, p<0.001) (Table 25).

Table 24: Ever exchanged sex (given or received) for money, goods or services for sex by Study Round

	Round 1 N=924 (%)	Round 2 N=995 (%)
Ever exchanged sex for money, goods or services	190 (20.6%)	398 (40%)

Table 25: Ever exchanged sex for money, goods and/or services by sex of participant in Round 2

	Male N=452 (%)	Female N=540* (%)
Ever exchanged sex for money, goods or services	151 (33.4%)	247 (45.7%)

*Missing=1 female participant

There was no difference between study Rounds in the proportion of participants who had ever given money to someone in exchange for sex (X^2, (1) =3.127, p=0.077) (Table 26). Proportionally more participants in Round 2 (12.9%) compared with Round 1 (8.4%) had ever given goods/favours in exchange for sex (X^2, (1) =9.71, p=0.002) (Table 27).

Table 26: Ever given money in exchange for sex, by Study Round

	Round 1 N=924 (%)	Round 2 N=988* (%)
Ever given money to someone in exchange for sex	83 (9%)	113 (11.4%)

*Missing= 7 participants in Round 2

Table 27: Ever given goods or favours in exchange for sex, by Study Round

	Round 1 N=924 (%)	Round 2 N=988* (%)
Ever given someone goods or favours in exchange to sex	78 (8.4%)	127 (12.9%)

*Missing= 7 participants in Round 2

Proportionally more participants in Round 2 (29%) than in Round 1 (12.2%) had ever received money for sex, (X^2, (1) =81.428, p<0.001) (Table 28). Proportionally more participants in Round 2 (28.6%) compared with Round 1 (11.8%) had ever received goods/favours in exchange for sex (X^2, (1) 82.721, p<0.001) (Table 29).

Table 28: Ever received money in exchange for sex, by Study Round

	Round 1 N=924 (%)	Round 2 N=989* (%)
Ever received money in exchange for sex	113 (12.2%)	287 (29%)

*Missing= 6 participants in Round 2

Table 29: Ever received goods or favours in exchange for sex, by Study Round

	Round 1 N=924 (%)	Round 2 N=990* (%)
Ever received goods or favours in exchange for sex	109 (11.8%)	283 (28.6%)

*Missing=3 participants in Round 2

In Round 2, significantly more female than male participants reported ever receiving money (X^2, (1) =89.119, p<0.001) (Table 30) and /or goods and favours (X^2, (1) =91.687, p<0.001) in exchange for sex (Table 31).

Table 30: Ever received money in exchange for sex by sex of participant in Round 2

	Male N=1031* (%)	Female N=881* (%)
Ever received money in exchange for sex	132 (12.8%)	268 (30.4%)

*Missing=2 Male, 2 Female

Table 31: Ever received goods or favours in exchange for sex, by sex of participant in Round 2

	Male N=1031* (%)	Female N=882* (%)
Ever received goods or favours in exchange for sex	127 (12.3%)	265 (30%)

*Missing=2 Male, 1 Female

The converse was true for giving money or good and services, where there was a significantly larger proportion of male than female participants who reported having ever given money (X^2, (1) =48.546, p<0.001) (Table 32) or goods and favours (X^2, (1) =59.919, p<0.001) (Table 33) in exchange for sex.

Table 32: Ever given money in exchange for sex, by sex of participant in Round 2

	Male N=1033 (%)	Female N=878* (%)
Ever given money in exchange for sex	152 (14.7%)	44 (5%)

*Missing=5 Female participants

Table 33: Ever given goods or favours in exchange for sex, by sex of participant in Round 2

	Male n=1033 (%)	Female n=878 (%)
Ever given money someone goods or favours in exchange to sex	163 (15.8%)	42 (4.8%)

**Missing=5 Female participants

6.2 Transactional vaginal sex

6.2.1 Number of transactional vaginal sex partners

Among participants who had ever exchanged sex there was a significant difference between the two study Rounds in the number of transactional (*given and received*) partners they reported having vaginal sex with in the last six months (X^2, (1) =59.539, p<0.001). There were proportionally more participants with greater than 5 transactional sex partners in Round 1 (40.5%) than in Round 2 (20.6%). There was also a difference in the proportion of participants who had ever transacted vaginal sex at Round 1 (0%) and Round 2 (15.2%), but who had not had done so in the last six months (Figure 21).

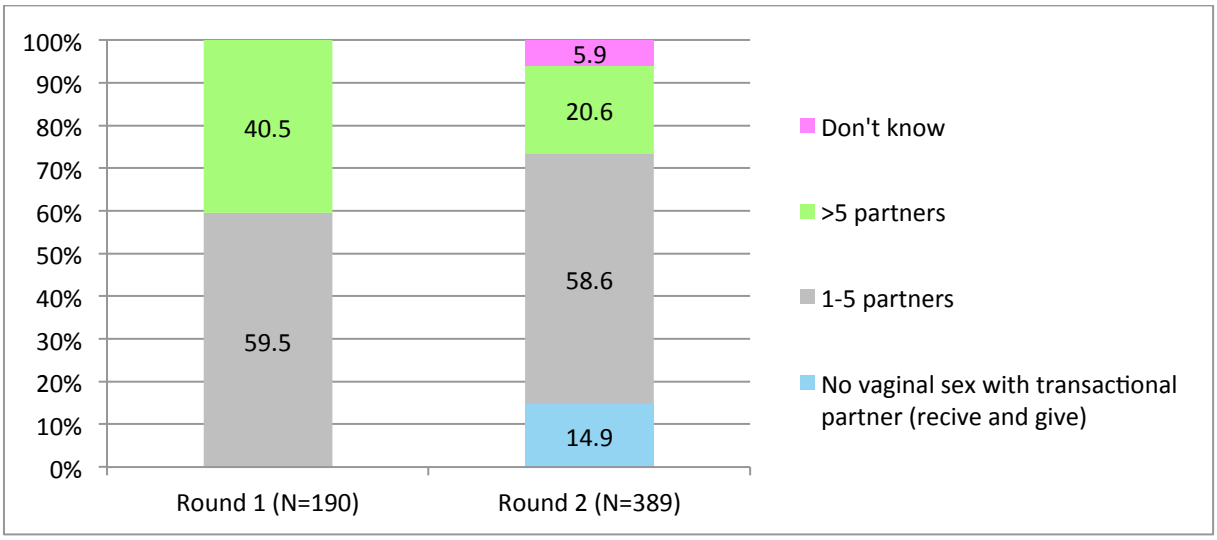

Figure 21: Number of transactional partners had vaginal sex with in the last six months by Study Round amongst those who had ever had transactional sex

*Missing=6 participants in Total

Among participants in Round 2 who had ever engaged in transactional sex, significantly more female than male participants had one or more transactional sex partners with whom they had vaginal sex in the last six months (X^2, (3) =124.620, p<0.001) (Figure 22).

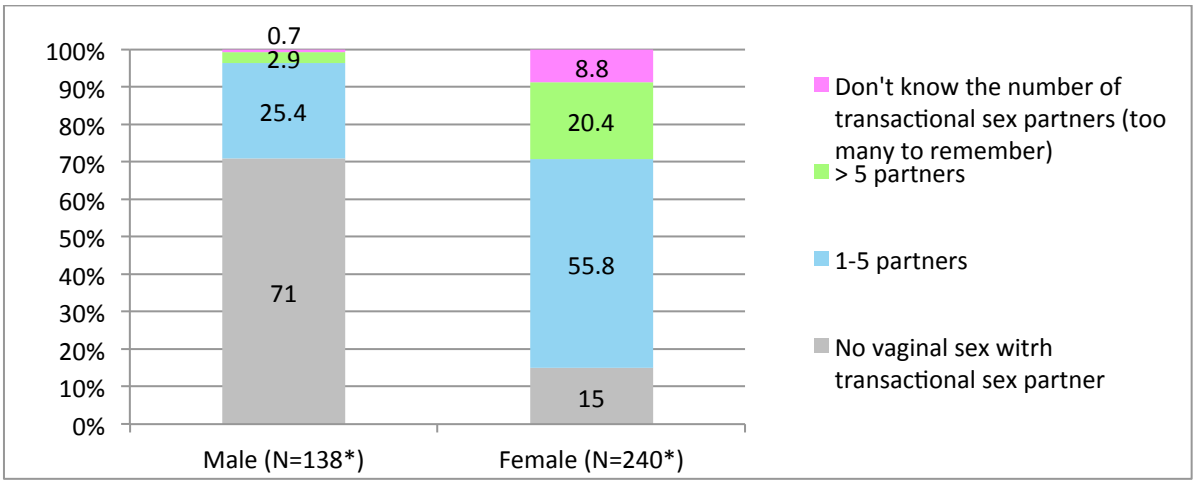

Figure 22: Number of transactional partners with whom participants received money, goods or favours in exchange for vaginal sex in the last six months by sex of participant in Round 2

*Missing= 20 participants in Total

6.2.2 Condom use for vaginal sex with transactional sex partners

In Round 1, survey questions about frequency of condom use during vaginal and anal sex with transactional partners were not asked separately for giving or receiving money, goods or favours. In Round 2, these questions were asked separately and as such, this section is focussed entirely on Round 2 data.

Condom use during vaginal sex with transactional sex partners who they gave money, good or favours in exchange for sex

Among Round 2 male and female participants who had vaginal sex with transactional partner(s) in the last six months with partners they had ***given*** money, goods or favours to, more than half the male participants (57.5%) reported always using a condom. Since there were only 13 female participants who had given money, goods, or favours in exchange for sex, no statistical comparisons were conducted (Figure 23).

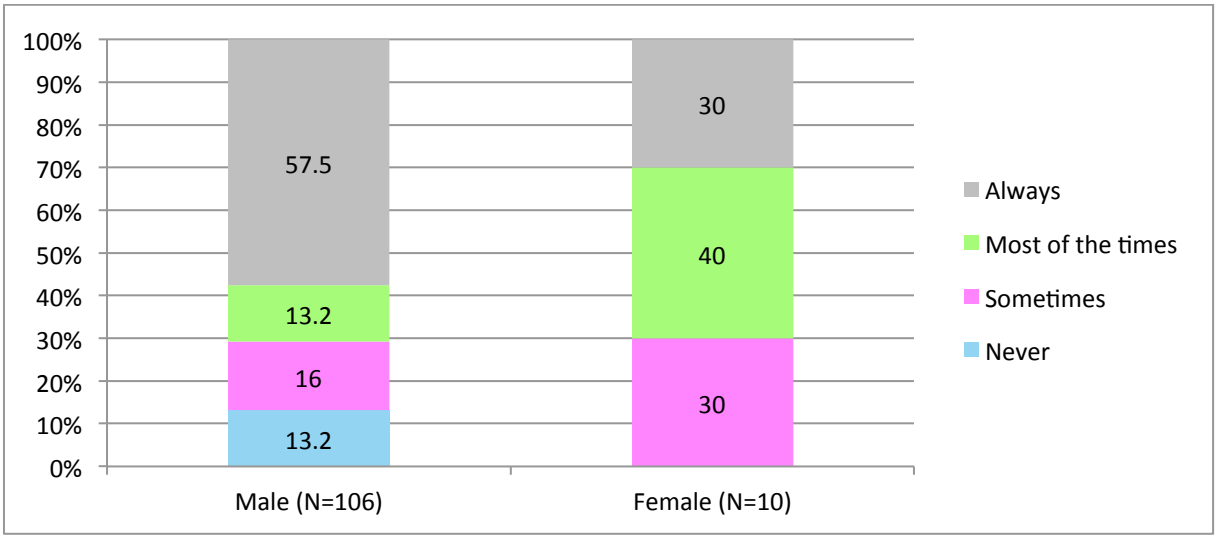

Figure 23: Frequency of condom use during vaginal sex with transactional sex partner(s) with whom participants in Round 2 gave money, goods or favours in the last six months by sex of participant in Round 2

*Missing=10 participants in Total

Amongst those who reported using a condom in the last six months during vaginal sex with one of more transactional partners who they had given money, goods, or favours to, significantly more male than female participants reported using a condom at last vaginal sex with such partner (Fishers Exact Test, p=0.032) (Table 34).

Table 34: Condom use at last vaginal sex with a transactional sex partner with whom participants gave money, goods or favours in exchange for sex by sex of participant in Round 2

	Male N=91 (%)	Female N=8 (%)
Used a condom use at last vaginal sex with a transactional sex partner whom participants gave money, goods or favours to	84 (92.3%)	5 (62.5%)

*Missing= 1 Male; 2 Female

The small number of people who did not use a condom on the last occasion they had vaginal sex with a transactional partner who they had given money, goods or favours to in exchange for sex, were asked for their reasons for not using a condom on that occasion. Only 7 people provided a response, with the most common reasons cited as 'trusting the partner', 'condom not available', and the participant 'didn't want to use a condom'.

Condom use during vaginal sex with transactional sex partners who they received money, good or favours in exchange for sex

Among those who reported having vaginal sex with a transactional partner from whom they received money, goods or favours, there were no significant differences in the proportions of female (48%) and male participants (41%) who reported always using a condom (Figure 24).

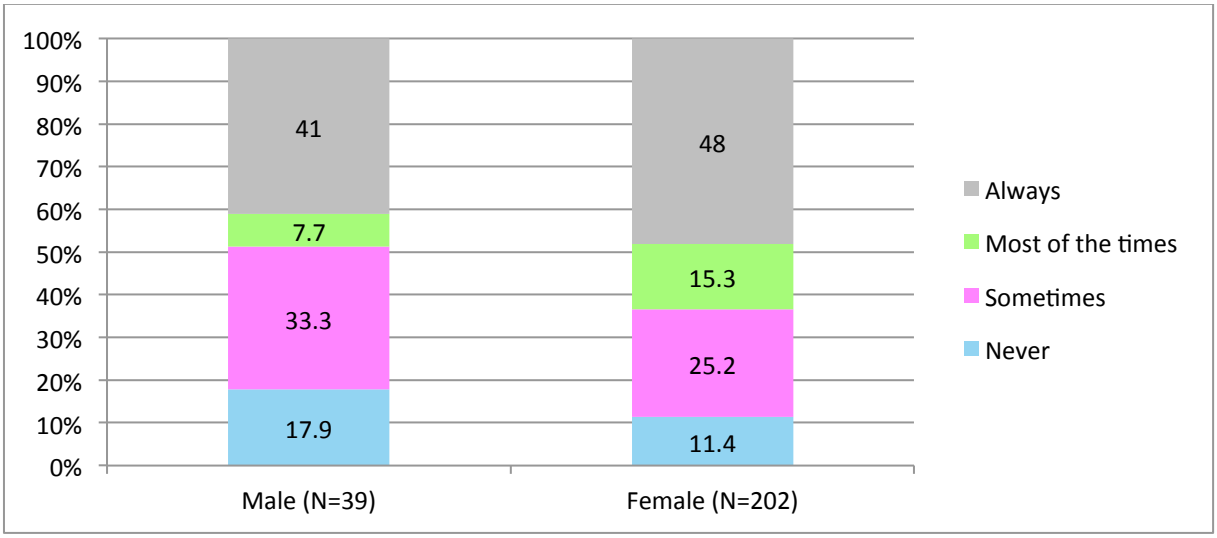

Figure 24: Frequency of condom use during vaginal sex with transactional partner(s) where participants received money, goods or favours in the last six months by sex of participant in Round 2

*Missing= 3 participants in Total.

In Round 2, the vast majority of both male (87.5%) and female (84.9%) participants reported having used a condom at last vaginal sex with a transactional partner from whom they received money, goods or favours in exchange for sex (Table 35).

Table 35: Used a condom at last vaginal sex with a transactional sex partner whom participants received money, goods or favours in exchange for sex by sex of participant in Round 2

	Male N=32 (%)	Female N=179 (%)
Used a condom use at last vaginal sex with a transactional sex partner whom participants received money, goods or favours from	28 (87.5%)	152 (84.9%)

Among those who did not use a condom at last vaginal sex with a partner with whom they received money, goods or favours, the main reasons given for not using a condom on that occasion included 'partner objection' (45.2 %) and 'trusting partner' (32.3%) (Table 36).

Table 36: Reasons for not using a condom at last vaginal sex with partners from whom participants received money, good or favours in Round 2

Reasons for not using condom at last vaginal sex with partners from participants received money, good or favours from	Round 2 N=31 (%)
Partner objected	14 (45.2%)
Trust partner	10 (32.3%)
Not available	6 (19.4%)
Too drunk/stoned	6 (19.4%)
I didn't want to	5 (16.1%)
Want a child	5 (16.1%)
Reduce pleasure	3 (9.7%)
Other	2 (6.5%)
Not comfortable	2 (6.5%)

*Participants could answer more than one

6.3 Anal sex with transactional partners

This section presents data about anal sex with transactional partners, including condom use. Similar to the section above, the data presented here are restricted to Round 2 survey data only.

6.3.1 Anal sex with transactional partners where partners had given money, goods or favours in exchange for sex

Among participants who had ever had sex with a transactional partner in Round 2, relatively few had given money, goods, services or favours in exchange for sex with a partner with whom they had anal sex (n=18), with significantly more male participants (n=15) than female (n=3) participants having done so (Fishers Exact Test, p=0.002).

Of the 15 male participants who had anal sex with a person who they gave money, goods, services or favours in exchange for sex, eight (53.3%) reported always using a condom while four (26.7%) reported that they never used condoms. Of the three female participants, two reported that they sometimes use a condom while one said never.

6.3.2 Anal sex with transactional partners where partners had received money, goods or favours in exchange for sex

Amongst those who reported ever having had a transactional partner from whom they received money, goods or favours in exchange for sex, proportionally more female (20.4%) than male (8.8%) participants had one or more transactional partners with whom they had anal sex (Figure 25).

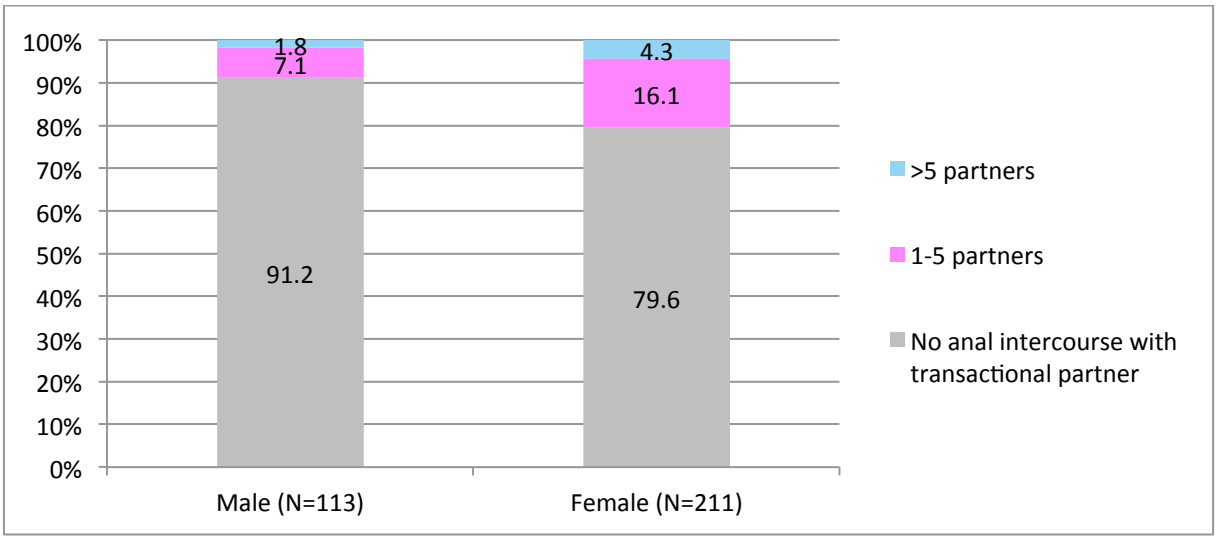

Figure 25: Number of partners with whom participants received money, goods or services in exchange for anal sex in the last six months amongst those who reported to ever having had transactional sex by sex of participant in Round 2

*Missing=74

Among those who reported having anal sex with a transactional partner from whom they received money, goods or favours, 66.7% of female participants reported having had some unprotected anal sex. Given the low number of male participants who received money for anal sex, the percentages should be interpreted with caution (Figure 26).

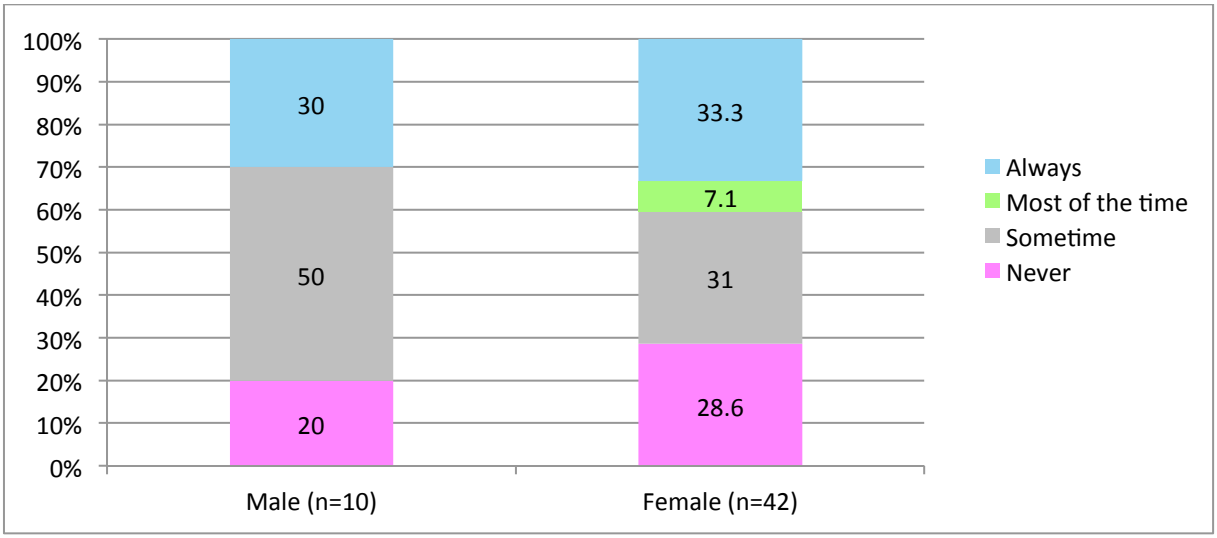

Figure 26: Frequency of condom use during anal sex with transactional partners with whom participants received money goods, services or favours in exchange for anal sex amongst those who reported having one or more transactional sex partners

*Missing=1

6.3.3 Lubricant use during anal sex with transactional sex partners

This section presents data about lubricant use for anal sex with transactional partners in Round 2.

Of the eighteen participants in Round 2 who had anal sex with partners who they gave money, goods or services to in exchange for sex, ten of them reported not using a lubricant at last anal sex with such partners, eight of whom were men.

Among female participants who received money, goods or favours in exchange for sex, which involved anal sex (n=35), about 50% (n=17) used lubricant on the last occasion of anal sex with such a partner. Among male participants (n=10), six (60%) reported that they had used condoms on the last occasion of anal sex with a transactional sex partner from whom they had received money, goods or favours. The figures for men are low and should not be relied upon.

7 SEXUALLY TRANSMITTED INFECTIONS (STIS)

Relevance to Tingim Laip log frame	
Objective 2	To deliver effective prevention and care responses in project locations
Objective 2.1	At least 75% of targeted KAPs in project locations knowledgeable on and have correct understanding of HIV and SRH
Objective 2.3	At least 80% of targeted KAPs in project locations regularly use STI services (screening, testing, treatment)

While many of the same questions about sexually transmitted infections (STIs) were asked in both survey Rounds, questions about awareness, knowledge and where such knowledge had been acquired were only asked of Round 2 participants.

7.1 Sources of information about STIs

In Round 2, the majority of participants (83.6%) had heard of STIs. There was no significant difference in the proportions of male (86.4%) and female (81.3%) participants who had heard of STIs. There was also no significant relationship between having heard of STIs and having received an STI referral, or having attended an STI awareness session in the last twelve months.

Among participants who had heard of an STI, the five most common sources of STI information were: TL field officers (56.3%); health workers (49.6%); TL volunteers (20.3%); newspaper (19.3%); and friends or relatives (18.5%) (Figure 27).

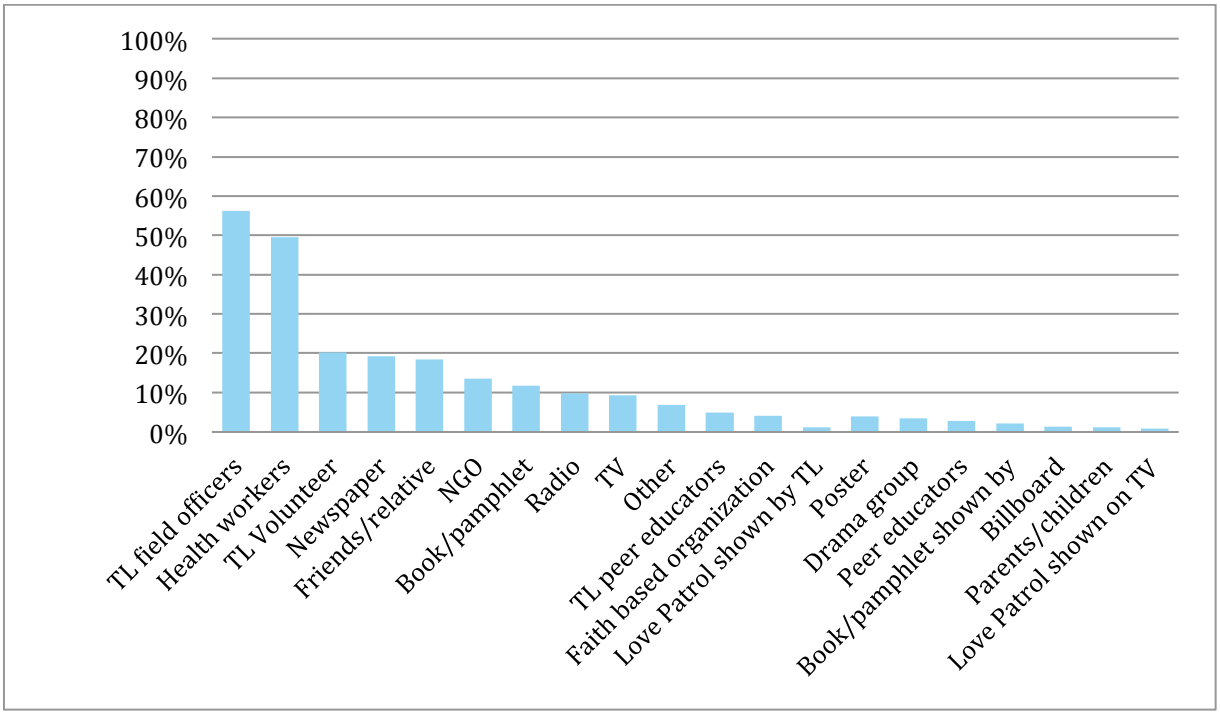

Figure 27: Source of STI information

*Participants could answer more than one

7.2 Experience of STI symptoms

Participants who reported ever having had sex (N=993) were asked additional questions about whether they had experienced STI symptoms, and what type of STI symptoms they had experienced in the last month. A significantly higher proportion of participants at Round 2 compared to Round 1 reported experiencing:

- Unusual genital discharge (12.4%, vs 3.2% respectively) (X^2, (1) =46.268, p<0.001)
- Lower abdominal pain during sexual intercourse (11%, vs 3.2% respectively) (X^2, (1) =35.960, p<0.001)
- Stinging and burning pain during urination (11.7%, vs 2.4% respectively) (X^2, (1) =51.097, p<0.001)

Among the participants in Round 2 who reported ever having had sex, a significantly higher proportion of female than male participants reported having experienced a number of STI symptoms in the last month, including: unusual genital discharge (19.3%, vs 4.2% respectively) (X^2, (1) =50.698, p<0.001); and, stinging or burning pain during urination (16.7%, vs 5.8% respectively) (X^2, (1) =27.805, p<0.001). Of those who reported having an STI in the preceding month, there was no significant difference between the two survey Rounds in the proportion who sought medical treatment for an STI (X^2, (1) =0.326, p=0.569) (Table 37). In Round 2 there was no significant difference in the proportion of male and female participants who sought medical treatment (X^2, (1) =0.4466, p=0.504).

Table 37: Seen someone for STI treatment by Study Round

	Round 1 N=76 (%)	Round 2 N=205 (%)
Seen someone for STI treatment	45 (59.2%)	129 (62.9%)

There was a significant difference between study Rounds in the association between having sought STI treatment and having received an STI referral or attended an STI awareness session. In Round 2 (but not in Round 1), participants were asked how many times they had visited an STI clinic in the preceding twelve months. Almost half (47.4%) the participants in Round 2 had visited an STI clinic one or more times in the previous twelve months (Figure 28). In Round 2, there was no significant difference between male and female participants in the number of visits made to an STI clinic (X^2, (3) =39.528, p=<0.001).

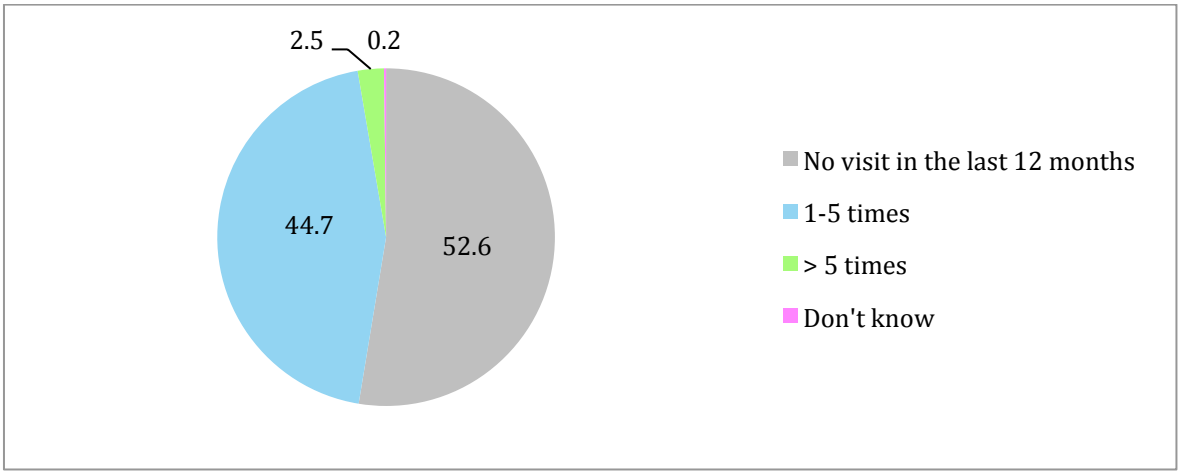

Figure 28: Number of times visited an STI clinic in the last twelve months in Round 2 (N=1017)

8 ALCOHOL AND DRUG USE

Relevance to Tingim Laip log frame	
Objective 2	To deliver effective prevention and care responses in project locations
Objective 2.1	At least 75% of targeted KAPs in project locations knowledgeable on and have correct understanding of HIV and SRH

8.1 Alcohol use in the last six months

There was a significant difference in the level of alcohol use between the two survey rounds (X^2, (4) =747.680, p<0.001). Participants in Round 2 were more likely to drink alcohol (73.8%) than those in Round 1 (65%). However of those who drank alcohol, those in Round 1 drank more frequently than those in Round 2, with 25.6% in Round 1 drinking weekly compared with 17.6% in Round 2 (Figure 29).

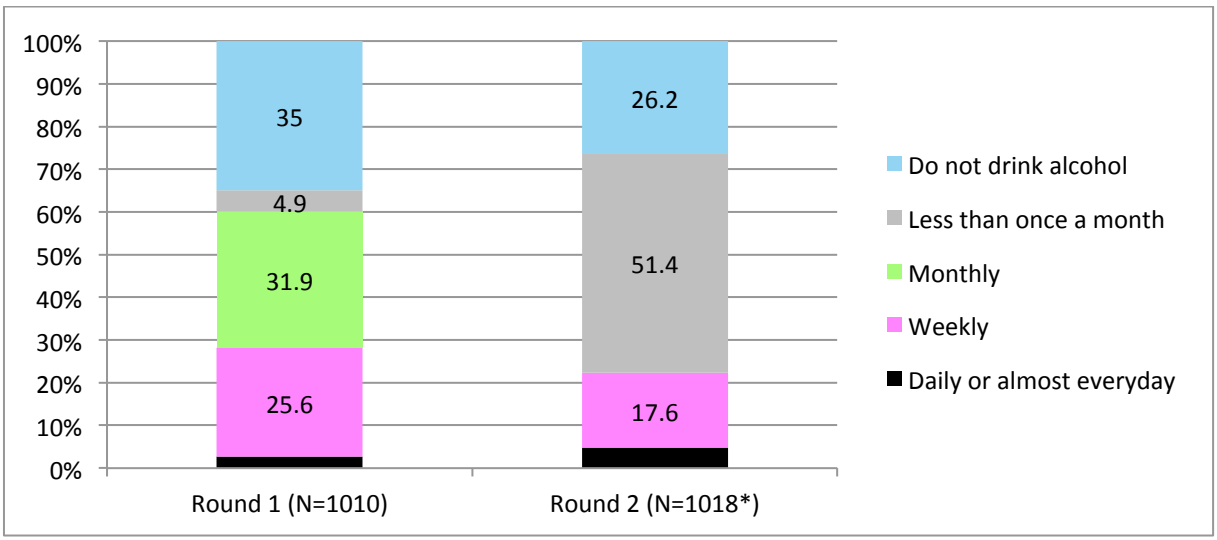

Figure 29: Frequency of alcohol intake in the last six months by Study Round

*Missing=7 participants in Total

At Round 2, there were significant differences in rates of alcohol use in the previous six months between male and female participants (X^2, (3) =62.596, p<0.001). More than double the proportion of female (35.3%) than male participants (15.4%) reported not drinking alcohol in the previous six months. Proportionally more male (23.2%) than female (13%) participants reported drinking alcohol weekly within the same period (Figure 30).

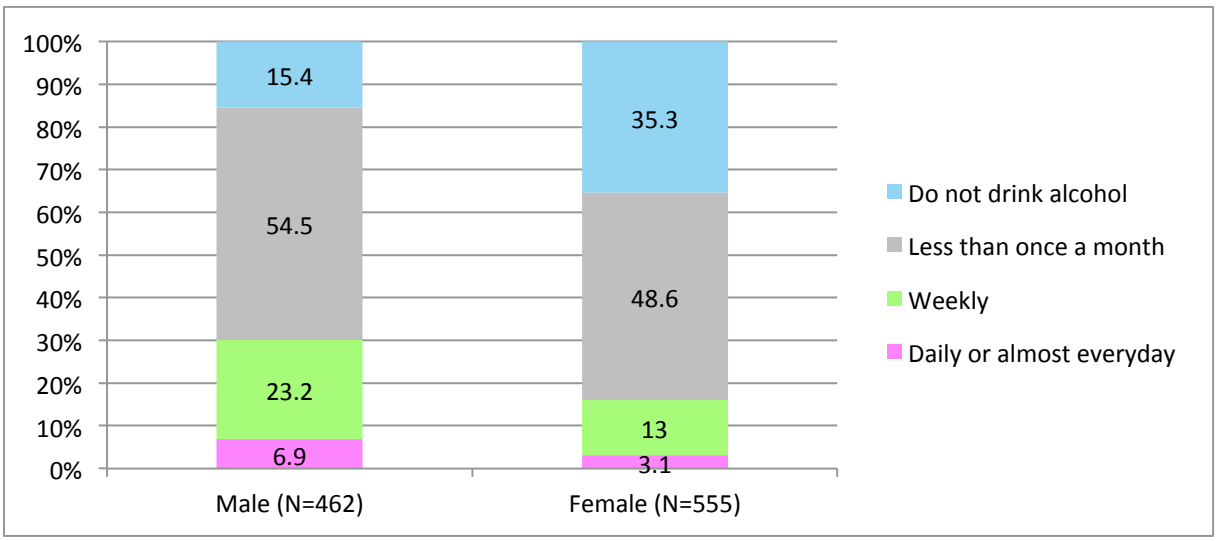

Figure 30: Frequency of alcohol intake in the last six months by sex of participant in Round 2

*Missing=8 participants in Total.

8.2 Average number of alcoholic drinks per drinking session in the last six months

Among those who reported drinking alcohol in the preceding six months, there was a significant difference in the average number of drinks consumed in a drinking session between the two study Rounds (X^2, (3) =63.659, p<0.001). Round 2 participants drank more per session than Round 1 participants, with almost 70% of Round 2 participants drinking eleven or more drinks per session compared with about 55% of the Round 1 participants (Figure 31).

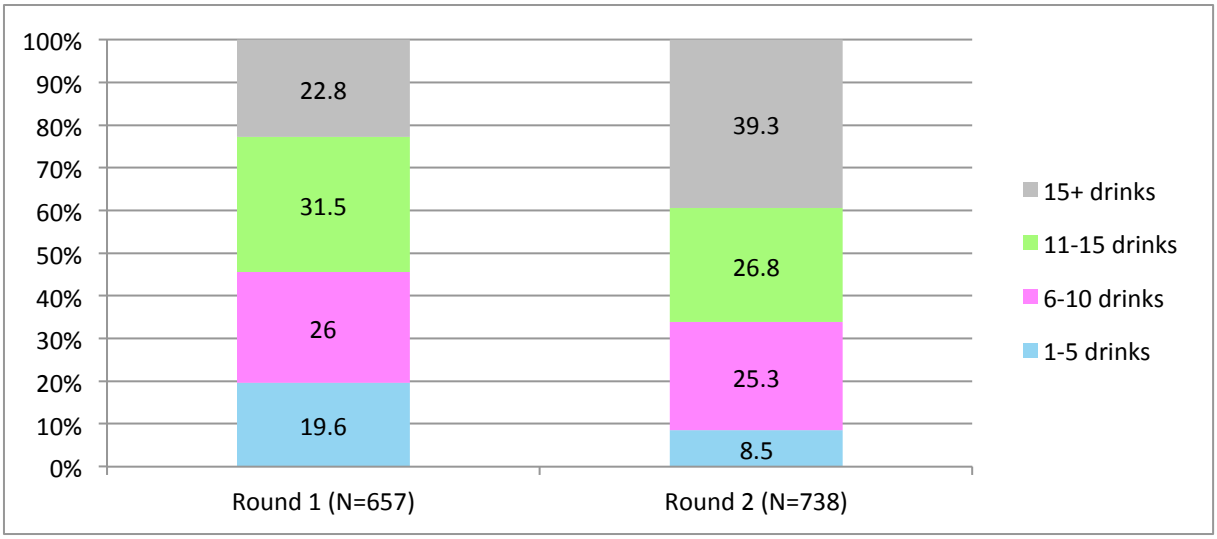

Figure 71: Average number of drinks per drinking session amongst participants who drank alcohol in the last six months by Study Round

*Missing=13 participants in Total

Of those participants in Round 2 who reported drinking alcohol within the last six months, proportionally more male (73.3%) than female (58.3%) participants drank more than 11 alcoholic drinks per drinking session (X^2, (3) =20.126, p<0.001) (Figure 32).

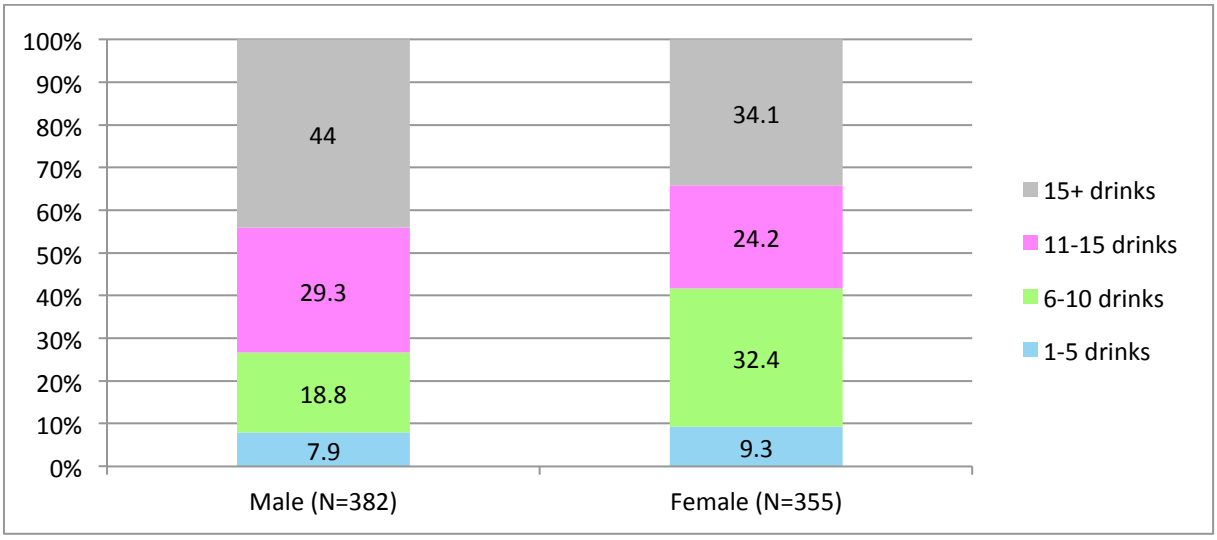

Figure 32: Average number of drinks per drinking session amongst participants in Round 2 who drank alcohol in the last six months by sex of participant

*Missing=14 participants

8.3 Preferred type of alcohol

Participants in Rounds 1 and 2 showed a significant difference in the types of alcohol they preferred, (X^2, (3) =303.611, p<0.001). While the majority of participants in both rounds identified SP Beer, a significantly larger proportion of Round 1 than Round 2 participants indicated their preference for SP Beer, while almost 40% reported Spirits in Round 2 while only 3.3% did in Round 1 (Figure 33). At Round 2, there was no significant difference between male and female participants in their preferred type of alcohol.

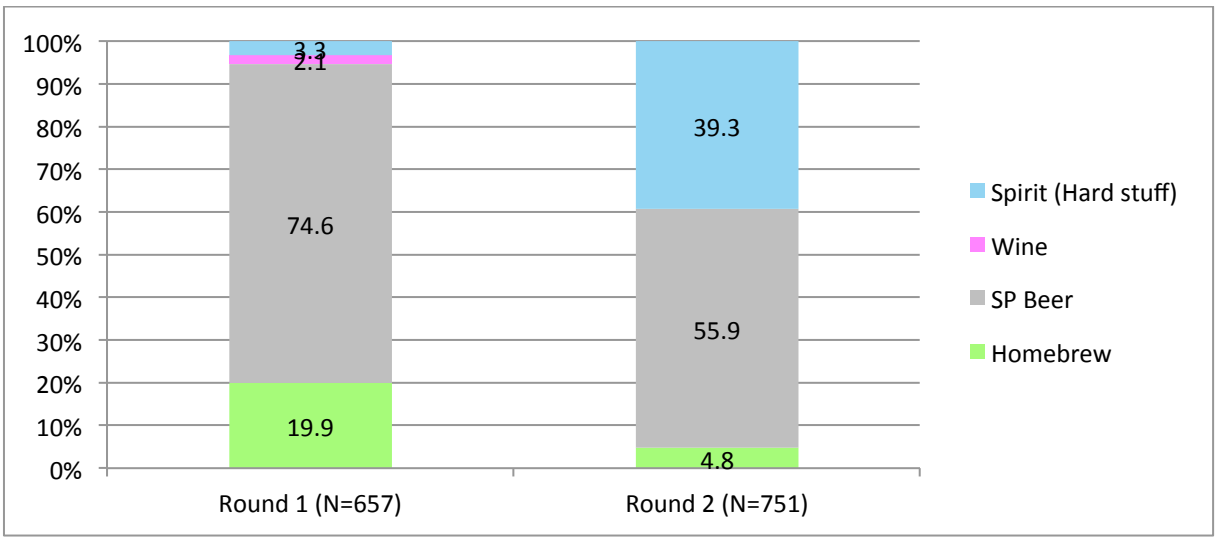

Figure 33: Type of alcohol preferred by participants who drank alcohol in the last six months by Study Round

8.4 Drug use in the last six months

A significantly higher proportion of participants in Round 1 (29.5%) compared to Round 2 (21.1%) used non-prescription drugs in the previous six months (X^2, (1) =19.191, p<0.001). A significantly higher proportion of male (29.2%), than female (14.2%) participants in Round 2 reported taking drugs within the preceding six months (X^2, (1) =34.198, p<0.001).

8.5 Type of drugs used in the last month

Among participants who reported using non-prescription drugs in the last six months, a significantly higher proportion of participants in Round 1 (94.6%) compared to Round 2 (49.3%) reported smoking tobacco in the last month (X^2, (1) =124.401, p<0.001). Conversely, a higher proportion of participants in Round 2 (60%) than Round 1 (30.4%) reported using marijuana within the same time period (X^2, (1) =41.934, p<0.001).

Among participants in Round 2 who reported having used non-prescription drugs, close to an equal proportion of male (60.7%) and female (59%) participants reported having used marijuana in the last month with a similar proportion also reporting having smoked tobacco (51.1% vs 46.2% respectively).

9 TINGIM LAIP ACTIVITIES

There was a significant difference between study Rounds in how participants came to know about TL. More than half (57.2%) the participants in Round 2 reported first hearing about TL through a TL staff member, however this was not so for Round 1, in which no participant reported TL staff as their first source. Friends were the most common source of how participants came to know about TL in Round 1 (34.9%), a striking contrast to the role of friends in Round 2 (6.9%) (Table 38).

In Round 2 more than 88% of participants reported learning about TL through a TL staff member or volunteer, or through a friend (a peer), compared with Round 1, in which only 69% of participants reported learning about TL through these groups.

Table 38: Major source from which participants knew about TL by Study Round

Sources on how participants knew about TL	Round 1 N (%)	Round 2 N (%)
TL staff	0 (0%)	584 (57.2%)
Friends	352 (34.9%)	70 (6.9%)
TL volunteers	121 (12%)	246 (24.1%)
TL Field officers	223 (22.1%)	0 (0%)
Family/relatives	102 (10.1%)	72 (7.1%)
TL condom distributers	77 (7.6%)	0 (0%)
Co-workers	43 (4.3%)	13 (1.3%)
Media	48 (4.8%)	7 (0.7%)
Volunteers from other NGO	34 (3.4%)	11 (1.1%)
Booklet	10 (1%)	5 (0.5%)
Other	0 (0%)	13 (1.3%)
Total	1010 (100%)	1021 (100%)

*Participants could give more than one source; Missing=4 participants in total

The majority of Round 1 participants (67.1%) commenced their involvement with TL in 2011-2013, while the majority of Round 2 participants (65%) began their TL involvement in 2014-2015 (Figure 34). It is important to note that the majority of participants in both rounds only became involved with TL in the one or two years prior to data collection. In Round 2, there was no significant difference between male and female participants in the time in which they became involved with TL.

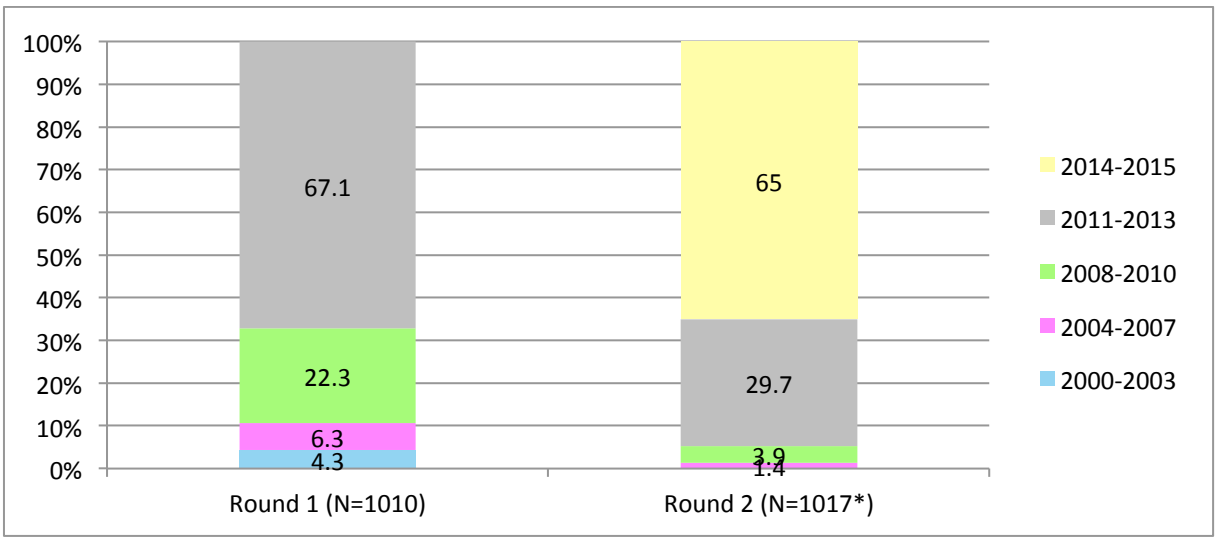

Figure 34: Year participants started taking part in TL activities by Study Round

*Missing=8 participants in Total

9.1 TL activity questions captured only in Round 2 Survey

Only participants in Round 2 were asked about the number of times they came into contact with TL staff and volunteers, including TL field officers, TL volunteers, or a condom distributor within the preceding twelve months. Proportionally more male (18.3%) than female (11.3%) participants reported coming into contact with a TL officer between 7 to 12 times in the previous twelve months (X^2, (4) =10.94, p<0.027) (Figure 35). Overall, 41.6% of participants reported coming into contact with a TL officer more than seven times in the previous twelve months. There was no significant difference in the number of times male and female participants at Round 2 had taken part in TL activities.

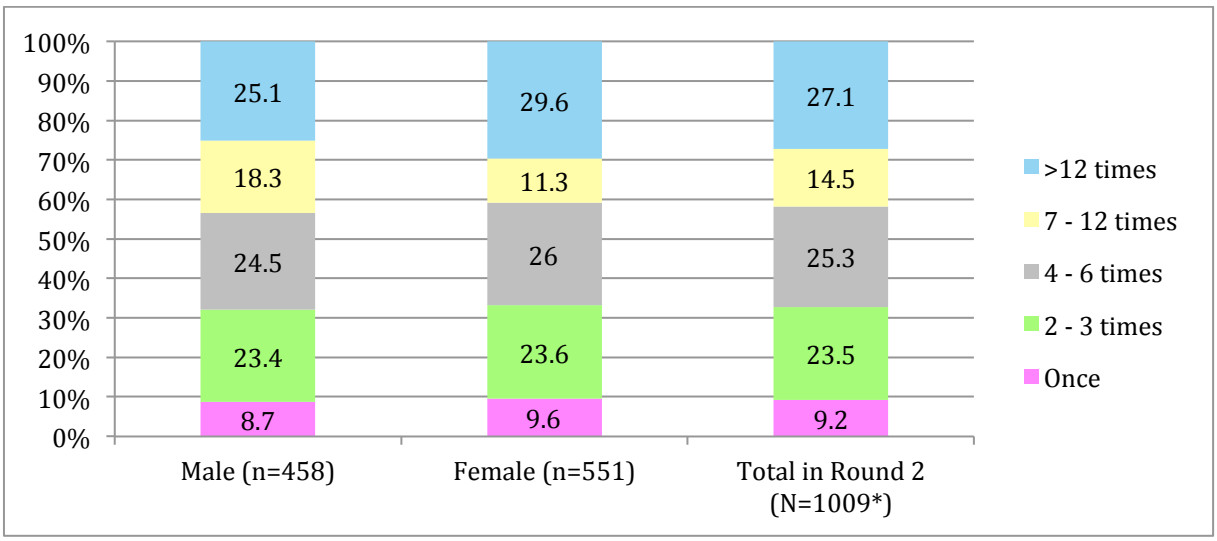

Figure 35: Number of times participants came in contact with a TL staff member or volunteer in the last twelve months in Round 2

More than 70% (72.4%) of participants reported that their first TL activity was an HIV awareness session (Table 39). This was followed by: watching a condom demonstration (42%); receiving free condoms (37.1%); and, STI awareness sessions (32.2%) (Table 39). A significantly higher proportion of female than male participants participated in small group discussions as their first TL activity (X^2, (1) 6.897, p=0.009) (Table 39).

Table 39: Type of session or services received on the first TL introductory session at Round 2

Type of session or serviced received in the first TL introductory session	Male n=463 (%)	Female n=555* (%)	Total N=1018* (%)
HIV awareness session	336 (72.6%)	419 (75.5%)	755 (72.4%)
Watched condom demonstration	197 (42.5%)	231 (41.6%)	428 (42%)
Received free condom	184 (39.7%)	194 (35%)	378 (37.1%)
STI awareness session	142 (30.7%)	186 (33.5%)	328 (32.2%)
Small group discussion	58 (12.5%)	103 (18.6%)	161 (15.8%)
Alcohol awareness session	50 (10.5%)	57 (10.3%)	107 (10.5%)
Counselling	43 (9.3%)	49 (8.8%)	92 (9%)
VCT referral	34 (7.3%)	50 (9%)	84 (8.3%)
Home based care	23 (5%)	47 (8.5%)	70 (6.9%)
Violence awareness session	17 (3.7%)	20 (3.6%)	37 (3.6%)
STI referral	9 (1.9%)	15 (2.7%)	24 (2.4%)
Community awareness session	12 (2.6%)	7 (1.3%)	19 (1.9%)
Love Patrol video screening	7 (1.5%)	11 (2%)	18 (1.8%)
Support to receive ART Treatment	2 (0.4%)	8 (1.4%)	10 (1%)
ART referral	1 (0.2%)	5 (0.9%)	6 (0.6%)

*Missing=7 female participants in Total

1 =Respondents could choose as many activities as applicable

Only participants in Round 2 were asked about the type of TL activities they participated in in the last twelve months. Almost all (90.9%) reported having attended an HIV awareness session, while 71.3% had received condoms and 64.6% had attended an STI awareness session (Table 40). A significantly larger proportion of male than female participants reported receiving free condoms (X^2, (1) 26.832, p<0.001) and watching a condom demonstration session(s) (X^2, (1) 25.278, p<0.001) in the last twelve months (Table 40). Conversely, a significantly higher proportion of female than male participants received the following TL activities in the last twelve months (Table 40):

- Received an STI referral(s) (X^2, (1) 27.935, p<0.001);
- Attended a violence awareness session (X^2, (1) 10.289, p=0.001);
- Received a VCT referral(s) (X^2, (1) 13.749, p<0.001);
- Attended a 'Love Patrol' video screening (X^2, (1) 23.478, p<0.001).

Table 40: Type of TL activity received/attended in the last twelve months by sex of participants in Round 2

Type of TL activity received in the last twelve months	Male n=463 (%)	Female n=555 (%)	Total in Round 2 N=1018 (%)
HIV awareness session	433 (93.5%)	492 (88.6%)	925 (90.9%)
Free condoms	367 (79.3%)	358 (64.6%)	725 (71.3%)
Condom demonstration	352 (76%)	340 (61.3%)	692 (68%)
STI awareness session	302 (65.2%)	356 (64.1%)	658 (64.6%)
VCT referral	179 (38.7%)	279 (50.3%)	458 (45%)
Small group discussion	116 (25.1%)	181 (32.6%)	297 (29.2%)
Alcohol awareness session	127 (27.4%)	151 (27.2%)	278 (27.3%)
STI referral	80 (17.3%)	176 (31.7%)	256 (25.1%)
Violence awareness session	53 (11.4%)	104 (18.7%)	157 (15.4%)
Counselling	63 (13.6%)	89 (16.1%)	152 (14.9%)
Home based care	42 (9.1%)	74 (13.3%)	116 (11.4%)
Love patrol video screening	14 (3%)	61 (11%)	75 (7.4%)
Training program	24 (5.2%)	31 (5.6%)	55 (5.4%)
Community education	9 (1.9%)	22 (4%)	31 (3%)
Support to receive ART treatment	3 (0.6%)	26 (4.7%)	29 (2.8%)
ART referral	4 (0.9%)	18 (3.2%)	22 (2.2%)
Others	11 (2.4%)	13 (2.3%)	24 (2.4%)

*Missing=6 Female participants in Total *Respondents could choose as many activities as applicable.

9.2 Association with Tingim Laip activities

For data collected in Round 2, participation in TL activities in the last twelve months was cross-tabulated with whether or not participants had correct knowledge of HIV and were able to reject major misconceptions about HIV. There were statistically significant associations between participants who had participated in TL activities and: having correct knowledge of HIV; and, being able to reject major misconceptions about HIV. In each of the significant associations, those who had attended a TL activity were more likely than those who had not, to have more correct HIV knowledge. These included: STI

awareness session (X^2, (1) =12.694, p<0.001); condom demonstration (X^2, (1) =4.879, p=0.027); VCT referral (X^2, (1) =9.610, p=0.002); STI referral (X^2, (1) =5.353, p=0.021); TL training program (X^2, (1) =10.949 p=0.001); community education (X^2, (1) =4.391, p=0.036); and Love Patrol video screening (X^2, (1) =8.417, p=0.004) (Table 41).

Table 41: Association between HIV knowledge and participation in Tingim Laip activities in the last twelve months

	Correct knowledge of HIV and reject major misconception about HIV n=501 (49.2%)	Incorrect knowledge of HIV and could not reject major misconception about HIV n=517 (50.8%)	Total N=1018* (100%)
Attended STI awareness session	351 (53.3%)	307 (46.7%)	658 (100%)
Attended condom demonstration	357 (51.6%)	335 (48.4%)	692 (100%)
Received VCT referral	250 (54.6%)	208 (45.4%)	458 (100%)
Received STI referral	142 (55.5%)	114 (44.5%)	256 (100%)
Love Patrol video screening	49 (65.33%)	26 (34.67%)	75 (100%)
TL Training program	39 (70.9%)	16 (29.1%)	55 (100%)
Community education	21 (67.7%)	10 (32.3%)	31 (100%)
ART referral	16 (72.7%)	6 (27.3%)	22 (100%)

*Missing=7 participants in total

There was a significantly higher proportion of participants who knew where to go for an HIV test amongst those who had attended one or more TL HIV awareness sessions in the last twelve months (X^2, (1) =12.282, p<0.001) (Table 42).

Table 42: Knew where to go for an HIV test by participants in Round 2 who attended/did not attend HIV awareness session in the last twelve months

	Attended an HIV awareness session in the last twelve months n=927 (%)	Did not attend an HIV awareness session in the last twelve months n=87 (%)	Total, N=1014* (%)
Knew where to get an HIV test	851 (91.8%)	70 (80.5%)	921 (90.8%)

Amongst those who used a condom at last vaginal sex with partner from whom they received money, goods or favours, a significantly higher proportion had attended at least one TL condom demonstration session in the last twelve months (X^2, (1) =6.934, p=0.008) (Table 43).

Table 43: Association between condom use at last vaginal sex with a transactional sex partner and having attended a condom demonstration on the last twelve months

	Attended a condom demonstration in the last twelve months n=180 (%)	Did not attend a condom demonstration in the last twelve months n=49(%)	Total in Round 2 N=209(%)
Used a condom use at last vaginal sex with a transactional sex partner whom participants received money, goods or favours from	142 (88.8%)	36 (73.5%)	178 (85.2%)

*Missing=2 participants in Total

Condom use at last anal sex with a regular non-paying partner was not significantly associated with having attended an HIV or STI session, having received free condoms or having viewed a condom demonstration in the last twelve months. Nor was there any significant association with activities/sessions reported as most helpful.

There was no association between frequency of condom use during vaginal sex with a transactional partner from whom participants received money, goods or favours, and having attended an HIV or STI awareness session, having received free condoms or having viewed a condom demonstration in the last twelve months. Nor was there an association with TL activities reported as useful.

9.3 TL activities considered most helpful for participants

Participants in Round 2 were asked about the type of TL activities that had been most helpful for them. HIV awareness sessions, free condoms, STI awareness sessions and condom demonstration sessions were the four activities that received the greatest endorsement by participants (Table 44).

A significantly higher proportion of female than male participants found the following TL activities helpful (Table 44):

- STI referral (X^2, (1) =14.343, p<0.001)
- VCT referral (X^2, (1) =13.467, p<0.001)
- Home based care (X^2, (1) =12.000, p=0.001)
- Support to receive ART treatment (Fishers Exact Test, p=0.001)
- Small group discussion (X^2, (1) =13.051, p<0.001)
- Love Patrol video screening (Fishers Exact Test, p=0.003)
- Liklik lipstick (Fishers Exact Test, p<0.001).

In contrast, significantly more male participants found receiving free condoms (X^2, (1) 5.691, p=0.017) and HIV awareness sessions (X^2, (1) =22.182, p<0.001) helpful (Table 44).

Table 44: Type of TL activities that have been helpful for participants at Round 2

Type of TL activity that has been helpful	Male n=461* (%)	Female n=554* (%)	Total in Round 2 N=1015* (%)
HIV awareness session	387 (83.9%)	396 (71.5%)	783 (77.1%)
Free condoms	214 (46.4%)	216 (39%)	430 (42.4%)
STI awareness session	195 (42.3%)	218 (39.4%)	413 (40.7%)
Condom demonstration	174 (37.7%)	222 (40.1%)	396 (39%)
VCT referral	117 (25.4%)	200 (36.1%)	317 (31.2%)
STI referral	58 (12.6%)	120 (21.7%)	178 (17.5%)
Alcohol awareness session	70 (15.2%)	65 (11.7%)	135 (13.3%)
Counselling	46 (10%)	77 (13.9%)	123 (12.1%)
Small group discussion	31 (6.7%)	76 (13.7%)	107 (10.5%)
Other	14 (3%)	55 (9.9%)	69 (6.8%)
Home based care	15 (3.3%)	47 (8.5%)	62 (6.1%)
Violence awareness session	15 (3.3%)	29 (5.2%)	44 (4.3%)
Training program	16 (3.5%)	22 (4%)	38 (3.7%)
Support to receive ART treatment	4 (0.9%)	23 (4.2%)	27 (2.7%)
Community education	7 (1.5%)	18 (3.2%)	25 (2.5%)
Love patrol video screening	3 (0.7%)	18 (3.2%)	21 (2.1%)
Liklik lipstick	1 (0.2%)	20 (3.6%)	21 (2.1%)
ART referral	5 (1.1%)	15 (2.7%)	20 (2%)
TB referral	2 (0.4%)	2 (0.4%)	4 (0.4%)

*Missing=10 participants in Total *Respondents could choose as many activities as applicable.

CONCLUSIONS

The results from Round 2 of the TL Periodic Survey are encouraging. They highlight a number of successes for TL as the program comes to an end. Through rigorous community engagement and strategic planning, TL was able to successfully refocus its prevention and care efforts to those most vulnerable. Although it was mandated to always work with women who exchange sex, the increase in proportion of those in Round 2 compared to Round 1 who both self identified as living off the earnings of sex and / or who reported receiving money, goods, services or favours increased significantly. This indicates that TL was successful in reorienting its work to focus on key populations and ensuring that women who exchange sex were actually reached. Other demographic changes also indicate this successful transition.

As a result of the effective reach of the TL program to key populations, as suggested by the demographic profile, it subsequently means that the activities are being implemented amongst those populations whom TL are mandated to serve. Not only are activities being implemented, they suggest impact in a number of ways. Attendance at a number of different TL activities results in greater knowledge of HIV while at the same time attendance at an HIV awareness session is associated significantly with a persons knowledge of were to attend for an HIV test. Although some activities are not positively associated with key indicators, there was no negative association.

The Periodic Survey was initially designed and intended to provide baseline data (Round 1) and follow up data (Round 2) to report on any changes across time. The programmatic changes undertaken by TL between the two study Rounds means that a comparative analysis of change is not scientifically possible. That said, all participants were still recipients of TL services. With that caveat in mind, those at Round 2 performed better on most indicators for HIV knowledge health seeking behaviour and safer sex practices, indicating a stronger and more effective intervention model.

Although the participants at Round 2 are comparatively better educated, have better access to condoms and report safer sex practices (for the most part), the findings from this study indicate that there is still considerable work to be done amongst the key populations served by TL. The challenge will be sustaining a focus amongst these populations into the future and to ensure that the best practices set by TL continue to inform programmatic responses in Papua New Guinea, particularly as it relates to meaningful engagement with key populations to provide peer-led prevention and care services.

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[i] Kelly-Hanku, A., Amos A., Worth, H., Kaitani, M., Miller, J, & McCallum, L. (2013). Tingim Laip Periodic Survey: Round 1. Australian Government Department of Foreign Affairs and Trade.