

Field Testing a Diagnostic Tool for Household Poverty and Food Security in Namibia

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EXECUTIVE SUMMARY

The Livelihoods and Food Security Technical Assistance II (LIFT II) project is a PEPFAR funded technical assistance project that seeks to extend the continuum of HIV and nutrition care from health facilities to include supportive services within the community. One of LIFT II's goals is to ensure that clients receiving nutrition assessment, counseling and support (NACS) services at health facilities are able to systematically access community-based economic strengthening, livelihood and food security (ES/L/FS) services that can improve their economic, food security and nutritional status.

To that end, LIFT II is developing a poverty and food security diagnostic tool that can be used to assess the household poverty and food security of NACS clients. The results of the diagnostic will classify households according to the LIFT Livelihood and Food Security Conceptual Framework¹ (along the provision, protection, promotion spectrum) and thereby guide referrals to services that are most appropriate and relevant based on a household's current level of poverty and food security. LIFT II combined three existing national and international poverty and food security assessment indices to create a poverty and food security diagnostic tool for Namibia. The tool comprises the Simple Poverty Score Card for Namibia (also known as the Progress out of Poverty Index, or PPI),² which collects poverty and vulnerability data, along with two tools developed by the Food and Nutrition Technical Assistance (FANTA) project that measure household food security: the Household Hunger Score (HHS)³ and the Household Dietary Diversity Score (HDDS)⁴. The complete tool is included in Appendix 1.

The first step in LIFT II's field test was to collect household data using the diagnostic tool. In October 2013, LIFT II hired and trained a team of four local data collectors to conduct 400 client interviews at the ART facilities in four health facilities in Namibia: Katutura Health Center and Katutura Hospital in Kohmas Region, and Engela District Hospital and Ongha Health Center in Ohangwena Region. In addition to collecting client data using the diagnostic tool, LIFT II also asked clients a final series of questions to gauge community interest in, understanding of, and perceived barriers to referrals and recorded these answers to be included in the data analysis.

The second step in the investigation was to conduct a thorough debrief with data collectors to assess their perceptions of the diagnostic tool's utility and suitability as an aid in classifying clients and in making efficient, effective and appropriate referrals. Data collectors also provided input on classification cut-off points and considerations.

Efficient referrals do not take long to complete. The four data collectors reported they spent an average of 19 minutes to complete the survey on paper and manually calculate scores. They estimated

¹ LIFT's conceptual framework includes three household vulnerability and food security categories (provide, protect and promote), which are associated with distinct livelihood phases, coping mechanisms, livelihoods objectives and potential interventions. For more information see <http://theliftproject.org/wp-content/uploads/2013/03/Livelihood-and-Food-Security-Conceptual-Framework.pdf>. Accessed January 8, 2014.

² For information on the tool for Namibia, please see: <http://www.microfinance.com/#Namibia>

³For Ballard, Terri; Coates, Jennifer; Swindale, Anne; and Deitchler, Megan. Household Hunger Scale: Indicator Definition and Measurement Guide. Washington, DC: FANTA-2 Bridge, FHI 360. http://www.fantaproject.org/downloads/pdfs/HHS_Indicator_Guide_Aug2011.pdf. Accessed January 6, 2014.

⁴ Please see: http://www.fantaproject.org/downloads/pdfs/HDDS_v2_Sep06.pdf. Accessed January 8, 2014.

they would need approximately 38 minutes to counsel a client (after completion of the referral tool) to ensure they were making a useful and actionable referral.

Effective referrals are those that, for the LIFT II project and our partner network, allow us to collect data about clients to improve referral programming. Data collectors interviewed a total of 400 clients at the ART sites at four health facilities noted above. The proportion of households classified as food secure based on HHS was consistent throughout all four sites. In contrast, the PPI and HDDS both showed higher prevalence of poverty and food security, respectively, in the Ohangwena sites, compared to the Khomas sites. The three component tools classified households in agreement with expected trends, whereby the proportion of households classified as food insecure, using either tool, decreased when moving upwards on the poverty scale, from provisioning through protection to promotion.

Appropriate referrals provide clients with information about one or more services that are right for them and their household. Of the clients interviewed for this study (n=400), 97% expressed an interest in referrals, indicating there are some ES/L/FS needs that are not being met and that referrals could fill a critical gap. However, clients identified with a number of proposed barriers to acting on referrals to ES/L/FS services, though no one barrier was identified by more than 22% of the population. Promisingly, the primary concerns were related to being able to afford the referred service, not knowing where to go to receive the service, and distance to service providers—all of which can be addressed through proper counseling and matching clients to services that are fairly close by, with clear directions for access.

PPI and other data can be used to classify clients. In order to be used for classification, all tools had predetermined cut-off values that identify how the numerical scores translate into the poverty categories (provision, protection and promotion) or to food secure versus food insecure. Distributions of client classifications, as well as comparisons of household classification among the tools, indicated the cut offs were reasonably set. Data collectors uniformly felt that some households classified in protection or promotion should have been classified into provision, and cut-off points should be shifted upwards. Based on data from the study, staff determined that PPI cut-off points should be revised slightly to guide classification and referrals.

LIFT II will use both the quantitative data collected from the diagnostic tool and the qualitative data collected from the data collectors to develop a final diagnostic tool. This final diagnostic tool will also be accompanied by counseling guidance and training materials for service providers as well as for staff administering the tool in the field.

Overall, several key recommendations and conclusions emerged related to the finalization and use of the diagnostic tools:

1. **Paper-based administration and calculation are timely and accurate.** Data collectors were uniformly able to use the paper forms to collect data and accurately calculate client scores in real time. Adaptations can be made to administer the diagnostic in high-tech ways, but the paper-based form will be sufficient for most applications of the tool.
2. **Retain the PPI gateway and other questioned indicators.** While the data collectors expressed some concern about the “gateway indicator,” the overall percentage of clients who “tripped” the gateway is within an expected range, and the distribution between the two regions follows known poverty patterns. In addition, other PPI questions that seemed out of context for some households (such as owning ruminants in the urban sites) should be retained for their statistically predictive power when applied nationally.

3. **Revise PPI cut offs to support greater utility in referrals.** The cut-off points for the PPI that distinguish the provide, protect and promote household poverty/vulnerability categories were determined prior to the field test based on an estimation of the likelihood that households would fall below the national poverty line of NAD 12.43/day. To make the tool effective for referrals, alternative cut-off points are recommended
4. **Using the indices collectively for referrals.** Each of the three indices measures different dimensions of poverty and food security. The trade-offs and practical considerations for each should be considered in the design of the final tool. To effectively use the scores collectively, the diagnostic tool should be accompanied with easy-to-use tools that show how the client scored and how multiple scores can be jointly interpreted to make referrals.
5. **Supplement the diagnostic tool with counseling that focuses on the identified barriers to acting on referrals identified in the study.** The diagnostic tool provides important quantitative information about households; however, there is a clear need for additional information about the client/household before an informed referral can be made. Counseling sessions based both on diagnostic scores as well as on services available in the catchment area can help ensure that the referrals account for key factors that affect clients' ability to act on referrals made.

INTRODUCTION

LIFT II's field test of a poverty and food security diagnostic tool is an important step in the design of a referral system to link clinical nutrition assessment, counseling and support (NACS) clients to community-based economic strengthening, livelihood and food security (ES/L/FS) services. LIFT II is a PEPFAR-funded technical assistance project that seeks to extend the continuum of HIV and nutrition care from health facilities to include supportive services within the community. Specifically, LIFT II aims to ensure that clients receiving NACS services at health facilities are able to systematically access community-based ES/L/FS opportunities that can improve their economic, food security and nutritional status. Household food insecurity is a serious constraint to nutrition for many NACS clients and economic factors affect a household's ability to access food in sufficient quantities and of high nutritional quality. As NACS clients achieve improved health as a result of clinical services, they and their households may need ES/L/FS support to prevent relapse into malnutrition. ES/L/FS referrals are also an important alternative for clients who do not require specialized food products through NACS.

LIFT II supports the development of referral systems between NACS-implementing health facilities and community-based ES/L/FS service providers operating within their catchment area. To support effective referrals, LIFT II developed a poverty and food security diagnostic tool that can be used to assess the household poverty and food security of NACS clients. The results of the diagnostic tool classify households according to the LIFT Livelihood and Food Security Conceptual Framework (along the provision, protection, promotion spectrum) and thereby guide referrals to services that are most appropriate and relevant based on a household's current level of poverty and food security. In addition, this information will be used to collect client poverty and food security data and track changes in poverty and food security over time. This field test aimed to understand the utility of the LIFT II poverty and food security diagnostic tool in appropriately categorizing households and making referrals to community-based services, as well as compare how the two food security measures classified households.

In coordination with the Ministry of Health and Social Services (MOHSS), FANTA-3 and USAID, two regions and a total of four NACS-implementing ART health facilities and their surrounding communities were selected for the project's initial referral support:

- Katutura State Hospital } Khomas site
- Katutura Health Center } Khomas site
- Engela District Hospital } Ohangwena site
- Ongha Health Center } Ohangwena site

Staff at each of these facilities have received training to integrate nutrition and HIV care services through NACS.

OVERVIEW OF THE DIAGNOSTIC TOOL

Based on programmatic needs, LIFT II developed a diagnostic tool using three existing indices: one for poverty/vulnerability and two to assess food security. The aim was to provide a tool with the following characteristics:

- Easy to use (not too long/burdensome to be used routinely)
- Can assist in making initial referrals to ES/L/FS opportunities (categorizes households by poverty and food security level)
- Has a case management function (i.e., tracks clients and monitors progress)
- Produces results that are comparable across sites within Namibia
- Can be easily scaled-up for use in new contexts

Each existing tool selected for the LIFT II diagnostic tool is described below.

PROGRESS OUT OF POVERTY INDEX (PPI)

To identify the most appropriate poverty measurement, LIFT II conducted a thorough review of available poverty assessment and measurement tools and consulted with industry leaders and selected the Progress out of Poverty Index (PPI). The PPI tool⁵ is a set of 10 simple indicators that together create a statistically valid way to estimate the probability that a household has consumption expenditure below a monetary poverty line. Scores range from zero to 100, with higher scores indicating that the respondent is less likely to be below the poverty line. PPI was designed to answer two key questions — “*What percentage of clients are poor?*” and “*How does that percentage change over time?*” — by producing an estimation of a group's poverty ratio at a point in time and an estimation of change in a group's poverty ratio between two points in time. While the PPI has been used to track individual clients, its primary purpose is to look at clients in aggregate. LIFT II will use aggregate PPI data to track client poverty movement over time in an entire referral area, as well as to estimate the type and volume of programmatic services needed in an area — which is consistent with the design of the PPI. LIFT II will also use the PPI data to classify households into the provision, protection, and promotion categories and thereby guide referrals for each client/household to the services that are most relevant, and to the extent possible will track household changes over time. Through implementation, LIFT II will continue to explore and document the utility of the PPI in capturing household level data.

⁵ More information about the construction and use of the PPI tool can be found here: <http://www.progressoutofpoverty.org/faq-page#n493>

HOUSEHOLD HUNGER SCALE (HHS)

The Office of HIV and AIDS (OHA) within USAID provided strategic direction in the creation of a set of harmonized indicators for nutrition and HIV, meant for use in global NACS programs. These indicators fall into three programmatic areas: nutrition care and support, prevention of mother-to-child transmission of HIV (PMTCT), and food security—LIFT II is specifically interested in the indicators that comprise the food security set. The impact indicator for that set is defined as follows: the number and proportion of PLHIV receiving care and treatment services whose households have poor access to food based on the HHS. Similar to the PPI, HHS is intended to be reported in aggregate/at the group level. The inclusion of the HHS in the diagnostic tool is meant to quickly provide information that will help health facility or community-based service provider staff understand the household's food security and vulnerability and thereby inform appropriate referrals to supportive services. It will also provide local stakeholders a picture of household food security at the network or community level. In addition, it is expected to help LIFT II gather data about the usefulness, usability and relevance of the HHS for routine monitoring of household food security in Namibia. The Household Hunger Scale was developed by the FANTA project using a series of three questions using a 30 day recall period. Responses (never, rarely, sometimes, or often) are recorded, producing a final score between 0 and 6 with higher scores indicating more severe food insecurity.

HOUSEHOLD DIETARY DIVERSITY SCORE (HDDS)

LIFT II selected HDDS as part of the diagnostic tool test to round out the household vulnerability picture to inform initial referrals to services, as well as to track aggregate changes in dietary diversity over time. The HDDS was included to complement HHS because it is a relatively short tool but adds another dimension to the food security measurement, as dietary diversity can be a significant food and nutrition security factor in Namibia. A more diversified diet is highly correlated with factors such as caloric and protein adequacy, percentage of protein from animal sources, and household income, and can be a proxy measure of the socioeconomic level of the household. The HDDS, like HHS, was also developed by the FANTA project and asks a respondent a series of yes or no questions about the types of foods consumed by household members the previous day and night. The output for HDDS is a variable with value of 0-12, where a higher number indicates a more diverse diet.

FIELD TEST GOALS

The goals of this activity were to field-test whether the diagnostic tool can be used to make **efficient**, **effective** and **appropriate** referrals to community-based service providers, as well as to assess the utility of the tool for **classifying** interviewees into LIFT II's poverty framework categories. Efficient, effective and appropriate referrals are defined as follows:

- **Efficient referrals** do not take long to complete. They are client-centered and, to the extent possible, allow a LIFT II-mentored service provider to quickly diagnose a client's household poverty and food security status with the expectation that this information will help speed the referral process.
- **Effective referrals** are those that, for the LIFT II project and our partner network, allow us to collect data about clients to improve referral programming.

- **Appropriate referrals** provide clients with information about a service that is right for them and their household. That means the service is one they are eligible for, can reasonably travel to, and that they have interest in.
- In addition, the tools must be useful for **classification** into the three categories of LIFT II's conceptual framework: *provide*, *protect* and *promote*. The utility for classification was determined through a qualitative debrief with the data collectors who tested the tool.

Study questions are summarized in **Table 1**.

Table 1: Research Questions		
Referral Criteria	Research Questions	Method to Collect Data
Efficient	1. How long does the diagnostic tool take to administer?	Time the administration of diagnostic tool.
	2. Are there any items that can be eliminated or replaced to streamline the tool? Either because they are superfluous, or because clients do not or are hesitant to answer them.	Review (1) quality of collected data and (2) interviewer perceptions of client stress or aversion during the diagnostic process.
Effective	3. Is LIFT II able to capture relevant food security data?	Review quality of data collected by comparing two food security measures. Debrief data collectors to capture their perceptions of including both measures tool utility.
Appropriate	4. Are there barriers that prevent clients from acting on a referral LIFT II provided?	Ask clients about their experience and possible reasons they may not be able to act on a referral.
Classification	5. How do the data collected through the diagnostic tool—in particular HH poverty status—help classify households to streamline the referral process?	Ask data collectors (interviewers) their thoughts on the utility of the diagnostic tool for classification and get their input on classification cut-off points and considerations.

TARGET POPULATION

The target population was adult clients (ages 18 and above) or adult caregivers of clients receiving health services at one of the four health facilities in Namibia designated for LIFT II support. No health-related or identifiable data from these clients were collected, and all interviewees were read an informed consent statement and allowed to ask questions or opt out of the field test before any interviews began.

DATA COLLECTION

Data were collected in two waves, the first from health facility clients (Tool A) and the second from debriefing interviews with the data collectors (Tool B), as outlined in **Table 2**.

Table 2. Components of the Diagnostic Tool

Tool Components		Score Range
Tool A	PPI – The Progress out of Poverty Index	0 – 100
	HHS – The Household Hunger Scale	0 – 6
	HDDS – The Household Dietary Diversity Score	0 – 12
	Final Questions (access to services, interest and perceptions)	N/A
Tool B	Data Collector Debrief	N/A

DATA COLLECTION FROM HEALTH FACILITY CLIENTS (TOOL A)

The team used the diagnostic tool (comprised of the three indices described previously) to collect the first wave of data from health facility clients. This was supplemented by five additional questions that assessed clients' current receipt of ES/L/FS services, as well as interest in and possible barriers to action on potential referrals to other services. These questions are not part of the diagnostic tool itself, but provide useful information from the client perspective that the project should consider in supporting or developing referral systems.

LIFT II staff and data collectors worked with health facility management to decide the best place to stand on health facility grounds to recruit participants, and also where interviews would take place. These interviews were conducted in either English or Oshiwambo, depending on the preference of the client, using survey tools in the same language. Most interviews in Khomas were conducted in English while all interviews in Ohangwena were conducted in Oshiwambo.

DATA COLLECTION FROM THE DATA COLLECTOR DEBRIEF (TOOL B)

The second set of data collection was in the form of one-on-one debriefing discussions with the data collectors. These represent a second wave of data collection, which is operations research that is primarily qualitative in nature. Once the data collection among clients was complete, LIFT II staff conducted a thorough debrief with the data collectors to better understand their perceptions of the tool's use, efficiency, effectiveness, and appropriateness in facilitating referrals. Data collectors were asked a series of detailed questions about the aggregate diagnostic tool including time to complete, ease of use, perceived value of the diagnostic for making appropriate referrals to available services,⁶ and additional client data/information that would be needed to make referrals. These interviews were conducted in English with an English interview guide and are discussed in the following section.

DATA ENTRY AND ANALYSIS

Data collectors used a paper-based interview form, recorded client data manually, and manually calculated client scores for each of the three indices at the end of each interview. Data collection for the field test was paper-based, because that is likely how the tool will be used in referral settings and because doing so promoted harmonization with existing referral systems. Data were entered into a Microsoft Excel 2010 spreadsheet daily and spot-checked in Excel to ensure accuracy. Data were analyzed using Excel and SAS 9.3 to calculate descriptive statistics to understand aggregate client

⁶ No referrals were made during this field test—this was simply to determine whether or not the data collectors felt that the diagnostic tool results would be useful in expediting the process of matching a client with a service.

scores, to classify them into the LIFT framework, and to understand agreement among the various indices that make up the tool. Simple descriptive statistics were used to understand aggregate poverty and food security status in the area.

Additional data were generated through debriefings among individual data collectors to learn about their experience using the tools. These results include some categorical data that were summarized in Excel. The majority of the data from the debriefs were qualitative statements about the time spent using tools, the data collectors' perception of the tools, and their thoughts on how the tool might be useful in categorizing clients in order to make appropriate referrals. These data were analyzed for emergent themes, which were subsequently summarized for use by the LIFT II project.

LIMITATIONS

This study has several limitations:

- The quantitative data collected may lack validity due to the use of a convenience sample. This will not affect the qualitative data captured from data collectors about their experience using the tools.
- The data are not expected to be generalizable beyond the Namibian context. They are being collected to help guide programming in the country, to gather feedback on improving the new diagnostic tool, and ultimately to provide guidance that is useful for referral systems in Namibia.
- Because limited similar research has been conducted in this area, this study was unable to incorporate past lessons learned, other than those from the LIFT II project's recent study in the Balaka District of Malawi.
- The data collectors hired to test the tool and share their experience through debriefs are not likely to have expertise in referral systems and may be challenged to provide optimum feedback.

RESULTS

This section presents results on the efficiency, effectiveness, etc. of a new diagnostic tool for measuring household poverty and food security in Namibia.

EFFICIENCY

1) Time to administer

As noted in **Table 1**, this study's first research question asked, "*How long does the diagnostic tool take to administer?*" Data collectors were asked about: (1) the amount of time it took to complete the diagnostic tool with the client, (2) the amount of time it took to calculate each client score and (3) their estimate of the time they would need to counsel a client satisfactorily to match them with an appropriate service (assuming a more in-depth knowledge of services in the community).

The four data collectors estimated that it took approximately 11.75 minutes (with a range of 5 to 25 minutes) to complete the diagnostic tool with each client and an additional 7.1 minutes were needed to calculate the client scores. This is a total of just under 19 minutes to complete the diagnostic process. Data collectors also estimated they would need an average of 38.4 minutes (with a minimum of 22 minutes and maximum of 60 minutes) to counsel a client after administering the diagnostic tool to ensure

that they were making a useful and actionable referral based on the available services. **Figure 1** below summarizes these results.

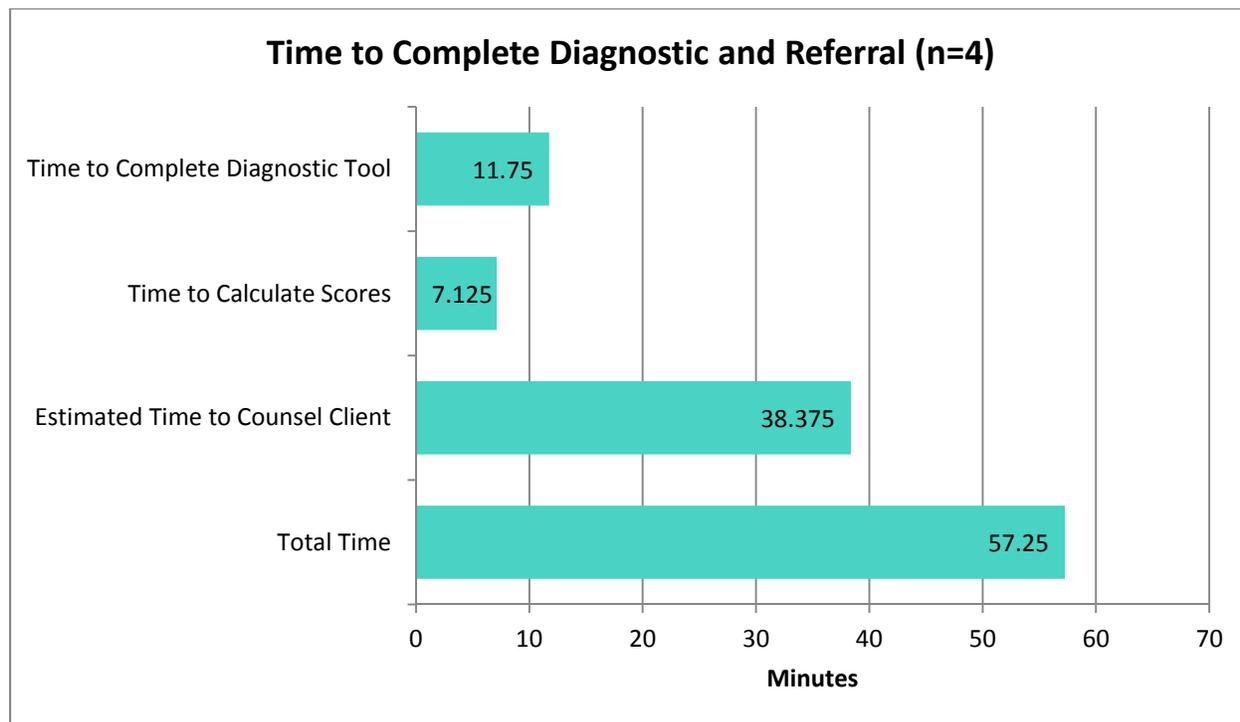


Figure 1. Data collectors were asked to estimate times associated with the diagnostic tool. This includes the average time taken to administer the tool and calculate scores manually, as well as the projected times they would need if counseling a client for a referral.

The data collectors explained the range of time spent completing the diagnostic tool with various clients in the following ways:

Data Collector A⁷ provided for a range of 15-25 minutes: *Other clients understood easily while some clients required more explanation and clarification.*

Data Collector D noted that the tool took 7-10 minutes: *I ended up getting used to the questions so they took less time to go through and explain to clients.*

The range of times required for counseling was also elaborated on by the four data collectors and explained below:

Data Collector B felt that 30 minutes of counseling would be needed to properly explain the options: *There is no need to rush the person; a lot of explanation is required. I think a person within the provision category (most poor) may require a lot of explanation. Some clients also have very low educational levels.*

⁷ The four data collectors are quoted frequently in this report and have been de-identified and are referred to as “Data Collector A-D” in the text.

Data Collector C felt an hour was needed for counseling: *There is a need to probe in order to get accurate information. Some clients may lie in expectation of getting a benefit.*

These responses indicate that as people administering the diagnostic tool and providing subsequent counseling gain more practice with the tool, their efficiency in using it may increase. They are better able to explain questions, they become more familiar with common responses, and they can more quickly recall the services available in the area. The data collectors also reported on the process for preparing for and recruiting clients to participate in the field test, including challenges. While the context for completing the tool with clients would be quite different in practice, some of the issues noted may be relevant in terms of clients' interest in participating.

Data Collector A: *Some clients have experienced several surveys in the past but with no results/feedback coming back to them. Some clients indicated they had no time for the survey as they wanted to rush back to work.*

Data Collector B: *No challenges were met; clients appeared interested in participating.*

As part of the data collectors' debriefs, they were asked to rate the tool's ease of use from 1 (difficult) to 5 (easy) in a number of categories (**Figure 2**). The average scores in all areas were positive, though the overall efficiency — measured by ability to ask a question and have a respondent readily answer without undue clarification — was ranked most difficult for the data collectors (3.75). All other areas were rated well; the explanation of the purpose of the diagnostic tool, ease of terminology used and the ease of recording data were rated as the easiest aspects of the process. Slightly less favorable scores went to design and layout of the tool, and the recording of categorical data.

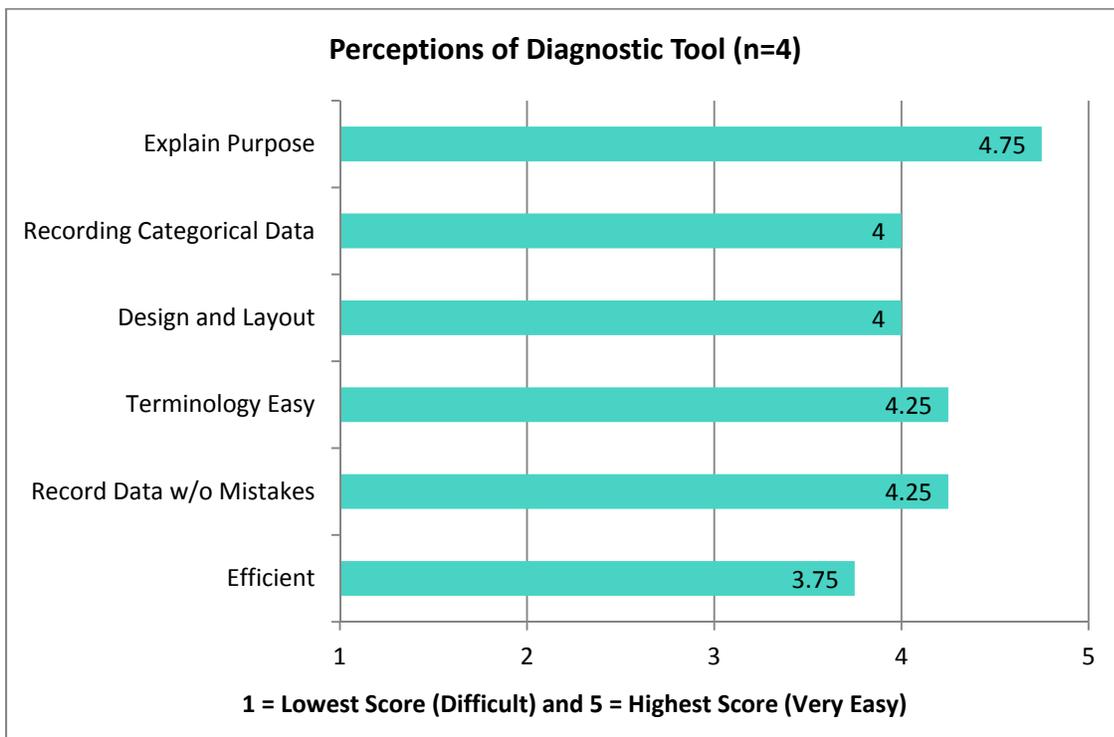


Figure 2. Data collectors underwent a thorough debrief interview after they completed client interviews. As part of this interview, they were asked to rate the ease of use of the diagnostic tool in six different areas.

Data Collector C gave the lowest rating of 3 for the efficiency of the tool, but when probed to provide an explanation on this rating in the qualitative interview noted: *The tool appears simple enough such that no further improvement is really necessary. It appears understanding depend on clients' levels of comprehension based on educational levels and other factors.*

In addition, Data Collector D noted that the final questions related to interest in referrals and barriers to acting on referrals in Oshiwambo seemed unclear to some clients. These questions were supplementary for this study and will not be included in the final diagnostic tool.

Data collector responses provide some detail about why recording categorical information and the design and layout received slightly less favorable scores.

Data Collector B: *One had to be careful as it was always possible to circle the wrong response.*

Data Collector A: *Need to expand and elaborate some of the choices [used to prompt clients]. For example, for vegetables, clients tended not to think in terms of traditional varieties, only those available in shops.*

Overall, data collectors noted that the diagnostic tool was easy to use, citing that the questions were straightforward, brief and to the point.

2) Unnecessary or difficult questions

The second research question sought to identify any questions or components of the diagnostic tool that could or should be eliminated to streamline the tool—either because they were superfluous or because clients did not or were hesitant to answer them.

Data collectors were asked whether any of the questions made the interviewees uncomfortable. No discomfort was cited related to the PPI questions. However, three of the data collectors felt the HHS questions were difficult in that they caused emotional client responses and client discomfort with being identified as hungry. Data collectors also noted that people generally do not talk about what they eat, especially in Ohangwena.

Data Collector A: *Some people appeared emotional in describing how they are suffering and not having enough food.*

Data collectors cited less discomfort with HDDS (compared to HHS), but Data Collector D noted: *For some food classes, like vegetables, eggs, cheese, yogurt and milk and honey, some clients were surprised to be asked whether they ate such foods—they assumed data collectors should know that such foods were not readily available or affordable.*

Data collectors were also asked to identify questions that were difficult because they were hard to explain or that seemed out of context in Namibia. Three data collectors noted that the component of the PPI gateway that asks about owning a microwave oven is out of context in the rural Ohangwena setting because most people do not have/use electricity. They also felt that the PPI question about livestock ownership was out of context for Khomas (only 7 clients out of 201 in the Khomas sites responded that they own large ruminants). In addition two data collectors noted that the PPI question on the number of rooms used for sleeping was problematic.

Data Collector D: *In the north, people have several huts for sleeping, even if they may be poor, such clients would still earn a lot of points based on the several rooms used for sleeping.*

Data Collector A thought that some of the responses may have been skewed based on seasonality, noting: *The question about whether people ate meat may have been asked in the wrong time (drought period) in the North, as animals are dying and people are picking the dead animals for eating. So this time there was a lot of "meat" available, which may give an impression that meat is always part of the diet.*

EFFECTIVENESS

3) Ability to capture relevant poverty and food security data

The third research question examined the ability to capture two kinds of household level data—poverty and food security—using different sets of tools, and then to see how those households were classified when combining those measures. LIFT II’s purpose in collecting these data was to determine whether these tools classified households in similar and predictable ways (i.e., those classified as very poor in the provisioning category were also classified as food insecure, and those classified as food insecure by one food security measure were also classified as food insecure by the second measure). These data also provide a cross-sectional snapshot of poverty and food security in the area and an opportunity to collect qualitative data from the data collectors about the utility of these measures for referrals.

LIFT II collected poverty data at the four health facilities using the PPI (**Table 3**). There was a significant difference in mean PPI between the two regions ($p < 0.05$) based on a t-test, which indicates significantly higher levels of poverty in the sites in Ohangwena compared to those in Khomas.

	mean	median	std. dev.	min.-max.
Katutura Hospital (n=101)	50.90	43.50	26.23	4 – 100
Katutura Health Center (n=100)	57.51	46.00	27.66	8 – 100
Engela District Hospital (n=100)	37.89	27.00	26.16	8 – 100
Ongha Health Center (n=99)	33.71	28.00	21.70	10 – 100

The Namibia PPI includes a gateway indicator that automatically allocates 100 points to households that own a motor vehicle or a microwave or to single-person households based on a statistically very low probability that any of these households would be poor. Because approximately 16.25% of households in this field test answered yes to the gateway, this highly skewed the data toward the high end of the PPI scale. Therefore, median is a more reliable metric than mean for analyzing PPI data.

Based on the PPI cut-off points established before the field test (0-24=Provision, 25-44=Protection and 45-100=Promotion), clients from each site were categorized into the three poverty categories (**Table 4**).

	Provision n (%)	Protection n (%)	Promotion n (%)
Katutura Hospital (n=101)	8 (7.9)	43 (42.6)	50 (49.5)

Katutura Health Center (n=100)	8 (8.0)	42 (42.0)	50 (50.0)
Engela District Hospital (n=100)	34 (34.0)	44 (44.0)	22 (22.0)
Ongha Health Center (n=99)	32 (32.3)	45 (45.5)	22 (22.2)
Total	82 (20.5%)	174 (43.5%)	144 (36.0%)

This categorization reflects similar client poverty characteristics at both facilities within each of the two regions. The data also highlight differences in poverty characteristics (and point to differences in demand for services) between the regions. Specifically, the data reflect a much higher demand for provisioning services among clients from the Ohangwena sites — approximately 33% compared to only 8% of the clients in the Katutura sites. The percentage of clients who were classified as needing protection services was fairly consistent throughout all four sites at an average of 43.5%. Classification into the promotion category was also variable by region: approximately 50% of client households in the Katutura sites would be directed to these services, compared with only 22% in the sites in Ohangwena. In the sections below on classification and recommendations, alternative cut-off points for the PPI tool are discussed.

Food security data were collected at the same health facilities using the HHS and HDDS, which measure different dimensions of food security related to household food access. Based on HHS guidelines, the following cut-off values were used to determine food security status:

0-1 = Food secure (FS)

2-3 = Moderately food insecure (MFI)

≥ 4 = Severely food insecure (SFI)

Combined, these categories make up the proportion of clients who are classified by HSS as food insecure (FI total) and are discussed jointly below. This is done primarily for ease of comparison with binary HDDS data.

For HDDS, LIFT II calculated a binary food security status using the following cut offs⁸:

0-5 = Food insecure (FI)

6-12 = Food Secure (FI)

Table 5 summarizes these data; FI indicates classification as food insecure and FS indicates classification as food secure. Both tools score the majority of clients as food insecure at all sites, with only two exceptions (HDDS scored slightly more clients at Katutura Health Center as food secure, and HHS scored slightly more clients at Ongha Health Center as food secure). Notably, there is a great deal of consistency in HHS categorization among the sites, while HDDS categorization was much less consistent among the sites, with a greater percentage of households classified as food insecure in the Ohangwena sites.

Table 5. Comparison of Food Security Assessment Tool (HHS, HDDS) Scores by Site

⁸ Pendleton, Pickanor and Pomuti. The State of Food Insecurity in Windhoek, Namibia. African Food Security Urban Network, 2012. This publication shows that HDDS scores of <6 correspond to household food insecurity.

	HHS				HDDS	
	SFI	MFI	FI total	FS %	FI %	FS %
Katutura Hospital (n=101)	9.9	42.6	52.5	47.5	60.4	39.6
Katutura Health Center (n=100)	7.0	47.0	54.0	46.0	48.0	52.0
Engela District Hospital (n=100)	8.0	43.0	51.0	49.0	85.0	15.0
Ongha Health Center (n=99)	4	44.5	48.5	51.5	80.8	19.2
Total n (%)	29 (7.25%)	177 (44.25%)	206 (51.5%)	194 (48.5%)	274 (68.5%)	126 (31.5%)

Figure 3 presents agreement data for the two food security tools, where the dark blue bars indicate agreement among the scores and the teal bars represent non-agreement. Ideally, these tools would be calibrated so that they classify clients the same way (i.e., both indicate a specific client is food secure or food insecure); however, given that they are measuring different dimensions of food security, differences in classification are anticipated. A recent review of data generated by seven food security measures in Ethiopia noted several differences in how they classified food insecurity.⁹

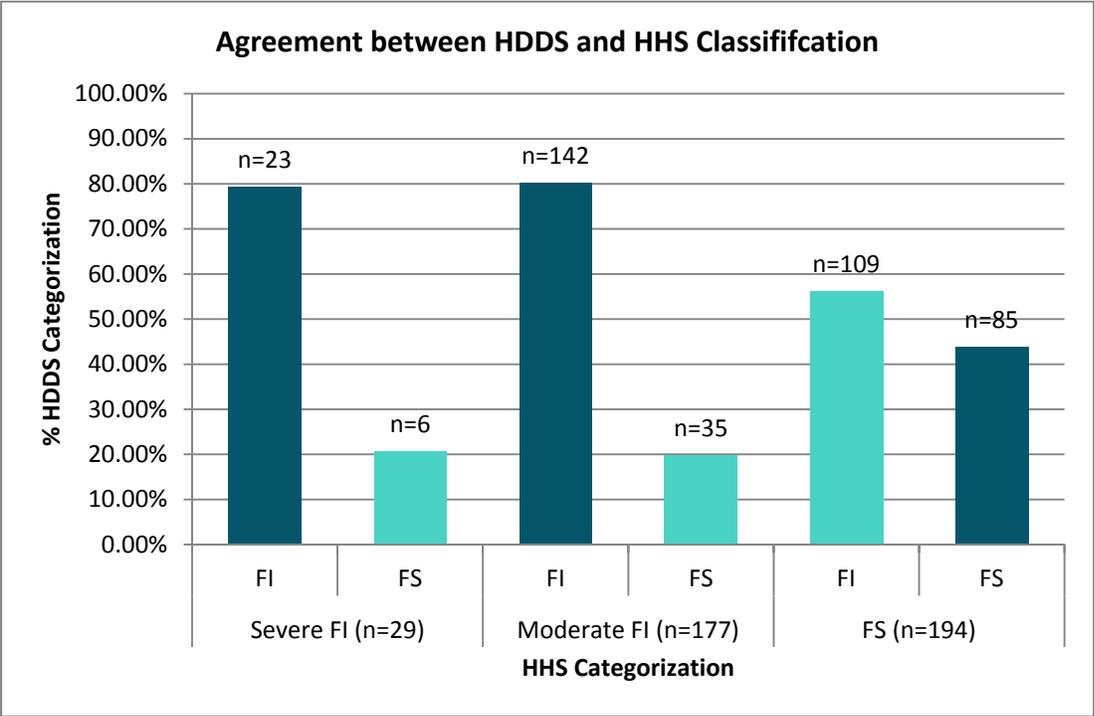


Figure 3. Agreement between HDDS and HHS classification of clients.

⁹ [How do different measures of Household Food Insecurity Compare?](#)

While a sensitivity/specificity analysis was beyond the scope of this research, the HHS and HDDS agree reasonably well. In this study, 62.5% of the time the two tools classified a client the same way. However, the high proportion (n=109 or 27.25% of all clients) that were classified as food secure based on HHS but food insecure based on HDDS is cause for additional attention to clarify how these measures can be used in the diagnostic tool. Because HDDS cut-off points are not pre-set as they are in the HHS, this study also looked at agreement using the cut-off point of ≤ 4 instead of ≤ 5 for HDDS to determine if agreement between the food security measures was maximized. This resulted in 64.5% agreement between the tools, an improvement of two percentage points. Similarly, using cut-off points of ≤ 3 and ≤ 6 both resulted in slight decreases in agreement, to 62% and 61.25%, respectively. However, these differences are not statistically significant, and there were no additional factors found in this study or additional sources referenced that would indicate that any of these are more appropriate cut-off points for HDDS. These findings highlight the need to consider tradeoffs and benefits to using one or both of the food security measures in a final diagnostic that informs referrals to ES/L/FS services.

Figure 4 shows how clients were classified using both the PPI and HHS results.

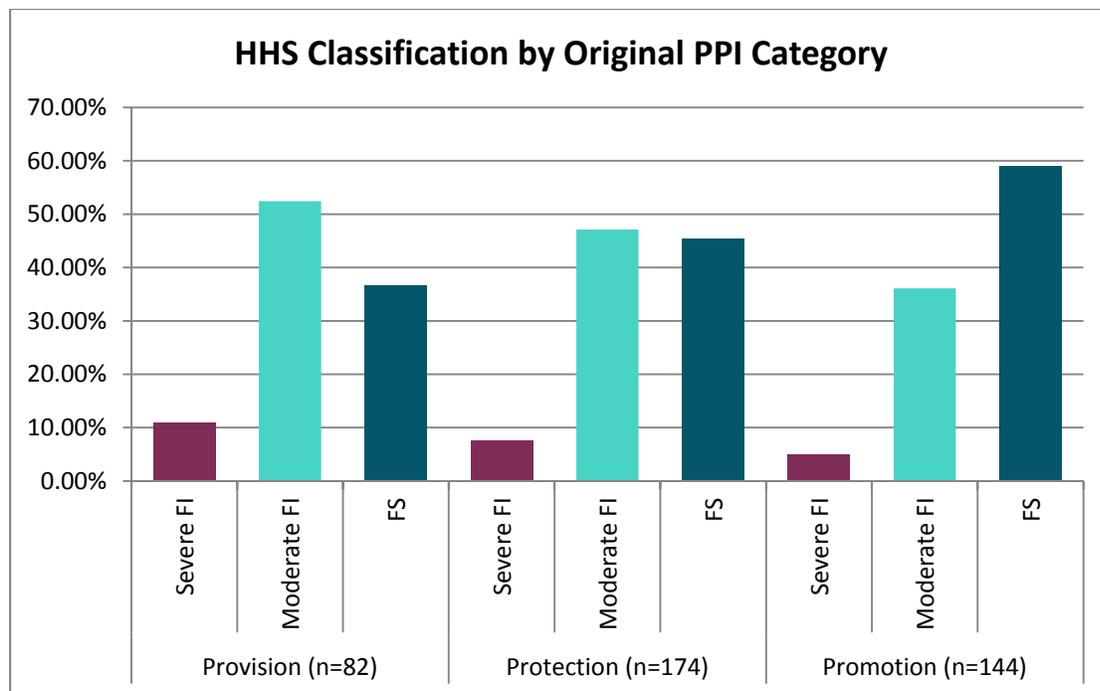


Figure 4. This graph shows how HHS and PPI classify the same clients.

Generally, the joint poverty and food security classifications followed expected trends. Approximately 36.5% clients classified in the provision category (the lowest poverty category with the highest likelihood of poverty) were found to be food secure, compared to 45.4% and 59.0% in the protection and promotion categories, respectively. This indicates that as poverty classification moves upward from provision to promotion, the prevalence of both severe and moderate food insecurity drops and food security prevalence increases.

While a greater percentage of households were classified as food insecure by the HDDS (versus the HHS), the comparison of HDDS to PPI scores (**Figure 5**) shows the same trend of increased prevalence of food security (and decreased prevalence of food insecurity) as poverty scores rise (less poor).

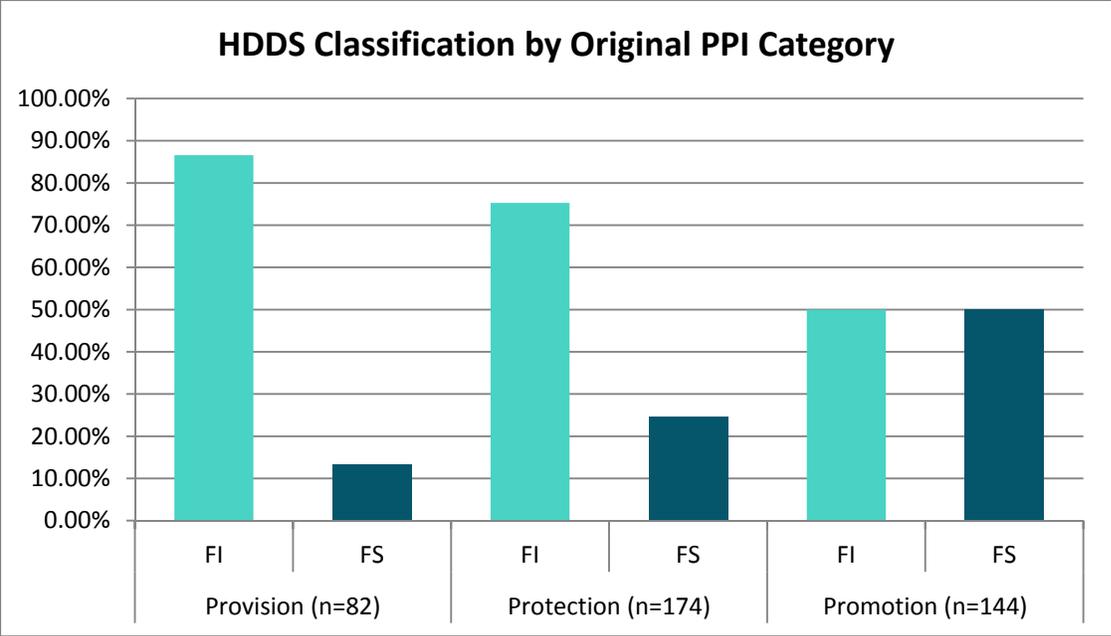


Figure 5. This graph shows how HDDS and PPI classify the same clients.

APPROPRIATENESS

4) Current services received and barriers to acting on referrals

The fourth research question explored health facility clients’ current access to and interest in ES/L/FS services. Forty-two percent of the clients interviewed indicated that they were currently receiving food aid. This varied significantly by site, with 98.8% of the food aid recipients located in the sites in Ohangwena. In addition, 31.75% of interviewed clients indicated that they were receiving economic strengthening or livelihoods support. Again, this varied considerably between the two regions: approximately 12.4% of the respondents from the Katutura sites received this support, compared to 51.3% from the Ohangwena sites (Table 6).

Table 6. Receipt of Food Aid and Other ES/L/FS Services by Site		
	Food Aid n=168	ES/L Services n=127
Katutura Hospital (n=101)	2	14
Katutura Health Center (n=100)	0	11
Engela District Hospital (n=100)	85	47
Ongha Health Center (n=99)	81	55
Total	168 (42.0%)	127 (31.75%)

Of the other ES/L/FS services received by clients (**Figure 6**), nearly all were grants provided by the Government of Namibia.

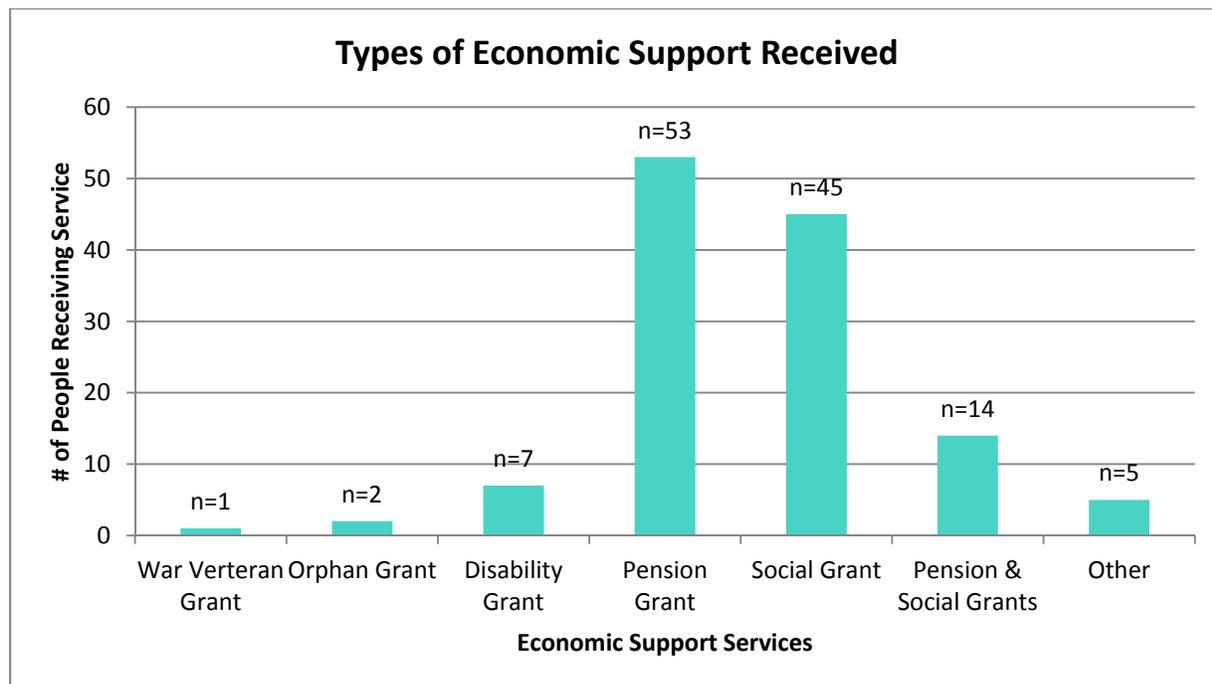


Figure 6. Shows the number of clients currently receiving ES/L/FS support by the type of support. Many clients are already receiving ES/L/FS support, nearly all of which is in the form of government grants.

Clients were also asked about their interest in referrals to other ES/L/FS services. An overwhelming majority of clients (97.0% [n=388]) said they were interested in referrals to ES/L/FS support within the community, with no variation among the different sites. Interviewees were then presented with 12 possible barriers (and the option to add other barriers) and were asked if they felt a particular barrier would prevent them from acting on a referral to ES/L/FS services (**Figure 7**). No single barrier was identified by more than 22.0% of the respondents, indicating variation in the concerns about referrals among the clients. The barriers that were concerning to the most participants were the affordability of the referred service (22.0%), not knowing where to go to receive the service (19.5%), and the service being far away or inconvenient to access (17.0%). Interestingly, the barrier related to convenience of services was a concern for more people in the Katutura facilities (n=48), where services are generally closer together and more centrally located compared to clients at the Ohangwena facilities (n=22). The barrier related to cost of services was also a concern to a greater number of clients in the Katutura facilities (n=54) compared to Ohangwena (n=34). These are issues that can be addressed through the LIFT II referral process to ensure that clients receive clear guidance on where the service is located and are only sent to services that are affordable (based on the households' threshold) and convenient for them to access.

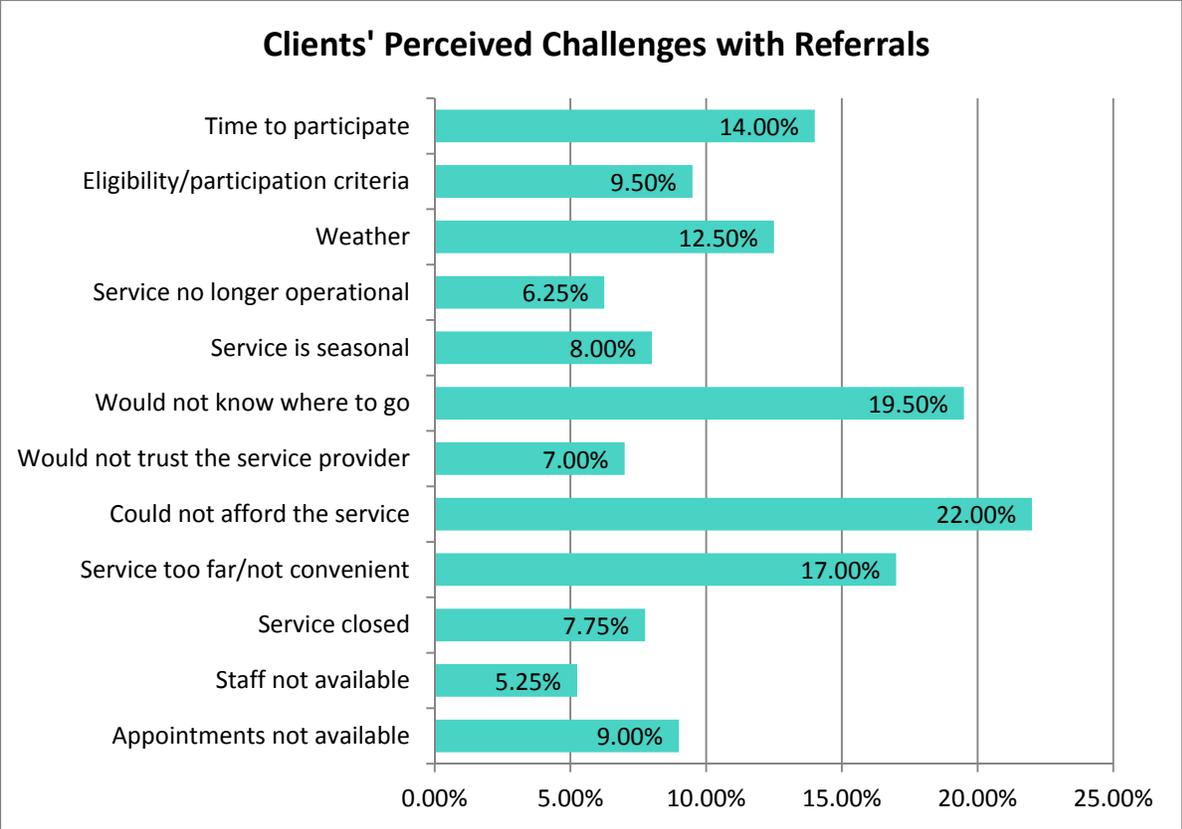


Figure 7. Almost all interviewees (97%, or n=388) expressed interest in referrals. These clients identified various concerns that LIFT II and local service providers need to address in the design and rollout of referral systems.

Over 15% of clients (n=62) indicated there were “other” barriers to accessing referrals. All but one of these other concerns related to transportation fees to access services, which was cited by 15.25% of all clients interviewed. All concerns cited by clients will need to be considered by LIFT II and the network of service providers in developing and supporting effective referral systems.

UTILITY FOR CLIENT CATEGORIZATION

5) Do the data collected through the diagnostic tool —particularly household poverty status — help classify households to streamline the referral process.

The final research question asked data collectors whether they thought the tool was effective in classifying households and if they had any input on classification cut-off points. In addition, data collectors were asked what additional information they would need to obtain from clients to supplement the diagnostic tool to make informed and appropriate referrals. Data collectors noted that the tool highlights important household poverty and food security characteristics that assist in understanding and classifying households.

Data Collector A: The tool brings to light important aspects about household welfare and also helps in categorizing households based on scores

Two of the four data collectors did not feel the tool was effective at classifying households, and all data collectors perceived a general trend of classifying households too high along the PPI spectrum. Concern

over the validity of specific survey questions was raised by some data collectors, each noting individual questions on the PPI that they felt were not predictive or that led to an underestimation in household poverty.

Data Collector C: Responses to questions about livestock may be misleading; it is a common cultural practice, especially in Ohangwena, for households to keep livestock that do not belong to them (requested by owner). So a respondent can say the household has livestock, even if they do not have control over the animals.¹⁰

Data Collector B: The tool does not appear to be sufficient in correctly categorizing people. Some people are categorized under protection, for example, while poverty is still evident. Some people have just inherited items like a microwave and as such would be regarded, based on the tool, as not being poor (even if they may not be using an inherited microwave due to poverty). Observation and probing tended to suggest that some people categorized under protection had nothing, such that they still needed to be classified under provision.

It is difficult to know whether these kinds of examples were the result of a true discrepancy in the classification of clients. The intention of the tool is not to classify all poor people in the provision category, but to classify only the poorest households in that way. The protection category still assumes that households may be poor, but that they are more stable than the highly vulnerable households in the provision category. Some degree of poverty is expected at all levels of classification within the PPI tool, including promotion. These comments from the data collectors underscore the need for additional training on tools such as the PPI and the context in which they should be interpreted.

Data collectors felt that an average of approximately 64% of clients were classified correctly using the PPI cut-off points established before the study (responses ranged from 50-80% correct classification). All of the data collectors felt the cut off for the provision category should be increased from the current cut off of 24, thereby allowing more households to be classified in the lowest poverty category. The average suggestion was to increase the cut off to 35 (range was from 30-45) so that all households receiving a PPI score from 0-35 would be classified as needing provisioning services. This change would result in classifying 45.75% (n=183) clients in the provisioning category, only 18.25% (n=73) in the protection category, and the remaining 36% (n=144) in the promotion category.

This proportion is at odds with economic strengthening standards of practice. In most stable contexts, the majority of households should be supported primarily with protection services, whereas only those highly vulnerable households be given provisioning support, which is expensive to provide and can promote dependency on “hand-outs” if provided continuously. In the practical application of the tool to match and refer clients to services, it would be ineffective and put an undue burden on social safety net programs if a high percentage of households were classified as in need of provisioning services. Rather, the aim of the tool is to identify those in most immediate need of provisioning services while channeling other, often poor, households toward supportive services that are more stabilizing or productive in nature.

Data collectors were hired for this research only and did not have a deep knowledge of the array of services available in the different communities. However, they were asked to describe additional information that they felt they would need to collect from clients (beyond information they gathered using

¹⁰ This question asks specifically about livestock ownership so this could be an error on the part of data collector(s) and could be addressed with additional training of the diagnostic tool administrator.

the diagnostic tool) in order to make an informed referral to illustrative ES/L/FS services. All data collectors indicated they would need to understand current household employment and sources/amounts of income. Two data collectors noted the need to understand whether orphans or other children were being supported by the household who may require specific additional services, and it was noted that information on other specific economic burdens would be important to understand.

Data Collector B elaborated on some additional points of interest: *You would need to find out who is employed or getting income in the family and is the person who is employed supporting other household members, including the client? What kind of job (if any), that the client is doing? You also need to ask if the person is interested in services that may be in the community. It may also be necessary to ask if the client agrees to the categorization based on the tool.*

Data collectors were also asked about other materials (information, pamphlets, training, etc.) that would make providing referrals easier. They uniformly cited radio as an effective way of reaching health facility clients to provide information and orientation about the process and objectives of these referrals, noting that written materials were generally not well utilized. Three of the four data collectors also recommended getting Constituency Counselors to endorse the approach and lead information sessions. Posters in places like health facilities or constituency offices were also cited as a good way to orient clients.

Data Collector C: *Information sessions led by Constituency Councilors (people, especially in rural areas, have so much faith in community leaders, particularly Constituency Councilors); radio; posters at Constituency Council Offices.*

DISCUSSION

Overall, this field test indicated that the diagnostic tool can be used to help LIFT II and partners make efficient, effective, and appropriate referrals, provided some minor editing of the tool and improved guidance for those using the tool in the field. The test of the diagnostic tool represents LIFT II's first opportunity in Namibia to collect data about health facility clients that could be used specifically to facilitate referrals from clinics to the community services. The data collected can also be used to track household poverty and food security in aggregate, over time, in a program area. Though this field test was cross-sectional in nature, data collected can provide a baseline measurement for future work and subsequent studies.

The tool proved to be easy to administer, taking approximately 19 minutes to complete and allowing LIFT II to collect key household poverty and food security data. In addition, the tool was highly rated by the data collectors in terms of its functionality; they cited that the questions were straightforward and to the point. The three component tools classified households in agreement with expected trends, whereby the proportion of households classified as food insecure, using either tool, decreased when moving upwards on the poverty scale, from provisioning through protection to promotion.

While the data collectors expressed the most discomfort with HHS, this tool is essential for LIFT II's data collection and reporting and is a widely accepted measure of household food security. Any food security metric that looks at access to food will require that questions be asked about household food availability and experiences of hunger. The discomfort these questions might cause will need to be addressed in training service providers to administer the tool and could be overcome to some degree by building trust between service providers and their clients.

Testing the tool in both an urban and rural areas allowed a greater understanding of the application of the tool in different contexts—particularly important because the objective is to develop a diagnostic tool for

national use. While there was some concern among data collectors about the relevance of specific questions to either the rural or urban populations, the national nature of the tool makes this unavoidable and less problematic.

Interestingly, the PPI and HDDS showed great variation between the two regions, with higher poverty and food insecurity (dietary diversity) in the Ohangwena region, respectively, whereas the HHS showed comparable food security/insecurity (food access) between the regions. The study also showed that a number of clients are already receiving food aid (42%) and/or ESL/FS support (31.75%), with the vast majority of recipients of both kinds of support located in Ohangwena. In addition, the types of ES/L/FS support received was nearly all in the form of government grants, leaving significant opportunity to link clients to a more diverse and potentially productive set of services.

This cross-sectional study provides a useful snapshot of household-level data in these sites at a point in time. Based on the nature of the questions, data collected by these tools, particularly PPI, will change over time as there are changes in access to technology (such as mobile phones or even electricity), and these issues should be revisited in the future to ensure fluctuations do not adversely affect programming.

The PPI tool includes a gateway indicator as follows: *Does the household have only one member, own a microwave oven, or own a motor vehicle?* Households answering “yes” are immediately given 100 points (the highest score, least likely to be poor). This question was included as a simple way to make the scorecard apply to all households and yet to focus 90% of the scorecard on indicators that are more relevant for poorer households. It was somewhat surprising in this field test that 65 (16.25%) of the clients interviewed answered yes to the gateway. Among the general population, approximately 39% of households throughout Namibia would answer yes to the gateway; however, there was an assumption that based on the recruitment of clients from the previously named ART facilities that few of these households would be identified in this study. In subsequent discussions with the PPI developer, Mark Schreiner, LIFT II determined that the proportion of 16.25% (almost 71% of which came from the Khomas sites) was not out of the expected range. Statistically, he calculated that by eliminating the least poor ethnic groups, 32% of the population would still “trip” the gateway. The proportion identified in this study is approximately half of that, which is likely accounted for based on the recruitment of clients from ART facilities in communities in need of development assistance.

The testing did, in some cases, raise the expectations of clients who were hoping for a referral to services (even though it was explicitly explained in the informed consent session that referrals would not be provided). However, this indicates that clients are interested in receiving referrals, and therefore the planned programming could fill an existing gap. Barriers or perceived barriers to accessing services through referrals do exist, and it is important to consider them when working with local stakeholders who will manage a referral network. The primary concern (22%) was that households would not be able to afford the referred service. This is further supported by the number of people who said transportation or transport costs would be an issue (15.25%). The second and third concerns clients expressed were not knowing where to go (19.50%) and service providers being too far away (17%), which can be readily addressed through proper counseling and matching clients to close services with clear directions for access. Promisingly, issues such as lack of trust of service providers (7%), and staff not being available (5%) were not commonly cited, which indicates receptiveness on the part of the clients.

Client-level data provided a rich sample size from which to draw conclusions. On the other hand, the reliance on feedback and impressions from only four data collectors to better understand the practical application and utility of the tool proved challenging. While they have valuable first-hand knowledge of the diagnostic tool, they likely do not have a complete understanding of either the development/application of the component tools or of the implications and considerations in applying the diagnostic tool in making

referrals. For example, as discussed above related to the PPI cut-off points, data collectors felt the provision cut-off point should be around 11 points higher, though this would result in highly skewed and possibly ineffective referrals when applied in context. It is important to remember that definitions of poverty used by the PPI (and “food insecurity” by the food-security indexes) do not necessarily coincide with the personal definitions of the data collectors. In particular, the PPI is stringent in that it bases the scores on statistical probability, and though some households may be commonly considered “poor” they may not be considered so by the expenditure-based definition of the scorecard. These limitations in sample size (n=4) and in the level of the data collectors’ understanding were considered in making the following recommendations.

RECOMMENDATIONS AND CONCLUSIONS

Several key recommendations emerged based on the diagnostic tool field testing in Namibia.

Paper-based administration and calculation were accurate and timely. Given the interest in applying the diagnostic tool widely in Namibia, the field test aimed to replicate the most likely way in which data would be collected. Paper-based tools are aligned with current referral technology and support harmonization with existing referral systems. This approach consisted of data collectors using paper forms and calculating each score by hand in real time. This worked well for the data collectors, who were uniformly able to use the paper-based forms to administer the tool to clients and to complete the scoring and calculations as the interviews progressed or within a short window of time after administering the tool. Adaptations can be made to administer the diagnostic tool on a mobile phone/tablet or through a computer program that calculates scores directly, but the paper-based form will be sufficient for most applications of the tool.

Retain the PPI gateway and other questioned indicators. Although the data collectors expressed some concern about the gateway, particularly related to ownership of a microwave, the field test did not highlight any specific reasons to replace this question. The overall percentage of clients who “tripped” the gateway is within an expected range, and the distribution between the two regions follows known poverty patterns. LIFT II recommends that as the diagnostic tool is used in practice, implementers complete the entire tool with households if they feel the gateway may have been tripped erroneously. This would allow them to collect additional household data that could inform a classification and subsequent referral. Similarly, other PPI questions that seemed out of context for some households (such as owning ruminants in the urban sites) should be retained for their statistically predictive power when applied nationally. Careful training of diagnostic administrators can reduce recording

Revise PPI cut offs to support greater utility in referrals. The cut-off points for PPI that distinguish the household poverty/vulnerability categories of provide, protect and promote were determined before the field test based on a statistical estimation of the likelihood that households would fall below the national poverty line of NAD 12.43/day (based on distribution tables provided with the tool). As noted above, data collectors felt the cut-off point between the provision and protection categories was too low; however, programmatically it is recommended that the cut-off be lowered further to improve the tool’s use in referring clients to services.

Upon further reflection, it was estimated that approximately 12% of the sample should fall into the provide and promote categories, while the remaining 76% of the sample should be classified as protect. Based on the known frequency distribution data, as well as the PPI data collected in this field test, revised cut-off points for LIFT II referral activities are suggested below. For consistency with the tool’s “look-up tables,” the values were set at a slight variation from the prescribed percentages above, making the results easier to interpret. **Table 7** summarizes these PPI cut-off values to provide that approximate distribution and

also provides data included with the official PPI Namibia documentation (likelihood that a household within the range is below the national upper poverty line). The gateway indicator accounted for 16.25% of clients getting a score of 100, and therefore a higher percentage of clients classified in the promotion category, though this cannot be addressed with changes to the cut-off points.

Table 7. Cut-off Values for the PPI			Data provided with PPI Scorecard
	Original Cut-off Values	Distribution from Study Data	Likelihood Below National Upper Poverty Line (NAD12.43/day)
Provide	≤ 24	82 (20.50%)	70.1%
Protect	25 – 44	174 (43.50%)	51.8% - 16.7%
Promote	≥ 45	144 (36.00%)	12.2 - 1.8%
TOTAL		400 (100.00%)	
	Revised Cut-off Values	Distribution from Study Data	Likelihood Below National Upper Poverty Line (NAD12.43/day)
Provide	≤ 19	53 (13.25%)	76.4%
Protect	20-74	282 (70.50%)	66.9-1.8%
Promote	≥ 75	65 (16.25%)	1.8-1.7%
TOTAL		400 (100.00%)	

These revised cut-off points provide similar comparisons with both the HHS and HDDS as the previous cut-off points as shown in **Figures 8 and 9**.

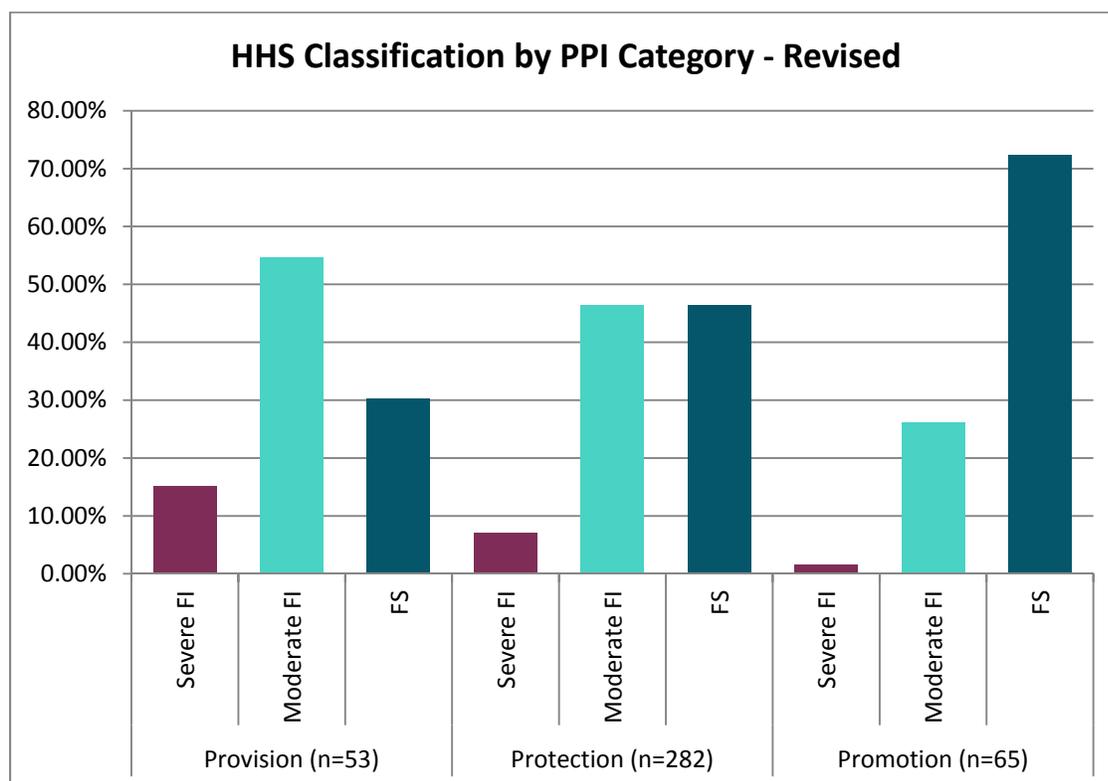


Figure 8. This graph shows how HHS and PPI classify the same clients, using revised PPI cut-off points.

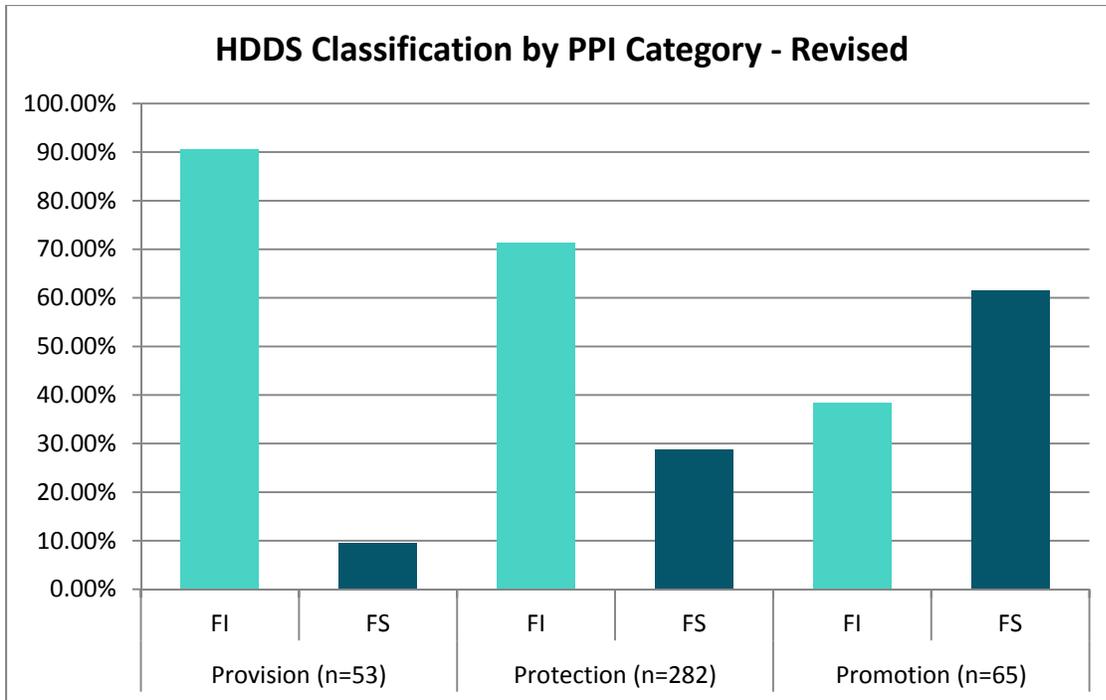


Figure 9. This graph shows how HHDS and PPI classify the same clients using revised PPI cut-off points.

Using the indices collectively for referrals. In practice, the PPI cut-off points should be viewed only as guides, whereby, if clients are scored on or near a cut off, services in the adjacent category should be always be considered. In addition, household food security data can be used to obtain a clearer picture of the household’s vulnerability, which could point to referrals in other categories than the one assigned by PPI alone. To apply this principle more effectively, the diagnostic tool should be accompanied with easy-to-use tools that show how the client scored and how the scores can be jointly interpreted to make referrals. A sample tool below shows gradations of household vulnerability based on combined PPI, HHS and HHDS scores and can be used when trying to match clients with services.

PPI Category	HHS Category		
	Severe FI	Moderate FI	Food Secure
Provision	A	B	C
Protection	B	C	D
Promotion	C	D	E



HHDS	Combined PPI/HHS Score Above				
	A	B	C	D	E

Food Insecure	A	A	B	C	C
Food Secure	A	B	C	C	E

In addition, the food security data gathered through this test provide useful insight into how each of these tools classifies clients. Given the interest in a rapid tool that can be used routinely, LIFT II will look carefully at the benefits and trade-offs of including two food security measures or whether HHS alone is sufficient for the food security dimension of the final diagnostic tool.

Supplement the diagnostic tool with counseling that focuses on the identified barriers to acting on referrals identified in the study. The diagnostic tool provides quantitative information about households that serve two primary purposes: (1) to classify households, thereby assisting individuals with a limited understanding of vulnerability and/or ES/L/FS approaches to make referrals to appropriate services, and (2) to collect household-level data that can demonstrate changes (at household level or in aggregate) over time. While the field test speaks to the tool’s utility, there is a clear need for additional information about the client/household before an informed referral can be made. The barriers identified in this study will be important to address or overcome in the referral process. Counseling based both on diagnostic scores and on the services available in the catchment area can help ensure that the referrals take into consideration key factors that affect clients’ ability to act on referrals made. These counseling sessions will be somewhat context specific, but all should address important issues such as current employment/income sources, experience and skills/abilities, interests, ability to commit time and/or resources to be involved in ES/L/FS activities, and eligibility for various services, among others.

APPENDIX ONE – DATA COLLECTION TOOLS

The following are the tools used to collect data for this study. Tool A is the tool used to collect data (in either English or Oshiwambo) from health facility clients, and Tool B is the tool LIFT II staff used to collect data (in English) from the data collectors after the completion of their fieldwork. The Oshiwambo version of Tool A is available upon request.

TOOL A – CLIENT INTERVIEWS

PROGRESS OUT OF POVERTY INDEX (PPI)

Question	Response	Score	Sub Total
1. Does the household have only one member, own a microwave oven, or own a motor vehicle?	No	0	
	Yes	100	
2. How many members does the household have?	Eight or more	0	
	Seven	4	
	Six	10	
	Five	13	
	Four	20	
	Three	27	
3. What is the highest level of education that the female head/spouse has completed?	One or Two	35	
	None	0	
	Primary School	2	
	No female head/spouse	4	
	Junior secondary (high) school	6	
4. What is the main material used for the floor of the dwelling?	Senior secondary (high) school or more	14	
	Mud, clay, cow dung, or sand	0	
5. How many rooms in the dwelling are used for sleeping?	Concrete, wood or other	7	
	One	0	
	Two	6	
6. What is your main source of energy/fuel for cooking?	Three or more	11	
	Wood, wood charcoal, coal, animal dung, solar energy, none or other	0	
	Paraffin, gas, electricity	5	
7. Does the household own a refrigerator or freezer?	No	0	
	Yes	5	
8. Does the household own a television?	No	0	
	Yes	4	
9. Does the household own a cell telephone and/or landline telephone?	No	0	
	Only cell or only landline	4	
	Both	8	
10. Does the household own cattle, donkeys/mules or horses?	No	0	
	Yes	10	
	TOTAL		

Score	Service Category
0-24	Provision
25-44	Protection
45-100	Promotion

HOUSEHOLD HUNGER SCALE (HHS)

No.	Question	Response
11.	Q1 In the past [4 weeks/30 days], was there ever no food to eat of any kind in your house because of lack of resources to get food? If yes, how often did this happen?	No.....0 Yes—Rarely (1-2 times).....1 Yes—Sometimes (3-10 times).....2 Yes—Often (more than 10 times).....3
12.	In the past [4 weeks/30 days], did you or any household member go to sleep at night hungry because there was not enough food?	No.....0 Yes—Rarely (1-2 times).....1 Yes—Sometimes (3-10 times).....2 Yes—Often (more than 10 times).....3
13.	In the past [4 weeks/30 days], did you or any household member go a whole day and night without eating at all because there was not enough food?	No.....0 Yes—Rarely (1-2 times).....1 Yes—Sometimes (3-10 times).....2 Yes—Often (more than 10 times).....3

Score	Food Security Category
0-1	Little to No household hunger
2-3	Moderate household hunger
4-9	Severe household hunger

HOUSEHOLD DIETARY DIVERSITY SCORE (HDDS)

No.	Question	Response
14.	Any mahangu, maize, bread, rice noodles, biscuits, or any other foods made from mahangu, sorghum, maize, rice, or wheat?	No.....0 Yes.....1
15.	Any potatoes, yams, manioc, cassava or any other foods made from roots or tubers?	No.....0 Yes.....1
16.	Any vegetables?	No.....0 Yes.....1
17.	Any fruits?	No.....0 Yes.....1
18.	Any beef, pork, lamb, goat, rabbit, wild game, chicken, duck, or other birds, liver, kidney, heart or other organ meats?	No.....0 Yes.....1
19.	Any eggs?	No.....0 Yes.....1
20.	Any fresh or dried fish or shellfish?	No.....0 Yes.....1
21.	Any foods made from beans, peas, lentils, or nuts?	No.....0 Yes.....1
22.	Any cheese, yogurt, milk or other milk products?	No.....0 Yes.....1
23.	Any foods made with oil, fat or butter?	No.....0 Yes.....1
24.	Any sugar or honey?	No.....0 Yes.....1
25.	Any other foods, such as condiments, coffee or tea?	No.....0 Yes.....1
TOTAL		

FINAL QUESTIONS

No.	Question	Response
26a.	Is your household receiving any kind of food aid?	No.....0 Yes.....1
26b.	Is your household already receiving government grants or other community services related to economic strengthening, livelihoods, food security or health?	No.....0 (Skip to 60) Yes.....1
27.	If yes, what are these services?	Please list—free response
28.	Are you interested in referrals to other services such as (LIST possible services)?	

29.	<p>If you were given a referral to one of these services, what concerns would you have about accessing it?</p> <p>READ LIST, but allow them to include other options.</p>	<p>Appointments not available 1 Staff not available.....2 Service closed3 Service too far/not convenient.....4 Could not afford the service5 Did not trust the service provider .6 Did not know where to go.....7 Service is seasonal8 Service no longer operational9 Weather 10 Eligibility/participation criteria 11 Time to participate..... 12 OTHER..... Write in reason(s):</p>
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TOOL B – DATA COLLECTOR DEBRIEF

SECTION ONE – TIMING

1. How many minutes did it take for you to use the Diagnostic Tool with each client (if possible, focus only on the time it took to complete Questions 1-25 as the Informed Consent and Final Questions will not be part of the final tool)? **[Answer in number of minutes]**
2. How many minutes did it take for you to record client results? **[Answer in number of minutes]**
3. Do you have any concerns about the length of the Diagnostic Tool (again, focus on the time it took to complete Questions 1-25)? **[Answer is free response]**

SECTION TWO – EASE OF USE

4. Please rank the Diagnostic Tool according to the following six attributes (where 1 = very easy and 5 = not easy at all): **[Answer is 1 to 5, or 99 for refused]**
 - a. Efficient (in that the interviewees understood questions)
 - b. Easy to record information correctly and not make errors
 - c. Terminology used was easy to understand
 - d. Design and layout were easy to use
 - e. Easy to record data that was not an exact match for the provided answer choices
 - f. Easy to explain the purpose of the tool to someone (not a specialist; the general public)
5. For each of the items A-F above ranked 3, 4, or 5 please explain why you made that selection and what can be done to improve your score. **[Answer is free response for A-F]**
6. Did any of the questions make the interviewee uncomfortable? **[Answer is free response]**
7. Were there any questions that were difficult because they were hard to explain, or that seemed out of context in Namibia? Were any questions difficult for another reason? **[Answer is free response]**
8. What was the best thing about the Diagnostic Tool? **[Answer is free response]**
9. What was the worst thing about the Diagnostic Tool? **[Answer is free response]**

SECTION THREE – UTILITY OF THE TOOL FOR REFERRALS

10. As you know, this tool aims to categorize households into the provision, protection and promotion categories in order to help community service providers match households with the best services

for them. Based on your experience using the tool, do you think the information collected in the tool helps with this categorization and will make it easier for health or community workers to make appropriate referrals (keep in mind individuals will also have an easy to use directory of community services)?

11. Based on the scores of each of the clients interviewed, what percentage do you feel were correctly classified by the PPI into the provision, protection and promotion categories?
12. Would you make any changes to these cut-off points? If, so please explain.
13. Assuming you were going to refer the client to a service in [community], there would need to be a brief counseling session following the use of the diagnostic. What additional information would you need to collect in this session to help you identify the most appropriate service for that household?
14. After completing the diagnostic, how long do you think this counseling session would need to be to discuss the options available with the client to ensure you were referring them to a service they need and are eligible for? **[Answer in number of minutes]**

NOTE: To help the data collectors assess the value of the diagnostic for a referral they will be provided with the following information:

- a. sample referral directory
 - b. hard copies of the data collection tools so they may refer to specific questions
 - c. if possible, data from particular interviews they found insightful or challenging
15. Can you think of other materials (information, pamphlets, training, etc.) that would make providing referrals easier?

APPENDIX TWO – STUDY APPROVAL

This research was approved by two review boards: the Office of Research Ethics of the Ministry of Health in Namibia, and the Office of International Research Ethics (OIRE) of FHI 360 in the United States. The Office of Research Ethics of the Ministry of Health approved the research with no objections on October 18, 2013, and the OIRE approved the research as *human subjects research—exempt* on September 25, 2013. Copies of all approval letters are available upon request.