The Language Competence Survey of Jamaica

DATA ANALYSIS

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LANGUAGE COMPETENCE SURVEY OF JAMAICA 2006

Executive Summary

In 2005, the Jamaican Language Unit (JLU) conducted its first Language Attitude Survey of Jamaica (LAS), an island-wide study, to assess the views of Jamaicans towards Patwa (Jamaican Creole) as a language. This year's study: the Language Competence Survey of Jamaica (LCS) however concentrated on the ability of Jamaicans to 'code switch' between both languages, that is Patwa and English. In other words, the 2006 study sought to assess the level of bilingualism that is exhibited by Jamaicans and to delineate some of the characteristics that are important in understanding bilingualism.

The parameters of the sampling methodology were more or less maintained, with one minor modification to one of the stratifying variables used for sampling in the previous year's study. Specifically, the sample consisted of 1000 Jamaicans, stratified along the variables of region (western and eastern), area (urban and rural), age groups (18-30 years, 31-50 years and 51-80+ years), and gender. The survey methodology was modified to more of a (hybrid) quasi-experimental design rather than the standard correlational design (typical of surveys) used last year.

This change in the survey design and focus necessitated changes in the approach to data analysis. Firstly, fewer relationships were examined. This was due to the 2006 survey's more specific focus, as well as the approach to measurement of bilingualism that was taken. The present study utilised three variables essentially measuring the same construct, which were combined in the data analysis to get the best measurement of bilingualism, the dependent variable. This is unlike what occurred in 2005, when several dependent variables were used as the basis for analysis. Secondly, with the design change it was considered prudent to examine potential confounding relationships. For instance there could have been an interaction between the gender of the interviewers and the willingness of respondents to exhibit bilingualism (this is only true if interview teams were randomly assigned to interviews).

The results indicate that 46.4% of respondents were able to switch between both languages (with and without prompting) and therefore demonstrated bilingualism. The majority of the sample however was monolingual, with more than a third of this proportion being Patwa speakers (Jamaican Language users).

When bilingualism was examined using the demographic characteristics of respondents there were only two significant relationships. Demonstrated bilingualism tended to be slightly higher among respondents who were from eastern parishes that were urban areas when compared to their western and rural counterparts. Among monolingual respondents, eastern and urban areas tended to have more monolingual English speakers than western and rural areas. There was also a tendency for higher skilled or professional respondents to demonstrate bilingualism than respondents who indicated that they were unskilled or unemployed. Additionally, English speaking monolinguals tended to be concentrated in the highly skilled and professional groups.

There was some amount of interaction between the gender combination of the pair of interviewers as well as the language in which the interviewers initiated the interview process, and the respondent's behaviour. Respondents from urban areas who had two female interviewers were more likely to demonstrate bilingualism than those from rural Jamaica, while those from the eastern region were more likely to be monolingual English speakers than those in western parishes. Additionally the relationship between Occupation and Bilingualism was significant across all levels of the control variables but the relationships were stronger for mixed gender interview teams (teams consisting of male and female interviewers) and interviews initiated in Patwa.

Sample and Analytical Plan

In this section of the report, the demographic structure of the sample will be presented, along with how these characteristics were used to stratify the sample. The breakdown of the characteristics of the interviewers and interviews is also presented. Additionally a brief description of the analytical plan is provided, including the data manipulations, statistics used, level of significance used for testing and a simple diagrammatic presentation of the analytic procedure.

Profile of the Sample

Table 1: Demographic Variables in the Survey (N= 1000)			
Variables		***Frequency***	***%***
Region	*Western*	400	40
	Eastern	600	60
Urban/Rural	*Urban*	500	50
	Rural	500	50
Gender	*Male*	495	49.5
	Female	504	50.5
Age	*18 - 30 yrs*	349	34.9
	31 - 50 yrs	383	38.3
	51 - 80+ yrs	268	26.8
Occupational Groups	*Unskilled/Housewives*	246	24.6
	Unemployed	198	19.8
	Farmers/skilled craftsmen	241	24.1
	Clerical sales/services	148	14.8
	Self employed/ service professionals	167	16.7

As shown in Table 1, the majority of the respondents were from eastern parishes (60%) and the other 40% were pulled from western parishes. This is unlike the previous year in which the respondents were divided equally between western and central parishes. There were equal proportions of respondents from urban and rural areas compared to 3.8% more respondents from urban areas in 2005.

Table 2: Structure of the Stratified Sample					
Region	***Urban/Rural***	***Sex***	***Age groups***		
			18 - 30 yrs	***31 - 50 yrs***	***51 - 80+ yrs***
Western	**Urban**	***Males***	33 (49.3%)	34 (50.7%)	32 (48.5%)
		Females	34 (50.7%)	33 (49.3%)	34 (51.5%)
		All Sex	**67**	**67**	**66**
	Rural	***Males***	32 (48.5%)	31 (48.4%)	36 (52.2%)
		Females	34 (51.5%)	33 (51.6%)	33 (47.8%)
		All Sex	**66**	**64**	**69**
	All Areas		**133**	**131**	**135**
Eastern	**Urban**	***Males***	65 (56.5%)	50 (40%)	35 (58.3%)
		Females	50 (43.5%)	75 (60%)	25 (41.7%)
		All Sex	**115**	**125**	**60**
	Rural	***Males***	50 (50%)	49 (48%)	48 (49%)
		Females	50 (50%)	53 (52%)	50 (51%)
		All Sex	**100**	**102**	**98**
	All Areas		**215**	**252**	**133**
Total			**348**	**383**	**268**

The gender distribution has remained comparable across the two years with roughly equal proportions of male and female respondents. Last year there were slightly more men than women, this year that has been reversed, with one respondent not specifying gender. There was greater heterogeneity in the distribution of the age groups in the present sample. Last year the sample was divided roughly into thirds across the three groups. This year almost thirty five percent were between the ages of 31-50 years (34.9%) and less than a third (29.3%) was in the oldest age category. The largest occupational groups were unskilled/housewives (24.6%) and farmers/skilled craftsmen (24.1%) compared to clerical sales/services (25.4%) and farmers/skilled craftsmen (23.8%) in 2005. The unemployed category (19.8%) this year is slightly larger than the 12.2% of the sample last year. The self employed/ service professionals were 16.7% of all respondents, down from 20.4% in 2005.

Region (western and eastern), Urban/Rural (urban and rural), age (18-30 years, 31-50 years and 51-80+ years) and gender were the variables used to design the stratified sample for the LCS. The resulting design had 24 distinct strata, as displayed in Table 2. For the western parishes, there were roughly equal proportions of male and female respondents across all age groups. There was greater variability in the gender and age distributions for rural as opposed to urban areas.

There were greater disparities in the age and gender distribution in urban areas of the eastern parishes, actually exhibiting the greatest heterogeneity for any set of strata. The most salient feature is a 15.1% drop in the total number of respondents in the oldest age groups while the other two age groups had 5.8% and 9.2% increases in the numbers of respondents respectively, compared to the previous year. The rural parishes have a similar pattern to those of the strata for western parishes as well as the previous year and therefore there is relative uniformity in the distribution of age and gender.

Profile of the Interviewers and Interviews

Table 3 highlights that approximately of a third (33.7%) of the interviews were conducted by mixed gender interview couples. This was more a function of the disparities observed in the general university population (University of the West Indies, Mona campus), from which the interviewers were selected, rather than a specific design feature. There seemed to be a preference, irrespective of the gender combinations of the interviewing teams, in the language used to start the interviews, the majority

(53.2%) of which was started in Patwa. This roughly translates into six percent more interviews initiated using Patwa.

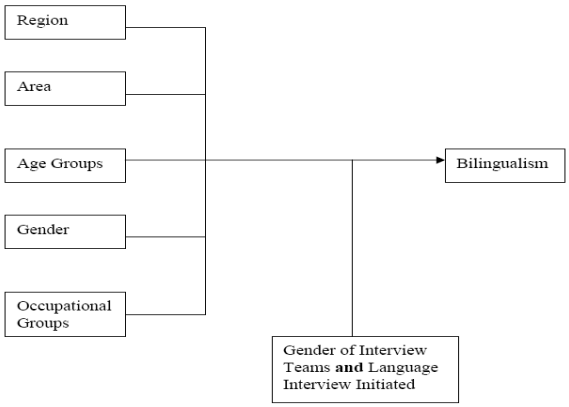
Table 3: Characteristics of Interviewers and Interviews			
Variables		***Frequency***	***%***
Sex of interviewers	*Male & Female*	337	33.7
	Female & Female	663	66.3
Language used to initiate interview	*English*	468	46.8
	Patwa	532	53.2

Data Analysis and Manipulation

The data was analyzed using the Statistical Package of the Social Sciences (SPSS). The variables used in the analysis were categorical, therefore the Chi-square statistic was used to examine the bivariate relationships. Additionally, all relationships were tested using a significance level of five percent (5%). The implication of this is that the maximum probability of the risk of making a Type I error was 0.05. Therefore all displayed significance levels that were below 0.05 were deemed to be statistically significant (any significance level that was exactly, as well as when rounded, equal to or greater than 0.05, was considered to be statistically insignificant).

Diagram 1 is the graphical representation of the analytical plan that was used in the study. On the left hand side of the diagram are the independent variables (region, area, age groups, gender and occupational groups. On the right hand side is the dependent variable (bilingualism) and the variables located at the bottom centre (gender of interviewers and language interviews initiated) are the control variables. The control variables are considered to be mediating the relationships between each of the independent

Diagram 1: Analytical Plan



variables and the dependent variable. These relationships were assessed to identify potential confounding relationships. Generally, only the relationships that were statistically significant were reported and discussed.

There are two notable variable modifications that were made for the analysis. The variable used to measure occupation groups was created by recoding the variable **OCCUPAT**. The original variable had a total of nine categories was simply regrouped into five (which can be seen in Table 1 above). Specifically, the categories labeled self employed/service professionals, farmers/skilled craftsmen and unemployed were created by collapsing as the names suggest self employed professionals with service professional, farmers with skilled crafts men and unemployed consisted of students, retired and unemployed respondents. This was done primarily to achieve parity with what was done in the previous year as well as to subsume categories into larger operational categories for occupational groups.

The variable **BILINGUALISM** was a 'proxy variable' used to measure language competence, was created by the summation of three variables; **Q8** (Language at scenario – Jamaican or English)**, Q9** (Language at prompt – Jamaican or English) and **Q10** (Language at debrief – Jamaican or English). These variables were first recoded, weighting the values of each variable to ensure that each characteristic represented by these variables would be clearly distinguishable when summed. After the creation of the proxy variable it was recoded into the three groups displayed in Table 4 below. This seemingly elaborate undertaking was done because each variable (**Q8, Q9 and Q10**) measured different aspects of the process used to measure bilingualism. Therefore no one variable was suitable as an adequate measure of bilingualism. This then necessitated the combination of all three to develop an accurate (as was possible) measure of bilingualism.

Data Presentation

Bilingualism

Table 4: Bilingualism			
Variable		***Frequency***	***%***
Monolingualism	*English*	171	17.1
	Patwa	365	36.5
Bilingualism	*Demonstrated Bilingualism*	464	46.4

From Table 4, it can be seen that 46.4% of the respondents demonstrated bilingualism. Less than 20% of the sample were monolinguals that spoke only English and just over a third (36.5%) of the respondents were Patwa speaking mono-linguals (either because they did not speak both languages during the interview or told the interviewers that they were capable of doing so but did not demonstrate competence in both).

Independent Variables: Region, Urban/Rural, Age, Gender, Occupation

Table 5-9 present the results of the chi-square analysis, examining the relationships between bilingualism and region, Urban/Rural, age, gender and occupation. Only three of relationships were found to be statistically significant, namely Region, Urban/Rural and Occupational Groups with Bilingualism.

Table 5: Bilingualism by Region				
Variables	***Bilingualism***			**Total**
Region	**English**	**Patwa**	**Demonstrated Bilingualism**	
$\chi^2 = 7.998$, p = 0.018	**Count (%)**	**Count (%)**	**Count (%)**	
Western	54 (13.5%)	162 (40.5%)	184 (46%)	n = 400
Eastern	117 (19.5%)	203 (33.8%)	280 (46.7%)	n = 600

Table 6: Bilingualism by Urban/Rural				
Variables	***Bilingualism***			**Total**
Area	**English**	**Patwa**	**Demonstrated Bilingualism**	
χ^2 =11.365, p =0.003	**Count (%)**	**Count (%)**	**Count (%)**	
Urban	103 (20.6%)	163 (32.6%)	234 (46.8%)	n = 500
Rural	68 (13.6%)	202 (40.4%)	230 (46%)	n = 500

Table 7: Bilingualism by Age				
Variables	***Bilingualism***			**Total**
Age Groups	**English**	**Patwa**	**Demonstrated Bilingualism**	
χ^2 =4.978, p = 0.290	**Count (%)**	**Count (%)**	**Count (%)**	
18 – 30 yrs	69 (19.8%)	115 (33%)	165 (47.3%)	n = 349
31 – 50 yrs	60 (15.7%)	142 (37.1%)	181 (47.3%)	n = 383
51 – 80+ yrs	42 (15.7%)	108 (40.3%)	118 (44%)	n = 268

Table 8: Bilingualism by Gender				
Variables	***Bilingualism***			**Total**
Gender	**English**	**Patwa**	**Demonstrated Bilingualism**	
χ^2 = 0.074, p = 0.964	**Count (%)**	**Count (%)**	**Count (%)**	
Male	86 (17.4%)	181 (36.6%)	228 (46.1%)	n = 495
Female	85 (16.9%)	183 (36.3%)	236 (46.8%)	n = 504

Table 9: Bilingualism by Occupation				
Variables	***Bilingualism***			**Total**
Occupational Groups	**English**	**Patwa**	**Demonstrated Bilingualism**	
χ^2 = 79.013, p = 0.000	**Count (%)**	**Count (%)**	**Count (%)**	
Unskilled/housewife	21 (8.5%)	127 (51.6%)	98 (39.8%)	n = 246
Unemployed	45 (22.7%)	66 (33.3%)	87 (43.9%)	n = 198
Farmer/skilled craftsman	28 (11.6%)	100 (41.5%)	113 (46.9%)	n = 241
Clerical sales/services	25 (16.9%)	36 (24.3%)	87 (58.8%)	n = 148
self-employed/service professional	52 (31.1%)	36 (21.6%)	79 (47.3%)	n = 167

Region

There was a statistically significant relationship between Region and Bilingualism (χ^2 (4) = 7.998, $p<0.05$). As shown in Table 5, there was a marginal difference in the number of bilinguals across the regions: eastern parishes had 46.7% compared to 46% in the western parishes. Among monolinguals, it would appear that respondents who were from eastern parishes (19.5%) were more likely to exhibit English monolingualism than those from western parishes (13.5%). The reverse is true for monolingual Patwa speakers, where 40.5% were to be found in western parishes compared to a third in eastern parishes. There was a very weak association between the two variables (cc = 0.089), with less than one percent of the variation in bilingualism being explained by its relationship with region.

Urban/Rural

The results indicate that a statistically significant relationship exists between Urban/Rural and Bilingualism ($\chi^2(2) = 11.365$, $p<0.05$). Respondents from urban areas were less likely to be Patwa-speaking mono-linguists (20.6%) and fractionally more likely to demonstrate bilingualism (46.8%) when compared with persons from rural areas (13.6% and 46%) respectively. There was a weak relationship between area of residence and bilingualism (cc = 0.106). Additionally, approximately one percent of the variation in the distribution of Bilingualism was explained by its relationship with area.

Occupational Groups

In terms of the relationship between Occupation and Bilingualism, there was direct variation between occupational classification groups and being an English speaking monolingual or exhibiting bilingualism. That is, as the level of skill (or education required) for the job increased or the occupational categories become more service oriented, respondents were more likely to either be English-speaking monolingual or be bilingual rather than a Patwa-speaking monolingual. From Table 9, it can be seen that unskilled workers or housewives (51.6%) were most likely to demonstrate Patwa monolingualism. Clerical sale/ services and self employed/ service professionals were most likely to demonstrate bilingualism (58.8% and 47.3% respectively). There was a weak relationship between the two variables (cc= 0.271), with 7.3% of the variation in bilingualism being explained by its relationship with occupational groups.

Controlling Variable: Gender of Interviewers

Tables 10 to 14 present the results of the chi-square analysis examining the relationships between bilingualism and the independent variables (Region, Urban/Rural, Age, Gender and Occupation), controlling for the effects of the gender of the interviewers. As before, the only significant relationships were found between Region, Urban/Rural and Occupational Groups.

Table 10: Re-examining Bilingualism by Region, Controlling for the Effects of the Gender of Interviewers

Gender of Interviewers	***Bilingualism***	***Western***	***Eastern***
		count(%)	***count(%)***
Male & Female **$\chi^2 = 8.905$, p = 0.012**	**English**	11 (8.5%)	43 (20.7%)
	Patwa	50 (38.8%)	74 (35.6%)
	Demonstrated Bilingualism	68 (57.7%)	91 (43.8%)
Female & Female **$\chi^2 = 4.967$, p = 0.083**	**English**	43 (15.9%)	74 (18.9%)
	Patwa	112 (41.3%)	129 (32.9%)
	Demonstrated Bilingualism	116 (42.8%)	189 (48.2%)

Table 11: Re-examining Bilingualism by Urban/Rural, Controlling for the Effects of the Gender of Interviewers

Gender of Interviewers	***Bilingualism***	***Urban***	***Rural***
		Count(%)	***count(%)***
Male & Female **$\chi^2 = 4.468$, p = 0.107**	**English**	31 (20.5%)	23 (12.4%)
	Patwa	55 (36.4%)	69 (37.1%)
	Demonstrated Bilingualism	65 (43%)	94 (50.5%)
Female & Female **$\chi^2 = 10.576$, p = 0.005**	**English**	72 (20.6%)	45 (14.3%)
	Patwa	108 (30.9%)	133 (42.4%)
	Demonstrated Bilingualism	169 (48.4%)	136 (43.3%)

Table 12: Re-examining Bilingualism by Gender, Controlling for the Effects of the Gender of Interviewers

Gender of Interviewers	***Bilingualism***	***Male***	***Female***
		count(%)	***count(%)***
Male & Female **$\chi^2 = 0.275$, p = 0.872**	**English**	25 (16.8%)	29 (15.4%)
	Patwa	56 (37.6%)	68 (36.2%)
	Demonstrated Bilingualism	68 (45.6%)	91 (48.4%)
Female & Female **$\chi^2 = 0.009$, p = 0.996**	**English**	61 (17.6%)	56 (17.7%)
	Patwa	125 (36.1%)	115 (36.4%)
	Demonstrated Bilingualism	160 (46.2%)	145 (45.9%)

Table 13: Re-examining Bilingualism by Age, Controlling for the Effects of the Gender of Interviewers				
Gender of Interviewers	***Age Groups***	**English**	**Patwa**	**Demonstrated Bilingualism**
Male & Female	18 - 30yrs	22 (18.6%)	38 (32.2%)	58 (49.2%)
χ^2 = 3.182, p = 0.528	31 - 50yrs	22 (16.8%)	51 (38.9%)	58 (44.3%)
	51 - 80+ yrs	10 (11.4%)	35 (39.8%)	43 (48.9%)
Female & Female **χ^2 = 4.527, p = 0.339**	18 - 30yrs	47 (20.3%)	77 (33.3%)	107 (46.3%)
	31 - 50yrs	38 (15.1%)	91 (36.1%)	123 (48.8%)
	51 - 80+ yrs	32 (17.8%)	73 (40.6%)	75 (41.7%)

Table 14: Re-examining Bilingualism by Occupation, Controlling for the Effects of the Gender of Interviewers				
Gender of Interviewers	***Occupational Groups***	**English**	**Patwa**	**Demonstrated Bilingualism**
Male & Female **χ^2 = 37.478, p = 0.000**	Unskilled/housewife	6 (7.1%)	50 (59.5%)	28 (33.3%)
	Unemployed	18 (27.3%)	17 (25.8%)	31 (47%)
	Farmer/skilled craftsman	9 (11.7%)	31 (40.3%)	37 (48.1%)
	Clerical sales/services	7 (14.6%)	13 (27.1%)	28 (58.3%)
	self-employed/service professional	14 (22.6%)	13 (21.0%)	35 (56.5%)
Female & Female **χ^2 = 53.632 p = 0.000**	Unskilled/housewife	15 (9.3%)	77 (47.5%)	70 (43.2%)
	Unemployed	27 (20.5%)	49 (37.1%)	56 (42.4%)
	Farmer/skilled craftsman	19 (11.6%)	69 (42.1%)	76 (46.3%)
	Clerical sales/services	18 (18%)	23 (23%)	59 (59%)
	self-employed/service professional	38 (36.2%)	23 (21.9%)	44 (41.9%)

Region

From Table 10, the relationship between Region and Bilingualism is significant for respondents who where interviewed by mixed gender interview teams (χ^2 (2) = 8.905, $p<0.05$). The nature of this relationship is similar to what was previously described for the test between both variables without the

control variable. Specifically, respondents from eastern parishes are more like to be monolingual-English speakers (20.7%) than those from western parishes (8.5%). However there was one notable exception, there were more bilinguals in the western region than in the east (52.7% compared to 43.8%). There was a marked increase in the strength of the relation (from cc=0.086 to cc = 0.160) which in turn increased the explained variation from approximately 0.7% to approximately 2.5% of the variation in bilingualism. This would suggest that the relationship is true of those respondents interviewed by mixed gender interviewers rather than those that had only female interviewers.

Urban/Rural

As before when looking solely on area, the results indicate that there is a statistically significant relationship between Urban/Rural and Bilingualism (χ^2 (2) = 11.365, $p<0.05$). However, this time it is only true for the interviews conducted by interview teams that had only female interviewers. The general nature of the relationship is also the same but the pattern is more distinctive. As seen in Table 11, respondents from urban areas were more likely to be bilinguals (48.4%) when compared with respondents from rural areas (43.3%). If they are monolinguals, they are more likely to speak English (20.6%) compared to their rural counterparts (14.3%). The strength of the relationship increased, but still remained weak (cc = 0.114). While this does point to an interaction of some sort between the gender of the interviewers and the behaviour of respondents, it is important to note that only a third of these interviews were conducted by mixed gender interview teams. Therefore it cannot conclusively be determined that such an interaction is indeed a true reflection of the effect of interviewer gender, particularly since there were no single sex male interview teams.

Occupational Groups

As seen in Table 14, the results obtained for the relationship between Occupational Groups and Bilingualism is similar to what was obtained before and is significant for both types of interview couples. This would indicate that the relationship is true generally for the sample and the gender of the interviewers had little effect on this relationship (although the relationship is stronger for mixed gender interview teams). As with Urban/Rural, the pattern of interaction between the independent and dependent variable is much more delineated. The pattern indicates that unskilled/ housewives, if monolingual, are more likely to be Patwa speakers than were respondents in the clerical or professional categories. Overall, unskilled and housewives are also less likely to be bilingual than their counterparts in the clerical or professional categories.

Even though the relation was significant for both types of interview teams, the fact that the relationship was stronger for mixed gender interview teams does indicate some level of interaction. Approximately 10% of the variation in bilingualism is explained by its relationship with occupation for mixed gender interview teams, which is two percent (2%) more than what is explained by the same relationship for all female teams. It is important however to note that while this reinforces the idea of the confounding effect that the gender of the interview teams had on the relationship, without that third group (single sex male interview teams) it is not possible to fully understand the nature of this interaction.

Controlling Variable: Language Used to Initiate Interview

Tables 15 to 19 present the results of the chi-square analysis examining the relationships between bilingualism and the independent variables (region, Urban/Rural, Age, Gender and Occupation) controlling for the effects of the language used to initiate the interviews. The variables Region, Urban/Rural, Age and Occupational groups were found to be significantly related to Bilingualism.

Table 15: Re-examining Bilingualism by Region, Controlling for the Effects of the Language Used to Initiate the Interviews

Starting Language	***Bilingualism***	***Western***	***Eastern***
English **$\chi^2 = 4.038$, p = 0.133**	**English**	37 (18.6%)	46 (17.1%)
	Patwa	81 (40.7%)	89 (33.1%)
	Demonstrated Bilingualism	81 (40.7%)	134 (49.8%)
Patwa **$\chi^2 = 15.293$, p = 0.000**	**English**	17 (8.5%)	71 (21.5%)
	Patwa	81 (40.3%)	114 (34.4%)
	Demonstrated Bilingualism	103 (51.2%)	146 (44.1%)

Table 16: Re-examining Bilingualism by Urban/Rural, Controlling for the Effects of the Language Used to Initiate the Interviews

Starting Language	***Bilingualism***	***Urban***	***Rural***
English **$\chi^2 = 12.158$, p = 0.002**	**English**	54 (21.6%)	29 (13.3%)
	Patwa	74 (29.6%)	96 (44%)
	Demonstrated Bilingualism	122 (48.8%)	93 (42.7%)
Patwa **$\chi^2 = 3.215$, p = 0.200**	**English**	49 (19.6%)	39 (13.8%)
	Patwa	89 (35.6%)	106 (37.6%)
	Demonstrated Bilingualism	112 (44.8%)	137 (48.6%)

Table 17: Re-examining Bilingualism by Gender, Controlling for the Effects of the Language Used to Initiate the Interviews			
Starting Language	***Bilingualism***	***Male***	***Female***
English **$\chi^2 = 0.238$, p = 0.888**	**English**	39 (17.6%)	44 (17.8%)
	Patwa	78 (35.3%)	92 (37.2%)
	Demonstrated Bilingualism	104 (47.1%)	111 (44.9%)
Patwa **$\chi^2 = 0.612$, p = 0.736**	**English**	47 (17.2%)	41 (16%)
	Patwa	103 (37.6%)	91 (35.4%)
	Demonstrated Bilingualism	124 (45.3%)	125 (48.6%)

Table 18: Re-examining Bilingualism by Age, Controlling for the Effects of the Language Used to Initiate the Interviews				
Starting Language	***Age Groups***	***English***	***Patwa***	***Demonstrated Bilingualism***
English **$\chi^2 = 4.102$, p = 0.392**	18 - 30yrs	27 (15.5%)	60 (34.5%)	87 (50%)
	31 - 50yrs	34 (17.8%)	68 (35.6%)	89 (46.6%)
	51 - 80+ yrs	22 (21.4%)	42 (40.8%)	39 (37.9%)
Patwa **$\chi^2 = 11.151$, p = 0.025**	18 - 30yrs	42 (24%)	55 (31.4%)	78 (44.6%)
	31 - 50yrs	26 (13.5%)	74 (38.5%)	92 (47.9%)
	51 - 80+ yrs	20 (12.1%)	66 (40.1%)	79 (47.9%)

Table 19: Re-examining Bilingualism by Occupation, Controlling for the Effects of the Language Used to Initiate the Interviews				
Starting Language	***Occupational Groups***	***English***	***Patwa***	***Demonstrated Bilingualism***
English **$\chi^2 = 23.722$, p = 0.003**	Unskilled/housewife	10 (9.8%)	52 (51%)	40 39.2%)
	Unemployed	20 (21.1%)	32 (33.7%)	43 (45.3%)
	Farmer/skilled craftsman	16 (14.3%)	45 (40.2%)	51 (45.5%)
	Clerical sales/services	13 (18.3%)	18 (25.4%)	40 (56.3%)
	self-employed/service professional	24 (27.3%)	23 (26.1%)	41 (46.6%)
Patwa **$\chi^2 = 60.378$, p = 0.000**	Unskilled/housewife	11 (7.6%)	75 (52.1%)	58 (40.3%)
	Unemployed	25 (24.3%)	34 (33%)	44 (42.7%)
	Farmer/skilled craftsman	12 (9.3%)	55 (42.6%)	62 (48.1%)
	Clerical sales/services	12 (15.6%)	18 (23.4%)	47 (61%)
	self-employed/service professional	28 (35.4%)	13 (16.5%)	38 (48.1%)

Region

There was a significant relationship (χ^2 (2) = 15.293, $p<0.05$) between Region and Bilingualism but only for those interviews that were initiated in Patwa (Table 15). As previously highlighted, respondents from western parishes were more likely to be bilingual (51.2%) and if they were bilingual they were less likely to be English speakers (8.5% compared to 21.5%). This relationship was weak accounting for less than three percent of the variation in bilingualism.

Urban/Rural

According to the results from Table 16, there is a significant relationship between Urban/Rural and Bilingualism but it is only significant for interviews that were initiated in English. In keeping with the general trend for this relationship (see Table 10), urban respondents are more likely to be bilinguals (48.8%) than those from rural areas (42.7%). Similar to what was found when the gender of the interview teams was used as a control for the amount of variation in the relationship increased to approximately 2.5%. This suggests that this relationship is mediated both by the gender or the interview teams and the language that was used to initiate the interviews. It is possible that male-female interview teams tended to start interviews in English more so than Patwa.

Age

There was a significant relationship between Age and Bilingualism when the language used to initiate the interview was held constant (Table 18). The relationship was true for respondents that started the interview process with a scenario presented in Patwa. Older respondents (47.9%) were more likely to report bilingualism than younger respondents (44.36%). However among those respondents that were monolinguals, younger respondents were more likely to be English speakers (24%) compared to their older counterparts who were Patwa speakers (66%). This relationship was weak explaining two percent of the variation in bilingualism.

Occupational Groups

From Table 19, irrespective of the language that the interview was started there was a relationship between Occupational Groups and Bilingualism. While the same general trend could be observed in the relationship (monolingual respondents tended to be less skilled than bilinguals and among monolinguals monolingual English speakers tended to be from the higher skilled groups), there was a stronger association between the variables for those interviews that were initiated using Patwa. On the one hand,

under this controlled condition (interviews started with Patwa), occupational group accounted for 10.2% of the variation in Bilingualism. On the other hand, for those interviews initiated in English occupational groups accounted for only 4.8%. Altogether this would indicate that the relationship between occupational groups and Bilingualism is mediated by the language the interviewers used to start the interview process.

Conclusion

There were significant relationships for three of the five variables: Region, Urban/Rural and Occupational group. Individuals that resided in eastern parishes tended to be bilingual or, if monolingual, were more likely to be English speakers. Urban area respondents/residents were more likely to be bilingual than those who were from rural areas. However, most English speaking monolinguals were to be found in urban areas. Respondents who classified themselves as clerical sales/ services or the self employed/service professionals were more likely to be bilingual than those who were unskilled/housewives or unemployed. Within the occupational groups those who were monolingual Patwa speakers were concentrated in the lower skilled groups.

When the analytical model was re-examined holding the gender of the interviewers constant as well as the language that was used to initiate the interviews, the same variables (Region, Urban/Rural and Occupational groups) were found to be significant. (Age was significant but only when the second control variable, language used to initiate interview, was used) All three relationships were affected by both control variables, which indicated potential methodological confounds. Specifically, the relationship between Age and bilingualism was only significant for those interviews that were initiated using Patwa. The relationship between bilingualism and Region was significant for male-female interview teams but not for all female teams and those interviews that were initiated using Patwa. The relationship between Urban/Rural and bilingualism was only significant for female interview couples and interviews imitated in English. A possible explanation for this is that male-female interview teams were more likely to start interviews using Patwa while all female teams were more likely to start using English (although they could be unrelated incidents). The relationship between Occupational Groups and Bilingualism was significant for the sample irrespective of whether respondents were interviewed by a mixed gender or all female teams or the interview was started with Patwa or English. It most be noted

however that the relationship was stronger for mixed gender interview teams and interviews that were initiated using Patwa.

APPENDIX - Questionnaire

LANGUAGE COMPETENCE SURVEY	
Procedures for Language Competence Survey 1. A team of two persons will approach an informant. 2. The member of the team who leads off the interaction is responsible for filling out the form. 3. Lead interviewer ensures that all information required on the form has been filled out.	
INTRODUCTION **THE LEAD MEMBER GETS VERBAL CONSENT FROM INFORMANT, USING THE LANGUAGE VARIETY TO BE EMPLOYED IN THE FIRST PART OF THE INTERACTION.**	
ENGLISH SCENARIO	**PATWA SCENARIO**
Good Morning/Afternoon we are University of the West Indies students conducting a survey. Would you be willing to answer some questions for us on cell phones? **[GET VERBAL CONSENT]**	Maanin Mam/Sar wi kom fram di University of di West Indies, an wi a du wan sorvie. Yu kyahn ansa som kwestiyan bout sel fuon fi wi? **[GET VERBAL CONSENT]**
Question 1 **LEAD MEMBER INTRODUCES THE CELL PHONE PHOTOGRAPHS AND QUESTIONS INFORMANT**	
ENGLISH SCENARIO	PATWA SCENARIO
a) We want you to look at these two cell phones and tell us which one you prefer. b) Why do you prefer that one?	a) Wi waahn yu luk pon dem sel fuon ya an tel wi wich wan yu rada 2) Wa mek?
SECOND MEMBER CUTS ACROSS IN THE SECOND LANGUAGE VARIETY	
CUT ACROSS IN PATWA	**CUT ACROSS IN ENGLISH**
[Introduce 3rd phone] Excuse *a) wa bout da fuon ya/ Yu wuda buy da wan ya?* *b) Wa mek?*	***[Introduce 3rd phone] Excuse me...*** *a) Would you buy this phone?* *b) Why/Why not?*
1a. The respondent spoke in ENGLISH [ ]	1b. The respondent spoke in PATWA [ ]
IF INFORMANT USES BOTH LANGUAGE VARIETIES GO TO DEMOGRAPHICS. **IF INFORMANT USES ONLY ONE LANGUAGE VARIETY CONTINUE TO QUESTION 2**	
Question 2 **EITHER MEMBER CONTINUES WITH PROMPT IF THE LANGUAGE VARIETY FOR WHICH THEY ARE RESPONSIBLE HAS NOT BEEN USED.**	
PROMPT FOR PATWA SPEAKERS	**PROMPT FOR ENGLISH SPEAKERS**
If I wanted to advertise this phone in English how would you describe this phone for me in English?	*Supuoz mi waahn advataiz da fuon ya ina Patwa ou yu wuda taak bout da fuon ya ina Patwa?*
2a) The respondent spoke in PATWA [ ]	2b) The respondent spoke in ENGLISH [ ]
IF RESPONDENT DOES NOT SWITCH TO PATWA/ENGLISH CONTINUE TO DEBRIEF	
Question 3 - DEBRIEF	
DEBRIEF FOR ENGLISH SPEAKERS	**DEBRIEF FOR PATWA SPEAKERS**

Part of our research today involves finding out what languages people speak. I noticed you answered all the questions in English even when my colleague spoke to you in Patwa. Do you speak Patwa?	**Paat a da stodi ya a fi fain out wa langgwij piipl taak. Mi riiyalaiz se yu ansa aal di kwestiyan dem ina Patwa aal wen mi fren a taak tu yu ina Ingglish. Yu taak Ingglish?**
3a) Respondent says they speak PATWA [ ]	3b) Respondent says they speak ENGLISH [ ]

IF NO GO TO DEMOGRAPHICS

Question 4 - DEMOGRAPHICS

SECOND MEMBER COLLECTS DEMOGRAPHIC INFORMATION IN ANY LANGUAGE VARIETY THAT SEEMS APPROPRIATE

4a. Parish of Residence:	4b. How Long:	4c. Parish of Birth:

5. Age Range:	a) 18 – 30 years [ ]	b) 31 – 50 years [ ]	c)51 – 80+ years [ ]

6. Sex:	Male [ ]	Female [ ]	7. Occupation:

INTERVIEWERS THANK INFORMANT FOR PARTICIPATION AND WITHDRAW

Comments:

SUPERVISOR:

Team Members 1. 2.

FOR OFFICE USE ONLY :	Western [ ] Easter [ ] Urban [ ] Rural [ ]

APPENDIX: SPSS Output

Frequency Tables of Demographic variables in the Language Competence Survey of Jamaica

REGION region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 western	400	40.0	40.0	40.0
	2 eastern	600	60.0	60.0	100.0
	Total	1000	100.0	100.0	

URBRUR urban/rural

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 urban	500	50.0	50.0	50.0
	2 rural	500	50.0	50.0	100.0
	Total	1000	100.0	100.0	

AGE age range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 18-30	349	34.9	34.9	34.9
	2 31-50	383	38.3	38.3	73.2
	3 51-80+	268	26.8	26.8	100.0
	Total	1000	100.0	100.0	

SEX gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 male	495	49.5	49.5	49.5
	2 female	504	50.4	50.5	100.0
	Total	999	99.9	100.0	
Missing	System	1	.1		
Total		1000	100.0		

OCCUGP occupational groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 unskilled/housewife	246	24.6	24.6	24.6
	2 unemployed	198	19.8	19.8	44.4
	3 farmer/skilled craftsman	241	24.1	24.1	68.5
	4 clerical sales/services	148	14.8	14.8	83.3
	5 self employed/service professionals	167	16.7	16.7	100.0
	Total	1000	100.0	100.0	

LANGUAGE language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 monolingua - English	171	17.1	17.1	17.1
	2 monolingual - Patwa	365	36.5	36.5	53.6
	3 Bilingual	464	46.4	46.4	100.0
	Total	1000	100.0	100.0	

Demographic variables by Language

LANGUAGE * REGION

Crosstab

			REGION region		
			1 western	2 eastern	Total
LANGUAGE language	1 monolingua - English	Count	54	117	171
		% within REGION region	13.5%	19.5%	17.1%
	2 monolingual - Patwa	Count	162	203	365
		% within REGION region	40.5%	33.8%	36.5%
	3 Bilingual	Count	184	280	464
		% within REGION region	46.0%	46.7%	46.4%
Total		Count	400	600	1000
		% within REGION region	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.998[a]	2	.018
Likelihood Ratio	8.117	2	.017
Linear-by-Linear Association	1.242	1	.265
N of Valid Cases	1000		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 68.40.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.089	.018
N of Valid Cases		1000	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * URBRUR urban/rural

Crosstab

			URBRUR urban/rural		
			1 urban	2 rural	Total
LANGUAGE language	1 monolingua - English	Count	103	68	171
		% within URBRUR urban/rural	20.6%	13.6%	17.1%
	2 monolingual - Patwa	Count	163	202	365
		% within URBRUR urban/rural	32.6%	40.4%	36.5%
	3 Bilingual	Count	234	230	464
		% within URBRUR urban/rural	46.8%	46.0%	46.4%
Total		Count	500	500	1000
		% within URBRUR urban/rural	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.365[a]	2	.003
Likelihood Ratio	11.424	2	.003
Linear-by-Linear Association	1.748	1	.186
N of Valid Cases	1000		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 85.50.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.106	.003
N of Valid Cases		1000	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * AGE range

Crosstab

			AGE age range			
			1 18-30	2 31-50	3 51-80+	Total
LANGUAGE language	1 monolingua - English	Count	69	60	42	171
		% within AGE age range	19.8%	15.7%	15.7%	17.1%
	2 monolingual - Patwa	Count	115	142	108	365
		% within AGE age range	33.0%	37.1%	40.3%	36.5%
	3 Bilingual	Count	165	181	118	464
		% within AGE age range	47.3%	47.3%	44.0%	46.4%
Total		Count	349	383	268	1000
		% within AGE age range	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.978[a]	4	.290
Likelihood Ratio	4.941	4	.293
Linear-by-Linear Association	.042	1	.839
N of Valid Cases	1000		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 45.83.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.070	.290
N of Valid Cases		1000	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * SEX gender

Crosstab

			SEX gender		
			1 male	2 female	Total
LANGUAGE language	1 monolingua - English	Count	86	85	171
		% within SEX gender	17.4%	16.9%	17.1%
	2 monolingual - Patwa	Count	181	183	364
		% within SEX gender	36.6%	36.3%	36.4%
	3 Bilingual	Count	228	236	464
		% within SEX gender	46.1%	46.8%	46.4%
Total		Count	495	504	999
		% within SEX gender	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.074[a]	2	.964
Likelihood Ratio	.074	2	.964
Linear-by-Linear Association	.074	1	.786
N of Valid Cases	999		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 84.73.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.009	.964
N of Valid Cases		999	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * OCCUGP occupational groups

Crosstab

			OCCUGP occupational groups					
			1 unskilled/housewife	2 unemployed	3 farmer/skilled craftsman	4 clerical sales/services	5 self employed/service professionals	Total
LANGUAGE language	1 monolingua - English	Count	21	45	28	25	52	171
		% within OCCUGP occupational groups	8.5%	22.7%	11.6%	16.9%	31.1%	17.1%
	2 monolingual - Patwa	Count	127	66	100	36	36	365
		% within OCCUGP occupational groups	51.6%	33.3%	41.5%	24.3%	21.6%	36.5%
	3 Bilingual	Count	98	87	113	87	79	464
		% within OCCUGP occupational groups	39.8%	43.9%	46.9%	58.8%	47.3%	46.4%
Total		Count	246	198	241	148	167	1000
		% within OCCUGP occupational groups	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	79.013[a]	8	.000
Likelihood Ratio	78.307	8	.000
Linear-by-Linear Association	.338	1	.561
N of Valid Cases	1000		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 25.31.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Contingency Coefficient	.271	.000
N of Valid Cases		1000	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Controlling for Sex of Interviewers

LANGUAGE * REGION * Q11 Sex of Interviewers

Crosstab

Q11 Sex of Interviewers				REGION region		Total
				1 western	2 eastern	
1 Male & Female	LANGUAGE language	1 monolingua - English	Count	11	43	54
			% within REGION region	8.5%	20.7%	16.0%
		2 monolingual - Patwa	Count	50	74	124
			% within REGION region	38.8%	35.6%	36.8%
		3 Bilingual	Count	68	91	159
			% within REGION region	52.7%	43.8%	47.2%
	Total		Count	129	208	337
			% within REGION region	100.0%	100.0%	100.0%
2 Female & Female	LANGUAGE language	1 monolingua - English	Count	43	74	117
			% within REGION region	15.9%	18.9%	17.6%
		2 monolingual - Patwa	Count	112	129	241
			% within REGION region	41.3%	32.9%	36.3%
		3 Bilingual	Count	116	189	305
			% within REGION region	42.8%	48.2%	46.0%
	Total		Count	271	392	663
			% within REGION region	100.0%	100.0%	100.0%

Chi-Square Tests

Q11 Sex of Interviewers		Value	df	Asymp. Sig. (2-sided)
1 Male & Female	Pearson Chi-Square	8.905[a]	2	.012
	Likelihood Ratio	9.587	2	.008
	Linear-by-Linear Association	6.612	1	.010
	N of Valid Cases	337		
2 Female & Female	Pearson Chi-Square	4.967[b]	2	.083
	Likelihood Ratio	4.948	2	.084
	Linear-by-Linear Association	.166	1	.684
	N of Valid Cases	663		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.67.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 47.82.

Symmetric Measures

Q11 Sex of Interviewers			Value	Approx. Sig.
1 Male & Female	Nominal by Nominal	Contingency Coefficient	.160	.012
	N of Valid Cases		337	
2 Female & Female	Nominal by Nominal	Contingency Coefficient	.086	.083
	N of Valid Cases		663	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * URBRUR urban/rural * Q11 Sex of Interviewers

Crosstab

Q11 Sex of Interviewers				URBRUR urban/rural 1 urban	2 rural	Total
1 Male & Female	LANGUAGE language	1 monolingua - English	Count	31	23	54
			% within URBRUR urban/rural	20.5%	12.4%	16.0%
		2 monolingual - Patwa	Count	55	69	124
			% within URBRUR urban/rural	36.4%	37.1%	36.8%
		3 Bilingual	Count	65	94	159
			% within URBRUR urban/rural	43.0%	50.5%	47.2%
	Total		Count	151	186	337
			% within URBRUR urban/rural	100.0%	100.0%	100.0%
2 Female & Female	LANGUAGE language	1 monolingua - English	Count	72	45	117
			% within URBRUR urban/rural	20.6%	14.3%	17.6%
		2 monolingual - Patwa	Count	108	133	241
			% within URBRUR urban/rural	30.9%	42.4%	36.3%
		3 Bilingual	Count	169	136	305
			% within URBRUR urban/rural	48.4%	43.3%	46.0%
	Total		Count	349	314	663
			% within URBRUR urban/rural	100.0%	100.0%	100.0%

Chi-Square Tests

Q11 Sex of Interviewers		Value	df	Asymp. Sig. (2-sided)
1 Male & Female	Pearson Chi-Square	4.468[a]	2	.107
	Likelihood Ratio	4.451	2	.108
	Linear-by-Linear Association	3.807	1	.051
	N of Valid Cases	337		
2 Female & Female	Pearson Chi-Square	10.576[b]	2	.005
	Likelihood Ratio	10.614	2	.005
	Linear-by-Linear Association	.042	1	.838
	N of Valid Cases	663		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 24.20.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 55.41.

Symmetric Measures

Q11 Sex of Interviewers			Value	Approx. Sig.
1 Male & Female	Nominal by Nominal	Contingency Coefficient	.114	.107
	N of Valid Cases		337	
2 Female & Female	Nominal by Nominal	Contingency Coefficient	.125	.005
	N of Valid Cases		663	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * AGE range * Q11 Sex of Interviewers

Crosstab

Q11 Sex of Interviewers				AGE age range			Total
				1 18-30	2 31-50	3 51-80+	
1 Male & Female	LANGUAGE language	1 monolingua - English	Count	22	22	10	54
			% within AGE age range	18.6%	16.8%	11.4%	16.0%
		2 monolingual - Patwa	Count	38	51	35	124
			% within AGE age range	32.2%	38.9%	39.8%	36.8%
		3 Bilingual	Count	58	58	43	159
			% within AGE age range	49.2%	44.3%	48.9%	47.2%
	Total		Count	118	131	88	337
			% within AGE age range	100.0%	100.0%	100.0%	100.0%
2 Female & Female	LANGUAGE language	1 monolingua - English	Count	47	38	32	117
			% within AGE age range	20.3%	15.1%	17.8%	17.6%
		2 monolingual - Patwa	Count	77	91	73	241
			% within AGE age range	33.3%	36.1%	40.6%	36.3%
		3 Bilingual	Count	107	123	75	305
			% within AGE age range	46.3%	48.8%	41.7%	46.0%
	Total		Count	231	252	180	663
			% within AGE age range	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

Q11 Sex of Interviewers		Value	df	Asymp. Sig. (2-sided)
1 Male & Female	Pearson Chi-Square	3.182[a]	4	.528
	Likelihood Ratio	3.316	4	.506
	Linear-by-Linear Association	.369	1	.543
	N of Valid Cases	337		
2 Female & Female	Pearson Chi-Square	4.527[b]	4	.339
	Likelihood Ratio	4.532	4	.339
	Linear-by-Linear Association	.028	1	.866
	N of Valid Cases	663		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.10.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.76.

Symmetric Measures

Q11 Sex of Interviewers			Value	Approx. Sig.
1 Male & Female	Nominal by Nominal	Contingency Coefficient	.097	.528
	N of Valid Cases		337	
2 Female & Female	Nominal by Nominal	Contingency Coefficient	.082	.339
	N of Valid Cases		663	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * SEX gender * Q11 Sex of Interviewers

Crosstab

Q11 Sex of Interviewers				SEX gender		Total
				1 male	2 female	
1 Male & Female	LANGUAGE language	1 monolingua - English	Count	25	29	54
			% within SEX gender	16.8%	15.4%	16.0%
		2 monolingual - Patwa	Count	56	68	124
			% within SEX gender	37.6%	36.2%	36.8%
		3 Bilingual	Count	68	91	159
			% within SEX gender	45.6%	48.4%	47.2%
	Total		Count	149	188	337
			% within SEX gender	100.0%	100.0%	100.0%
2 Female & Female	LANGUAGE language	1 monolingua - English	Count	61	56	117
			% within SEX gender	17.6%	17.7%	17.7%
		2 monolingual - Patwa	Count	125	115	240
			% within SEX gender	36.1%	36.4%	36.3%
		3 Bilingual	Count	160	145	305
			% within SEX gender	46.2%	45.9%	46.1%
	Total		Count	346	316	662
			% within SEX gender	100.0%	100.0%	100.0%

Chi-Square Tests

Q11 Sex of Interviewers		Value	df	Asymp. Sig. (2-sided)
1 Male & Female	Pearson Chi-Square	.275[a]	2	.872
	Likelihood Ratio	.275	2	.872
	Linear-by-Linear Association	.263	1	.608
	N of Valid Cases	337		
2 Female & Female	Pearson Chi-Square	.009[b]	2	.996
	Likelihood Ratio	.009	2	.996
	Linear-by-Linear Association	.006	1	.939
	N of Valid Cases	662		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 23.88.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 55.85.

Symmetric Measures

Q11 Sex of Interviewers			Value	Approx. Sig.
1 Male & Female	Nominal by Nominal	Contingency Coefficient	.029	.872
	N of Valid Cases		337	
2 Female & Female	Nominal by Nominal	Contingency Coefficient	.004	.996
	N of Valid Cases		662	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * OCCUGP occupational groups * Q11 Sex of Interviewers

Crosstab

Q11 Sex of Interviewe				OCCUGP occupational groups					Total
				1 unskilled/housewife	2 unemployed	3 farmer/skilled craftsman	4 clerical sales/services	5 self employed/service professionals	
1 Male & Female	LANGUAGE language	1 monolingua - Englis	Count	6	18	9	7	14	54
			% within OCCUGP occupational groups	7.1%	27.3%	11.7%	14.6%	22.6%	16.0%
		2 monolingual - Patw	Count	50	17	31	13	13	124
			% within OCCUGP occupational groups	59.5%	25.8%	40.3%	27.1%	21.0%	36.8%
		3 Bilingual	Count	28	31	37	28	35	159
			% within OCCUGP occupational groups	33.3%	47.0%	48.1%	58.3%	56.5%	47.2%
	Total		Count	84	66	77	48	62	337
			% within OCCUGP occupational groups	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2 Female & Female	LANGUAGE language	1 monolingua - Englis	Count	15	27	19	18	38	117
			% within OCCUGP occupational groups	9.3%	20.5%	11.6%	18.0%	36.2%	17.6%
		2 monolingual - Patw	Count	77	49	69	23	23	241
			% within OCCUGP occupational groups	47.5%	37.1%	42.1%	23.0%	21.9%	36.3%
		3 Bilingual	Count	70	56	76	59	44	305
			% within OCCUGP occupational groups	43.2%	42.4%	46.3%	59.0%	41.9%	46.0%
	Total		Count	162	132	164	100	105	663
			% within OCCUGP occupational groups	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

Q11 Sex of Interviewers		Value	df	Asymp. Sig. (2-sided)
1 Male & Female	Pearson Chi-Square	37.478[a]	8	.000
	Likelihood Ratio	37.080	8	.000
	Linear-by-Linear Association	1.740	1	.187
	N of Valid Cases	337		
2 Female & Female	Pearson Chi-Square	53.632[b]	8	.000
	Likelihood Ratio	51.540	8	.000
	Linear-by-Linear Association	2.817	1	.093
	N of Valid Cases	663		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.69.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.65.

Symmetric Measures

Q11 Sex of Interviewers			Value	Approx. Sig.
1 Male & Female	Nominal by Nominal	Contingency Coefficient	.316	.000
	N of Valid Cases		337	
2 Female & Female	Nominal by Nominal	Contingency Coefficient	.274	.000
	N of Valid Cases		663	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Controlling for Language used to Initiate Interview

LANGUAGE * URBRUR urban/rural * Q12 Starters

Crosstab

Q12 Starters				URBRUR urban/rural 1 urban	2 rural	Total
1 English starter	LANGUAGE language	1 monolingua - English	Count	54	29	83
			% within URBRUR urban/rural	21.6%	13.3%	17.7%
		2 monolingual - Patwa	Count	74	96	170
			% within URBRUR urban/rural	29.6%	44.0%	36.3%
		3 Bilingual	Count	122	93	215
			% within URBRUR urban/rural	48.8%	42.7%	45.9%
	Total		Count	250	218	468
			% within URBRUR urban/rural	100.0%	100.0%	100.0%
2 Patwa Starter	LANGUAGE language	1 monolingua - English	Count	49	39	88
			% within URBRUR urban/rural	19.6%	13.8%	16.5%
		2 monolingual - Patwa	Count	89	106	195
			% within URBRUR urban/rural	35.6%	37.6%	36.7%
		3 Bilingual	Count	112	137	249
			% within URBRUR urban/rural	44.8%	48.6%	46.8%
	Total		Count	250	282	532
			% within URBRUR urban/rural	100.0%	100.0%	100.0%

Chi-Square Tests

Q12 Starters		Value	df	Asymp. Sig. (2-sided)
1 English starter	Pearson Chi-Square	12.158[a]	2	.002
	Likelihood Ratio	12.237	2	.002
	Linear-by-Linear Association	.097	1	.755
	N of Valid Cases	468		
2 Patwa Starter	Pearson Chi-Square	3.215[b]	2	.200
	Likelihood Ratio	3.211	2	.201
	Linear-by-Linear Association	2.227	1	.136
	N of Valid Cases	532		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 38.66.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 41.35.

Symmetric Measures

Q12 Starters			Value	Approx. Sig.
1 English starter	Nominal by Nominal	Contingency Coefficient	.159	.002
	N of Valid Cases		468	
2 Patwa Starter	Nominal by Nominal	Contingency Coefficient	.078	.200
	N of Valid Cases		532	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * AGE range * Q12 Starters

Crosstab

Q12 Starters				AGE age range			Total
				1 18-30	2 31-50	3 51-80+	
1 English starter	LANGUAGE language	1 monolingua - English	Count	27	34	22	83
			% within AGE age range	15.5%	17.8%	21.4%	17.7%
		2 monolingual - Patwa	Count	60	68	42	170
			% within AGE age range	34.5%	35.6%	40.8%	36.3%
		3 Bilingual	Count	87	89	39	215
			% within AGE age range	50.0%	46.6%	37.9%	45.9%
	Total		Count	174	191	103	468
			% within AGE age range	100.0%	100.0%	100.0%	100.0%
2 Patwa Starter	LANGUAGE language	1 monolingua - English	Count	42	26	20	88
			% within AGE age range	24.0%	13.5%	12.1%	16.5%
		2 monolingual - Patwa	Count	55	74	66	195
			% within AGE age range	31.4%	38.5%	40.0%	36.7%
		3 Bilingual	Count	78	92	79	249
			% within AGE age range	44.6%	47.9%	47.9%	46.8%
	Total		Count	175	192	165	532
			% within AGE age range	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

Q12 Starters		Value	df	Asymp. Sig. (2-sided)
1 English starter	Pearson Chi-Square	4.102[a]	4	.392
	Likelihood Ratio	4.134	4	.388
	Linear-by-Linear Association	3.551	1	.060
	N of Valid Cases	468		
2 Patwa Starter	Pearson Chi-Square	11.151[b]	4	.025
	Likelihood Ratio	10.746	4	.030
	Linear-by-Linear Association	3.672	1	.055
	N of Valid Cases	532		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.27.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.29.

Symmetric Measures

Q12 Starters			Value	Approx. Sig.
1 English starter	Nominal by Nominal	Contingency Coefficient	.093	.392
	N of Valid Cases		468	
2 Patwa Starter	Nominal by Nominal	Contingency Coefficient	.143	.025
	N of Valid Cases		532	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * SEX gender * Q12 Starters

Crosstab

Q12 Starters				SEX gender 1 male	SEX gender 2 female	Total
1 English starter	LANGUAGE language	1 monolingua - English	Count	39	44	83
			% within SEX gender	17.6%	17.8%	17.7%
		2 monolingual - Patwa	Count	78	92	170
			% within SEX gender	35.3%	37.2%	36.3%
		3 Bilingual	Count	104	111	215
			% within SEX gender	47.1%	44.9%	45.9%
	Total		Count	221	247	468
			% within SEX gender	100.0%	100.0%	100.0%
2 Patwa Starter	LANGUAGE language	1 monolingua - English	Count	47	41	88
			% within SEX gender	17.2%	16.0%	16.6%
		2 monolingual - Patwa	Count	103	91	194
			% within SEX gender	37.6%	35.4%	36.5%
		3 Bilingual	Count	124	125	249
			% within SEX gender	45.3%	48.6%	46.9%
	Total		Count	274	257	531
			% within SEX gender	100.0%	100.0%	100.0%

Chi-Square Tests

Q12 Starters		Value	df	Asymp. Sig. (2-sided)
1 English starter	Pearson Chi-Square	.238[a]	2	.888
	Likelihood Ratio	.238	2	.888
	Linear-by-Linear Association	.109	1	.741
	N of Valid Cases	468		
2 Patwa Starter	Pearson Chi-Square	.612[b]	2	.736
	Likelihood Ratio	.612	2	.736
	Linear-by-Linear Association	.512	1	.474
	N of Valid Cases	531		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 39.19.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 42.59.

Symmetric Measures

Q12 Starters			Value	Approx. Sig.
1 English starter	Nominal by Nominal	Contingency Coefficient	.023	.888
	N of Valid Cases		468	
2 Patwa Starter	Nominal by Nominal	Contingency Coefficient	.034	.736
	N of Valid Cases		531	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

LANGUAGE * OCCUGP occupational groups * Q12 Starters

Crosstab

Q12 Starters				OCCUGP occupational groups					Total
				1 unskilled/housewife	2 unemployed	3 farmer/skilled craftsman	4 clerical sales/services	5 self employed/service professionals	
1 English starte	LANGUAGE language	1 monolingua - Engl	Count	10	20	16	13	24	83
			% within OCCUGP occupational group	9.8%	21.1%	14.3%	18.3%	27.3%	17.7%
		2 monolingual - Patv	Count	52	32	45	18	23	170
			% within OCCUGP occupational group	51.0%	33.7%	40.2%	25.4%	26.1%	36.3%
		3 Bilingual	Count	40	43	51	40	41	215
			% within OCCUGP occupational group	39.2%	45.3%	45.5%	56.3%	46.6%	45.9%
	Total		Count	102	95	112	71	88	468
			% within OCCUGP occupational group	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2 Patwa Starte	LANGUAGE language	1 monolingua - Engl	Count	11	25	12	12	28	88
			% within OCCUGP occupational group	7.6%	24.3%	9.3%	15.6%	35.4%	16.5%
		2 monolingual - Patv	Count	75	34	55	18	13	195
			% within OCCUGP occupational group	52.1%	33.0%	42.6%	23.4%	16.5%	36.7%
		3 Bilingual	Count	58	44	62	47	38	249
			% within OCCUGP occupational group	40.3%	42.7%	48.1%	61.0%	48.1%	46.8%
	Total		Count	144	103	129	77	79	532
			% within OCCUGP occupational group	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

Q12 Starters		Value	df	Asymp. Sig. (2-sided)
1 English starter	Pearson Chi-Square	23.722[a]	8	.003
	Likelihood Ratio	23.611	8	.003
	Linear-by-Linear Association	.105	1	.746
	N of Valid Cases	468		
2 Patwa Starter	Pearson Chi-Square	60.378[b]	8	.000
	Likelihood Ratio	59.661	8	.000
	Linear-by-Linear Association	.209	1	.648
	N of Valid Cases	532		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.59.

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.74.

Symmetric Measures

Q12 Starters			Value	Approx. Sig.
1 English starter	Nominal by Nominal	Contingency Coefficient	.220	.003
	N of Valid Cases		468	
2 Patwa Starter	Nominal by Nominal	Contingency Coefficient	.319	.000
	N of Valid Cases		532	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.