Some Purr Words
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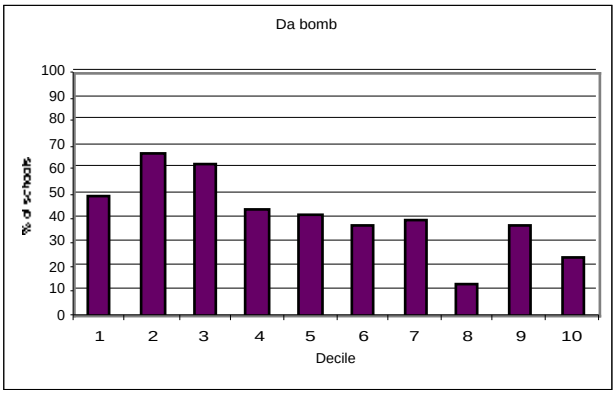
A number of questions demanded answers which fell into the general category of purr words: words with favourable senses. Many of the terms supplied were given in answer to several questions. A few of these appeared to be regionalised, and it seemed worthwhile gathering the reports of those from all questions where they occurred, to get an overall picture of their distribution. While it was usually the case that these terms came from the same schools in each of the relevant questions, there were some schools which reported them from one question but not another.
The three items treated in this category were *da bomb, primo* and *shot(ty)*.
In all, there were 61 reports of *da bomb*. It was more prevalent in the Northern Region than elsewhere, and more prevalent in the North Island than the South. Tables showing these discrepancies follow:

	Northern Region		**Central Region**		**Southern Region**	
	No.	% of total	No.	% of total	No.	% of total
Schools	57	38	78	52	14	9
Da bomb	31	51	26	43	3	5

	North Island		**South Island**	
	No.	%	No.	%
Schools	93	62	57	38
Da bomb	48	79	13	21

The North Island – South Island divide seems likely to be the stronger. In addition, *da bomb* shows signs of being socially marked:



There is a clear tendency for it to be more frequent in low decile schools. Whether this is linked to the fact that it is more frequent in the Northern Region will be addressed by the statistical analysis.
Da bomb also appears to be more common in urban schools than in rural ones, as the following table indicates.

	Urban		Rural	
	No.	%	No.	%
Schools	59	39	90	60
Da bomb	36	59	25	41

It will be seen from this that while urban schools make up 40% of the sample, they reported almost 60% of the cases of *da bomb*.
Primo was reported overall from 20 schools. The reports seem to be clustered in the North Island section of the Central Region, and it is absent from the Southern Region. It is also somewhat more frequent in the North Island than the South, as the following tables show.

	Northern Region		Central Region		Southern Region	
	No.	% of total	No.	% of total	No.	% of total
Schools	57	38	78	52	14	9
Primo	6	30	14	70	0	0

Within the North Island, the reports are divided in this way:

	Northern Region		North Island section of Central Region	
	No.	%	No.	%
Schools	57	38	35	23
Primo	6	30	10	50

This shows fairly clearly the clustering of this form in the lower part of the North Island. The following table shows that this form is predominantly a North Island form.

	North Island		South Island	
	No.	%	No.	%
Schools	93	62	57	38
Primo	16	80	4	20

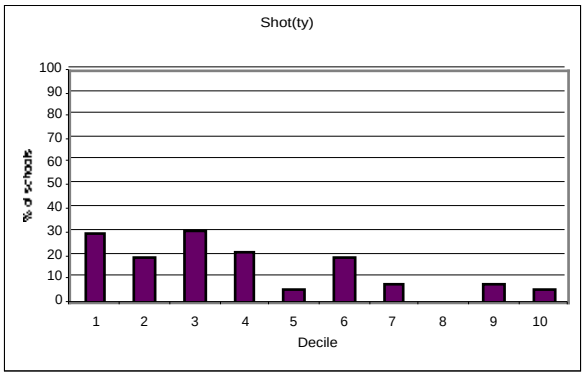
Shot(ty) was also reported by 20 schools. However, this time, it is the Northern Region which contains most of the reports, and the form is again absent from the Southern Region, as the following table shows:

	Northern Region		Central Region		Southern Region	
	No.	% of total	No.	% of total	No.	% of total
Schools	57	38	78	52	14	9
Shot(ty)	18	90	2	10	0	0

This strong tendency to be Northern also shows up in the Island distribution: *shotty* is also more common in the North Island than the South.

	North Island		South Island	
	No.	%	No.	%
Schools	93	62	57	38
Shot(ty)	19	95	1	5

In addition, *shotty* shows some tendency to be low decile, although it remains to be seen whether this is just a reflection of the concentration of low decile schools in the Northern Region:



Statistical Analysis

These three terms were all analysed statistically.

Da bomb is significantly low decile (p-value 0.0018). It was shown to be significantly more common in the Northern Region than the Southern Region (p-value 0.0360), and more common in the Northern Region than the Central Region (p-value 0.0144). *Da bomb* was shown to be significantly more common in the North Island (p-value 0.0007). It showed a tendency to be more common in Catholic schools, but this was not significant (p-value 0.0693), in contrast to the finding for *da bomb* in response to the question getting full marks in the maths test. However, it is more common in urban schools (p-value 0.0002).

For *da bomb*, Decile was shown to be more important than Main Region. The p-values for the regional contrasts Northern – Southern and Northern – Central are not significant when Decile is taken into account (p-values 0.0517 and 0.0847 respectively), but the p-value for Decile variation when Main Region is taken into account is significant (0.0095).

For *da bomb*, Island has a stronger effect than Decile, but both are significant. The p-value for Island variation when Decile is taken into account is 0.0034, while the p-value for Decile variation when Island is taken into account is 0.0132.

The interaction between Decile and the Urban/Rural factor was investigated in relation to *da bomb*. This showed that there is little difference in the strength of these effects, and both are highly significant. The p-value for Urban/Rural variation when Decile is taken into account is 0.0000 derived from a non-zero figure (-4.591); the p-value for Decile variation when the Urban/Rural factor is taken into account is likewise 0.0000 derived from a non-zero figure (-4.376). This possibly means that the effect of Decile is marginally stronger.

For *da bomb*, the p-value for Island variation when Main Region is taken into account is 0.0391. The p-values for the regional contrasts (including the Northern – Central contrast) are not significant when Island is taken into account. Thus Island has a stronger effect on *da bomb* than Main Region.
The interaction between Main Region and the Urban / Rural factor was investigated in relation to *da bomb*. This showed that the p-value for the Northern – Southern contrast when Urban / Rural distribution is taken into account is 0.0365, and for the Northern – Central contrast is 0.0051. On the other hand, the p-value for Urban / Rural variation when Main Region is taken into account is 0.0001. This means that, while both factors are significant, the Urban / Rural factor is stronger.
The interaction between Island and the Urban / Rural factor was also investigated in relation to *da bomb*. This showed that the p-value for Urban / Rural variation when Island is taken into account is 0.0003, whereas the p-value for Island variation when Urban / Rural variation is taken into account is 0.0020. Thus both factors are significant, but the Urban / Rural effect is stronger than the Island effect.
Overall, the results from the statistical investigation of the interactions between these factors are somewhat contradictory, making it difficult to rank them relative to each other. It is clear that Main Region is the least important factor: each of the others was shown to outweigh it. However, Island was shown to outweigh Decile, and the Urban / Rural factor was shown to outweigh Island. This suggests the ranking Urban / Rural, followed by Island, followed by Decile. However, the effect of Decile and the Urban / Rural factor were shown to be very similar in level. This may be because, in the absence of Island, either Decile or Urban / Rural to some extent capture the Island information: the differences between the Islands for both of these factors means that both reflect Island patterns to some extent. There is no obvious way to resolve the problems in the rankings, and the relative ordering of Decile, Island and Urban / Rural variation remains uncertain, although Urban / Rural, Island, Decile seems the most likely.
Primo was not reported from the Southern Region. The p-value for the Island correlation for *primo* was not significant (0.0844). (*Primo* also shows a tendency to be rural, but it is not significant, with p-value 0.0710).
S*hotty* is significantly low decile (p-value 0.0050). It was not reported from the Southern Region. It was necessary to delete the Southern Region to obtain the Northern – Central contrast , but this showed that there is significantly more use of *shotty* in the Northern than the Central Region (p-value 0.0002).It was also shown to be significantly more common in the North Island (p-value 0.0105). Because *shotty*, is absent from the Southern Region, the p-value for the Northern – Central contrast when Decile is taken into account was obtained by deleting the Southern Region, which showed the p-value for the Northern – Central contrast is 0.0009 when Decile is taken into account, while the p-values for Decile variation when Main Region is taken into account are not quite significant (0.0508 when all three regions are considered, and 0.0532 when the Southern Region is deleted). Thus for *shotty*, Main Region variation has a stronger effect than Decile on the distribution.
For *shotty*, there is little difference in the strength of the effect of Decile and Island, and both are significant. The p-value for Island variation when Decile is

taken into account is 0.0230; the p-value for Decile variation when Island is taken into account is 0.0216.

It is also worth noting that for *shotty*, the Decile effect was shown to be significantly different in urban and rural schools: *shotty* is significantly low decile in rural schools (p-value 0.0002), but not significantly low decile in urban schools.

For *shotty*, to obtain a comparison of the strength of the Island and Main Region factors, it was necessary to delete the Southern Region. This gave a p-value of 0.0090 for the Northern – Central contrast when Island is taken into account. The p-value for Island variation when Main Region is taken into account is 0.8828 regardless of whether all three regions are considered or the Southern Region is deleted. Thus Main Region variation is much more important than Island variation in accounting for *shotty*.

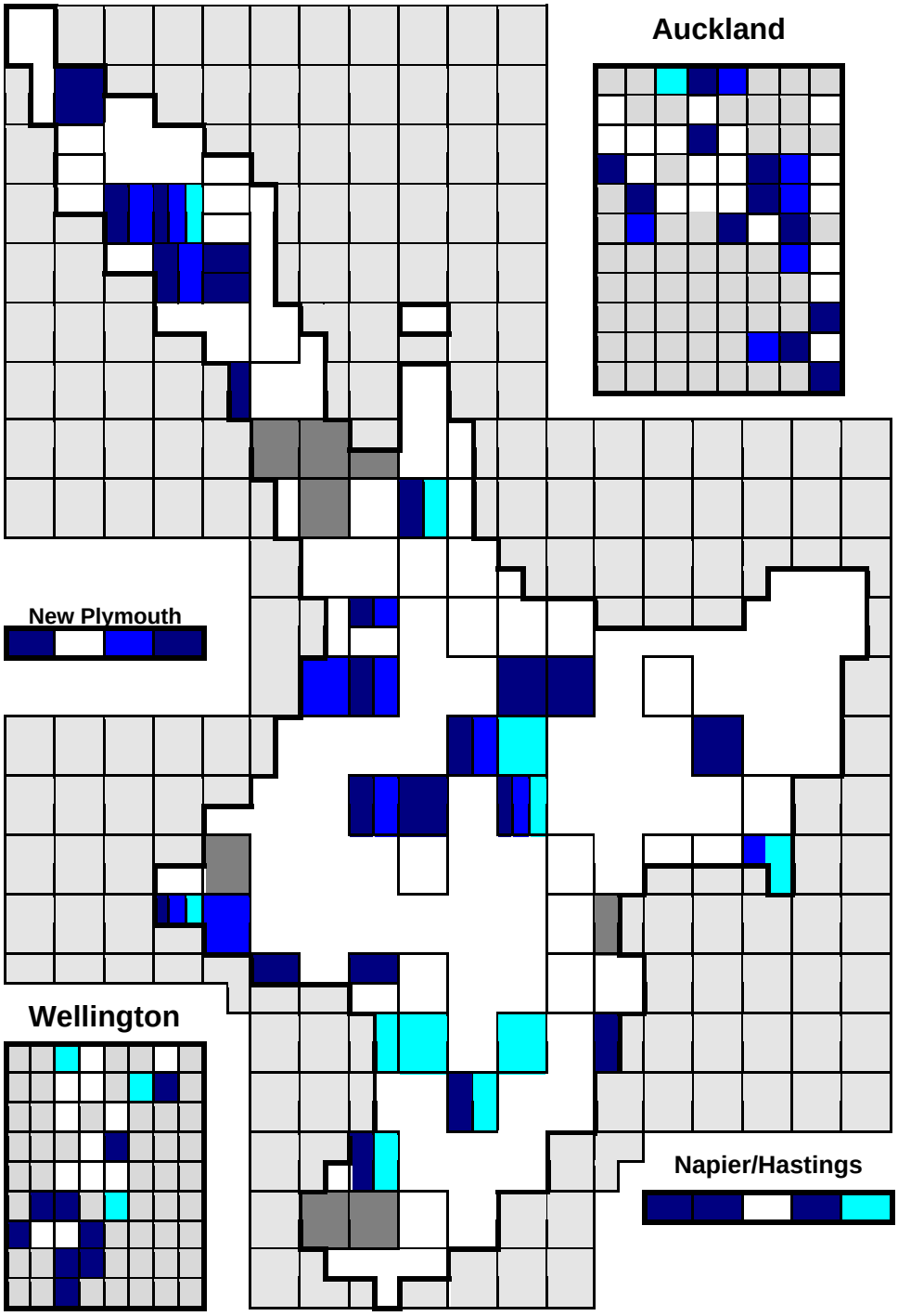
The prevalence in the Northern Region is the strongest factor affecting the distribution of this form, with the other two (Island and Decile) very similar in their level of effect.

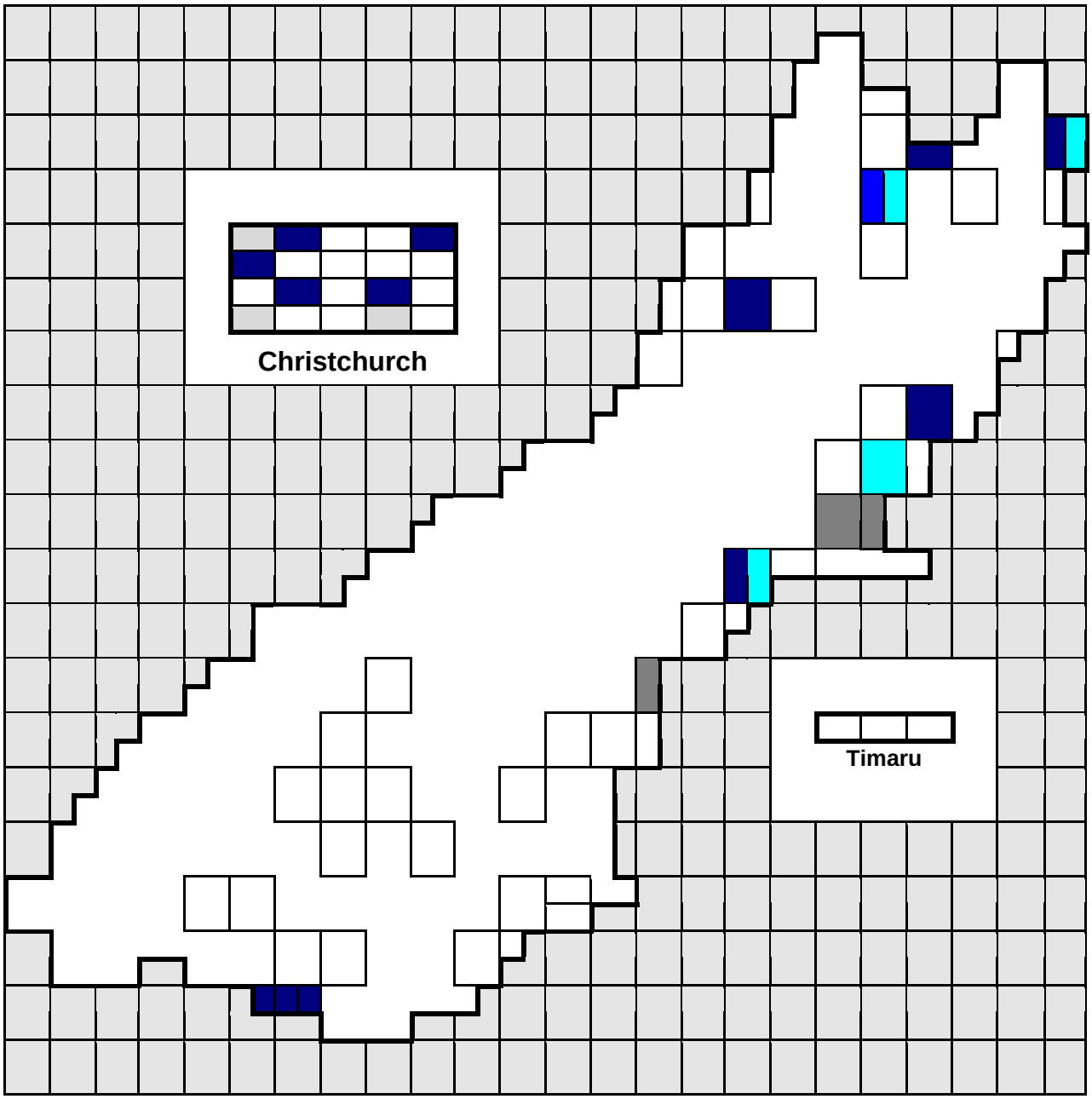
Summary

By combining the reports of these forms from all questions, it was possible to obtain a clearer idea of the factors influencing their distribution. However, it also shows that certain patterns in the data are not revealed by the statistical analysis, because it was necessary to build into the analysis the most frequently occurring patterns of regionalisation. When a form like *primo* clusters across the regional boundaries established through consideration of the data as a whole, the analysis does not indicate such clustering. (Similar observations could be made for *rej*.)

A map of these forms follows.

Map: Purr words combined: *da bomb, shotty, primo*





Key
Note that the insets are not to scale, nor all on the same scale for practical reasons. Each box represents one school in both urban and rural areas.

da bomb

shot(ty)

See urban map insert

primo

Purr Comp Statistics
Purr Comp by Decile
Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Estimate	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbombtot	0.7617	0.3957	-0.0139	1.5373	1.9249	0.0542
item	primotot	-1.8457	0.5089	-2.8431	-0.8483	-3.627	0.0003
item	shottot	-0.4716	0.4950	-1.4419	0.4986	-.9527	0.3407
decile*item	dbombtot	-0.2026	0.0648	-0.3296	-0.0755	-3.125	**0.0018**
decile*item	primotot	-0.0048	0.0779	-0.1575	0.1480	-.0611	0.9513
decile*item	shottot	-0.2799	0.0997	-0.4754	-0.0844	-2.806	**0.0050**
scale	1.0043	.	.	.	.	.	

Purr Comp by Main Region
Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbombtot	1	-1.2993	0.6513	3.9792	0.0461
item	primotot	1	-25.3654	0.2950	7390.8762	0.0001
item	shottot	1	-25.3654	0.7164	1253.8119	0.0001
item*region1	dbombtot, 1	1	1.4752	0.7035	4.3966	0.0360
item*region1	dbombtot, 2	1	0.6061	0.6942	0.7623	0.3826
item*region1	dbombtot, 3	0	0.0000	0.0000	.	.
item*region1	primotot, 1	1	23.2253	0.5228	1973.5071	**0.0001**
item*region1	primotot, 2	0	23.8455	0.0000	.	.
item*region1	primotot, 3	0	0.0000	0.0000	.	.
item*region1	shottot, 1	1	24.5922	0.7709	1017.5355	**0.0001**
item*region1	shottot, 2	0	21.7278	0.0000	.	.
item*region1	shottot, 3	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

CONTRAST Statement Results

Contrast	DF	ChiSquare	Pr>Chi	Type
1 -2 for dbombtot	1	5.9939	**0.0144**	LR

Purr Comp by Sub-Region

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbombtot	1	-1.2993	0.6513	3.9792	0.0461
item	primotot	1	-26.3651	0.7500	1235.7670	0.0001
item	shottot	1	-26.3649	1.0607	617.8720	0.0001
item*region2	dbombtot, 1	1	1.9924	1.0836	3.3807	0.0660
item*region2	dbombtot, 2	1	0.6061	1.0836	0.3129	0.5759
item*region2	dbombtot, 3	1	1.8383	0.8065	5.1954	**0.0226**
item*region2	dbombtot, 4	1	1.2993	0.7603	2.9202	0.0875
item*region2	dbombtot, 5	1	0.6061	0.8940	0.4597	0.4978
item*region2	dbombtot, 6	1	1.4816	0.7795	3.6130	0.0573
item*region2	dbombtot, 7	1	0.0465	1.0330	0.0020	0.9641
item*region2	dbombtot, 8	1	-0.3102	1.2745	0.0592	0.8077
item*region2	dbombtot, 9	1	0.8473	0.8112	1.0910	0.2962
item*region2	dbombtot, 10	1	-25.0660	167941.152	0.0000	0.9999
item*region2	dbombtot, 11	0	0.0000	0.0000	.	.
item*region2	primotot, 1	1	24.7557	1.3276	347.7125	**0.0001**
item*region2	primotot, 2	1	-0.0002	216811.094	0.0000	1.0000
item*region2	primotot, 3	1	23.4747	1.2720	340.5713	**0.0001**
item*region2	primotot, 4	1	24.6604	0.9263	708.8177	**0.0001**
item*region2	primotot, 5	1	24.7557	1.0782	527.1770	**0.0001**
item*region2	primotot, 6	1	25.6030	0.8786	849.0826	**0.0001**
item*region2	primotot, 7	1	25.1123	1.0979	523.1892	**0.0001**
item*region2	primotot, 8	1	-0.0002	216811.094	0.0000	1.0000
item*region2	primotot, 9	0	24.2857	0.0000	.	.
item*region2	primotot, 10	1	-0.0002	167941.152	0.0000	1.0000
item*region2	primotot, 11	0	0.0000	0.0000	.	.
item*region2	shottot, 1	1	26.3649	1.3385	387.9661	**0.0001**
item*region2	shottot, 2	1	-0.0005	216811.094	0.0000	1.0000
item*region2	shottot, 3	1	25.5917	1.1699	478.5464	**0.0001**
item*region2	shottot, 4	1	25.7289	1.1380	511.2034	**0.0001**
item*region2	shottot, 5	1	23.9670	1.4886	259.2234	**0.0001**
item*region2	shottot, 6	1	-0.0005	113225.901	0.0000	1.0000
item*region2	shottot, 7	0	24.2854	0.0000	.	.
item*region2	shottot, 8	1	-0.0005	216811.094	0.0000	1.0000
item*region2	shottot, 9	1	-0.0005	125175.944	0.0000	1.0000
item*region2	shottot, 10	1	-0.0005	167941.152	0.0000	1.0000
item*region2	shottot, 11	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

Purr Comp by Island

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Estimate	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbombtot	-1.2192	0.3157	-1.8380	-0.6005	-3.862	0.0001
item	primotot	-2.5840	0.5185	-3.6003	-1.5677	-4.983	0.0000
item	shottot	-4.0254	1.0089	-6.0027	-2.0480	-3.990	0.0001
item*island	dbombtot, 1	1.2838	0.3778	0.5434	2.0242	3.3984	**0.0007**
item*island	dbombtot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	primotot, 1	1.0128	0.5868	-0.1374	2.1629	1.7259	0.0844
item*island	primotot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	shottot, 1	2.6657	1.0412	0.6251	4.7064	2.5604	**0.0105**
item*island	shottot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	1.0000	.	.	.	.	.	

Purr Comp by Catholic

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbombtot	0.5108	0.5164	-0.5013	1.5229	0.9892	0.3226
item	primotot	-1.4663	0.6405	-2.7217	-0.2110	-2.289	0.0221
item	shottot	-1.9459	0.7559	-3.4275	-0.4643	-2.574	0.0100
item*catholic	dbombtot, 1	-0.9933	0.5468	-2.0650	0.0785	-1.816	0.0693
item*catholic	dbombtot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*catholic	primotot, 1	-0.4366	0.6913	-1.7915	0.9182	-.6317	0.5276
item*catholic	primotot,2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*catholic	shottot, 1	0.0429	0.7994	-1.5239	1.6097	0.0537	0.9572
item*catholic	shottot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	1.0000	.	.	.	.	.	

Purr Comp by Urban/Rural

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbombtot	0.4480	0.2669	-0.0752	0.9712	1.6784	0.0933
item	primotot	-2.6210	0.5179	-3.6360	-1.6060	-5.061	0.0000
item	shottot	-2.0053	0.4026	-2.7944	-1.2162	-4.981	0.0000
item*urb_rur	dbombtot, 1	-1.3400	0.3573	-2.0403	-0.6398	-3.751	**0.0002**
item*urb_rur	dbombtot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	primotot, 1	1.0664	0.5907	-0.0914	2.2242	1.8053	0.0710
item*urb_rur	primotot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	shottot, 1	0.1862	0.5089	-0.8112	1.1835	0.3659	0.7145
item*urb_rur	shottot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	1.0000	.	.	.	.	.	

Purr Comp in Northern and Central Regions only

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	-0.6931	0.2402	-1.1639	-0.2224	-2.886	0.0039
item	primo	-1.5198	0.2950	-2.0981	-0.9415	-5.151	0.0000
item	shot	-3.6376	0.7164	-5.0416	-2.2336	-5.078	0.0000
item*region1	dbomb, 1	0.8690	0.3583	0.1667	1.5714	2.4251	**0.0153**
item*region1	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	primo, 1	-0.6202	0.5228	-1.6449	0.4044	-1.186	0.2355
item*region1	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	shot, 1	2.8644	0.7709	1.3534	4.3754	3.7154	**0.0002**
item*region1	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	1.0000	.	.	.	.	.	

Purr Comp in Sub-Regions 1-9

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbomb	1	-0.4520	0.4835	0.8739	0.3499
item	primo	1	-2.0794	0.7500	7.6872	0.0056
item	shot	1	-26.3650	1.0607	617.8801	0.0001
item*region2	dbomb, 1	1	1.1451	0.9918	1.3330	0.2483
item*region2	dbomb, 2	1	-0.2412	0.9918	0.0591	0.8079
item*region2	dbomb, 3	1	0.9910	0.6782	2.1351	0.1440
item*region2	dbomb, 4	1	0.4520	0.6226	0.5270	0.4679
item*region2	dbomb, 5	1	-0.2412	0.7802	0.0955	0.7573
item*region2	dbomb, 6	1	0.6343	0.6458	0.9646	0.3260

item*region2	dbomb, 7	1	-0.8008	0.9363	0.7315	0.3924
item*region2	dbomb, 8	1	-1.1575	1.1974	0.9344	0.3337
item*region2	dbomb, 9	0	0.0000	0.0000	.	.
item*region2	primo, 1	1	0.4700	1.3276	0.1253	0.7233
item*region2	primo, 2	1	-24.2859	216811.094	0.0000	0.9999
item*region2	primo, 3	1	-0.8109	1.2720	0.4064	0.5238
item*region2	primo, 4	1	0.3747	0.9263	0.1636	0.6858
item*region2	primo, 5	1	0.4700	1.0782	0.1900	0.6629
item*region2	primo, 6	1	1.3173	0.8786	2.2477	0.1338
item*region2	primo, 7	1	0.8267	1.0979	0.5670	0.4515
item*region2	primo, 8	1	-24.2859	216811.094	0.0000	0.9999
item*region2	primo, 9	0	0.0000	0.0000	.	.
item*region2	shot, 1	1	26.3650	1.3385	387.9712	**0.0001**
item*region2	shot, 2	1	-0.0003	216811.094	0.0000	1.0000
item*region2	shot, 3	1	25.5918	1.1699	478.5529	**0.0001**
item*region2	shot, 4	1	25.7290	1.1380	511.2103	**0.0001**
item*region2	shot, 5	1	23.9671	1.4886	259.2272	**0.0001**
item*region2	shot, 6	1	-0.0003	113225.901	0.0000	1.0000
item*region2	shot, 7	0	24.2856	0.0000	.	.
item*region2	shot, 8	1	-0.0003	216811.094	0.0000	1.0000
item*region2	shot, 9	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

Purr Comp in Sub-Regions 1-7

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbomb	1	-1.2528	0.8018	2.4413	0.1182
item	primo	1	-1.2528	0.8018	2.4413	0.1182
item	shot	1	-2.0794	1.0607	3.8436	0.0499
item*region2	dbomb, 1	1	1.9459	1.1802	2.7186	0.0992
item*region2	dbomb, 2	1	0.5596	1.1802	0.2248	0.6354
item*region2	dbomb, 3	1	1.7918	0.9322	3.6942	0.0546
item*region2	dbomb, 4	1	1.2528	0.8926	1.9699	0.1605
item*region2	dbomb, 5	1	0.5596	1.0089	0.3077	0.5791
item*region2	dbomb, 6	1	1.4351	0.9090	2.4927	0.1144
item*region2	dbomb, 7	0	0.0000	0.0000	.	.
item*region2	primo, 1	1	-0.3567	1.3575	0.0690	0.7928
item*region2	primo, 2	1	-25.1126	216811.094	0.0000	0.9999
item*region2	primo, 3	1	-1.6376	1.3032	1.5790	0.2089
item*region2	primo, 4	1	-0.4520	0.9687	0.2177	0.6408
item*region2	primo, 5	1	-0.3567	1.1148	0.1024	0.7490
item*region2	primo, 6	1	0.4906	0.9232	0.2824	0.5951
item*region2	primo, 7	0	0.0000	0.0000	.	.
item*region2	shot, 1	1	2.0794	1.3385	2.4134	0.1203

item*region2	shot, 2	1	-24.2859	216811.094	0.0000	0.9999
item*region2	shot, 3	1	1.3063	1.1699	1.2468	0.2642
item*region2	shot, 4	1	1.4435	1.1380	1.6090	0.2046
item*region2	shot, 5	1	-0.3185	1.4886	0.0458	0.8306
item*region2	shot, 6	1	-24.2859	113225.901	0.0000	0.9998
item*region2	shot, 7	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

Purr Comp by Main Region and Decile, Model 2

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbomb	1	-0.3636	0.7447	0.2383	0.6254
item	primo	1	-25.1459	0.6467	1512.0309	0.0001
item	shot	1	-24.2899	0.8971	733.1660	0.0001
item*region1	dbomb, 1	1	1.3983	0.7186	3.7863	0.0517
item*region1	dbomb, 2	1	0.7532	0.7122	1.1183	0.2903
item*region1	dbomb, 3	0	0.0000	0.0000	.	.
item*region1	primo, 1	1	23.1913	0.5427	1826.1675	**0.0001**
item*region1	primo, 2	0	23.8713	0.0000	.	.
item*region1	primo, 3	0	0.0000	0.0000	.	.
item*region1	shot, 1	1	24.4786	0.7805	983.5036	**0.0001**
item*region1	shot, 2	0	21.8442	0.0000	.	.
item*region1	shot, 3	0	0.0000	0.0000	.	.
decile*item	dbomb	1	-0.1732	0.0668	6.7344	**0.0095**
decile*item	primo	1	-0.0386	0.0918	0.1769	0.6740
decile*item	shot	1	-0.2077	0.1063	3.8158	0.0508
scale	0	1.00	0.0000	.	.	

CONTRAST Statement Results

Contrast	DF	ChiSquare	Pr>Chi	Type
1 –2 for dbomb	1	2.9728	0.0847	LR

Purr Comp by Island and Decile, Model 2

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	-0.1723	0.5086	-1.1692	0.8246	-.3387	0.7348
item	primo	-2.7914	0.8006	-4.3607	-1.2222	-3.486	0.0005
item	shot	-2.7532	1.1707	-5.0477	-0.4587	-2.352	0.0187
item*island	dbomb, 1	1.1296	0.3852	0.3746	1.8847	2.9323	**0.0034**
item*island	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	primot, 1	1.0530	0.6123	-0.1471	2.2531	1.7197	0.0855
item*island	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	shot, 1	2.4538	1.0793	0.3384	4.5692	2.2735	**0.0230**
item*island	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
decile*item	dbomb	-0.1680	0.0678	-0.3009	-0.0351	-2.478	**0.0132**
decile*item	primo	0.0311	0.0800	-0.1256	0.1879	0.3894	0.6970
decile*item	shot	-0.2217	0.0965	-0.4109	-0.0325	-2.297	**0.0216**
scale	0.9945	.	.	.	.	.	

Purr Comp by Urban/Rural and Decile, Model 1

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	2.5699	0.7506	1.0988	4. 0410	3.4239	0.0006
item	primo	-3.2053	1.3316	-5.8151	-0.5955	-2.407	0.0161
item	shot	-1.6055	0.8898	-3.3494	0.1384	-1.804	0.0712
item*urb_rur	dbomb, 1	-2.0461	0.9186	-3.8464	-0.2458	-2.228	**0.0259**
item*urb_rur	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	primo, 1	1.6831	1.4563	-1.1711	4.5374	1.1558	0.2478
item*urb_rur	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	shot, 1	2.1781	1.0771	0.0670	4.2891	2.0221	**0.0432**
item*urb_rur	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
decile*item	dbomb	-0.3150	0.1011	-0.5132	-0.1169	-3.116	**0.0018**
decile*item	primo	0.0860	0.1733	-0.2537	0.4257	0.4962	0.6197
decile*item	shot	-0.0659	0.1314	-0.3235	0.1916	-.5017	0.6159
dec*item*u/r	dbomb, 1	0.0249	0.1392	-0.2479	0.2977	0.1789	0.8580
dec*item*u/r	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
dec*item*u/r	primo, 1	-0.0902	0.1993	-0.4808	0.3005	-.4524	0.6510
dec*item*u/r	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
dec*item*u/r	shot, 1	-0.5267	0.2060	-0.9304	-0.1229	-2.557	**0.0106**
dec*item*u/r	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	0.9723	.	.	.	.	.	

Purr Comp by Urban/Rural and Decile, Model 2

Analysis Of GEE Parameter Estimates – Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	2.4383	0.5508	1.3588	3.5179	4.4268	0.0000
item	primo	-2.8535	0.7478	-4.3192	-1.3878	-3.816	0.0001
item	shot	-0.4429	0.5463	-1.5135	0.6278	-.8107	0.4175
item*urb_rur	dbomb, 1	-1.8499	0.4030	-2.6397	-1.0601	-4.591	**0.0000**
item*urb_rur	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	primo, 1	1.2017	0.6088	0.0086	2.3949	1.9740	**0.0484**
item*urb_rur	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	shot, 1	-0.0327	0.5330	-1.0774	1.0120	-.0613	0.9511
item*urb_rur	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
decile*item	dbomb	-0.3029	0.0692	-0.4386	-0.1672	-4.376	**0.0000**
decile*item	primo	0.0237	0.0842	-0.1414	0.1888	0.2816	0.7783
decile*item	shot	-0.2908	0.1010	-0.4887	-0.0929	-2.880	**0.0040**
scale	1.0001	.	.	.	.	.	

Purr Comp by Main Region and Island, Model 2

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbomb	1	-1.2993	0.6513	3.9792	0.0461
item	primo	1	-25.3654	0.5250	2334.1996	0.0001
item	shot	1	-25.3652	1.0118	628.4315	0.0001
item*region1	dbomb, 1	1	0.4531	0.8605	0.2773	0.5985
item*region1	dbomb, 2	1	0.1054	0.7447	0.0200	0.8875
item*region1	dbomb, 3	0	0.0000	0.0000	.	.
item*region1	primo, 1	1	21.8643	0.5712	1465.1715	**0.0001**
item*region1	primo, 2	0	23.0881	0.0000	.	.
item*region1	primo, 3	0	0.0000	0.0000	.	.
item*region1	shot, 1	1	24.3807	1.0539	535.2196	**0.0001**
item*region1	shot, 2	0	21.6275	0.0000	.	.
item*region1	shot, 3	0	0.0000	0.0000	.	.
item*island	dbomb, 1	1	1.0221	0.4954	4.2563	**0.0391**
item*island	dbomb, 2	0	0.0000	0.0000	.	.
item*island	primo, 1	1	1.3610	0.6447	4.4564	**0.0348**
item*island	primo, 2	0	0.0000	0.0000	.	.
item*island	shot, 1	1	0.2113	1.4329	0.0217	0.8828
item*island	shot, 2	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

CONTRAST Statement Results

Contrast	DF	ChiSquare	Pr>Chi	Type
1 –2 for dbomb	1	0.6531	0.4190	LR

Purr Comp by Main Region and Urban/Rural, Model 2

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbomb	1	-0.3365	0.7168	0.2204	0.6387
item	primo	1	-26.3309	0.5386	2390.1079	0.0001
item	shot	1	-25.4306	0.7821	1057.2369	0.0001
item*region1	dbomb, 1	1	1.5584	0.7452	4.3732	**0.0365**
item*region1	dbomb, 2	1	0.4677	0.7345	0.4054	0.5243
item*region1	dbomb, 3	0	0.0000	0.0000	.	.
item*region1	primo, 1	1	23.3157	0.5400	1864.3959	**0.0001**
item*region1	primo, 2	0	24.0022	0.0000	.	.
item*region1	primo, 3	0	0.0000	0.0000	.	.
item*region1	shot, 1	1	24.5432	0.7746	1003.9404	**0.0001**
item*region1	shot, 2	0	21.7971	0.0000	.	.
item*region1	shot, 3	0	0.0000	0.0000	.	.
item*urb_rur	dbomb, 1	1	-1.5352	0.3855	15.8566	**0.0001**
item*urb_rur	dbomb, 2	0	0.0000	0.0000	.	.
item*urb_rur	primo, 1	1	1.2276	0.5997	4.1901	**0.0407**
item*urb_rur	primo, 2	0	0.0000	0.0000	.	.
item*urb_rur	shot, 1	1	0.0906	0.5567	0.0265	0.8707
item*urb_rur	shot, 2	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

CONTRAST Statement Results

Contrast	DF	ChiSquare	Pr>Chi	Type
1 –2 for dbomb	1	7.8393	**0.0051**	LR

Purr Comp by Urban/Rural and Island, Model 2

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates

Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	-0.3450	0.3803	-1.0904	0.4004	-.9072	0.3643
item	primo	-3.3710	0.6383	-4.6221	-2.1199	-5.281	0.0000
item	shot	-4.1657	0.9967	-6.1193	-2.2122	-4.179	0.0000
item*urb_rur	dbomb1	-1.3652	0.3751	-2.1004	-0.6300	-3.640	**0.0003**
item*urb_rur	dbomb2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	primo1	1.1396	0.5789	0.0050	2.2742	1.9685	**0.0490**
item*urb_rur	primo2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	shot1	0.3419	0.5164	-0.6703	1.3541	0.6620	0.5080
item*urb_rur	shot2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	dbomb1	1.2369	0.3996	0.4538	2.0200	3.0956	**0.0020**
item*island	dbomb2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	primo1	1.0038	0.5762	-0.1255	2.1331	1.7421	0.0815

item*island	primo2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	shot1	2.5624	1.0085	0.5858	4.5390	2.5409	**0.0111**
item*island	shot2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	0.9818	.	.	.	.	.	

Purr Comp by Decile in Urban Schools only

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	2.5939	0.7555	1.1131	4.0746	3.4334	0.0006
item	primo	-3.1697	1.3142	-5.7455	-0.5939	-2.412	0.0159
item	shot	-1.5811	0.8792	-3.3043	0.1421	-1.798	0.0721
decile*item	dbomb	-0.3182	0.1017	-0.5176	-0.1188	-3.127	**0.0018**
decile*item	primo	0.0815	0.1724	-0.2564	0.4193	0.4726	0.6365
decile*item	shot	-0.0692	0.1303	-0.3247	0.1862	-.5312	0.5953
scale	0.9922	.	.	.	.	.	

Purr Comp by Decile in Rural Schools only

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	0.5274	0.5290	-0.5095	1.5643	0.9969	0.3188
item	primo	-1.5275	0.5903	-2.6845	-0.3705	-2.588	0.0097
item	shot	0.6139	0.6109	-0.5834	1.8112	1.0049	0.3149
decile*item	dbomb	-0.2910	0.0956	-0.4783	-0.1036	-3.043	**0.0023**
decile*item	primo	-0.0028	0.0986	-0.1960	0.1905	-.0279	0.9777
decile*item	shot	-0.6056	0.1633	-0.9257	-0.2856	-3.709	**0.0002**
scale	0.9597	.	.	.	.	.	

Purr Comp by Decile in Northern and Central Regions only

Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	0.7552	0.4182	-0.0646	1.5749	1.8056	0.0710
item	primo	-1.6989	0.5178	-2.7138	-0.6840	-3.281	0.0010
item	shot	-0.2730	0.5133	-1.2790	0.7331	-.5318	0.5949
decile*item	dbomb	-0.1881	0.0675	-0.3205	-0.0558	-2.785	**0.0053**
decile*item	primo	-0.0090	0.0794	-0.1646	0.1467	-.1128	0.9102
decile*item	shot	-0.2933	0.1032	-0.4956	-0.0909	-2.841	**0.0045**
scale	1.0052		.				

Purr Comp by Main Region and Island in Northern and Central Regions only
Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	-1.1939	0.3610	-1.9014	-0.4864	-3.307	0.0009
item	primo	-2.2773	0.5250	-3.3063	-1.2483	-4.338	0.0000
item	shot	-3.7377	1.0118	-5.7208	-1.7545	-3.694	0.0002
item*region1	dbomb1	0.3477	0.4311	-0.4972	1.1927	0.8066	0.4199
item*region1	dbomb2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	primo1	-1.2238	0.5712	-2.3433	-0.1042	-2.142	**0.0322**
item*region1	primo2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	shot1	2.7532	1.0539	0.6877	4.8187	2.6125	**0.0090**
item*region1	shot2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	dbomb1	1.0221	0.4954	0.0511	1.9931	2.0631	**0.0391**
item*island	dbomb2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	primo1	1.3610	0.6447	0.0974	2.6246	2.1110	**0.0348**
item*island	primo2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*island	shot1	0.2113	1.4329	-2.5971	3.0198	0.1475	0.8828
item*island	shot2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	1.0000	.	.	.	.	.	

Purr Comp by Main Region and Urban/Rural in N and C Regions only
Analysis Of GEE Parameter Estimates – Empirical Standard Error Estimates
Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	0.1419	0.3145	-0.4745	0.7584	0.4513	0.6518
item	primo	-2.2647	0.5155	-3.2750	-1.2543	-4.393	0.0000
item	shot	-3.5872	0.6709	-4.9021	-2.2722	-5.347	0.0000
item*region1	dbomb, 1	1.0854	0.4095	0.2828	1.8880	2.6506	**0.0080**
item*region1	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	primo, 1	-0.6751	0.5326	-1.7188	0.3687	-1.268	0.2049
item*region1	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	shot, 1	2.7417	0.7818	1.2094	4.2740	3.5070	**0.0005**
item*region1	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	dbomb, 1	-1.5393	0.4133	-2.3494	-0.7292	-3.724	**0.0002**
item*urb_rur	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	primo, 1	1.1361	0.5746	0.0099	2.2622	1.9773	**0.0480**
item*urb_rur	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*urb_rur	shot, 1	0.0304	0.5321	-1.0124	1.0733	0.0572	0.9544
item*urb_rur	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
scale	0.9961	.	.	.	.	.	

Purr Comp in Sub-Regions 1-6

Analysis Of Initial Parameter Estimates

parameter		DF	Estimate	Std Err	ChiSquare	Pr>Chi
intercept	0	0.00	0.0000	.	.	
item	dbomb	1	0.1823	0.4282	0.1813	0.6702
item	primo	1	-0.7621	0.4577	2.7723	0.0959
item	shot	1	-26.3652	1.0445	637.1948	0.0001
item*region2	dbomb, 1	1	0.5108	0.9661	0.2796	0.5970
item*region2	dbomb, 2	1	-0.8755	0.9661	0.8212	0.3648
item*region2	dbomb, 3	1	0.3567	0.6399	0.3106	0.5773
item*region2	dbomb, 4	1	-0.1823	0.5807	0.0986	0.7535
item*region2	dbomb, 5	1	-0.8755	0.7472	1.3727	0.2413
item*region2	dbomb, 6	0	0.0000	0.0000	.	.
item*region2	primo, 1	1	-0.8473	1.1872	0.5093	0.4754
item*region2	primo, 2	1	-25.6032	216811.094	0.0000	0.9999
item*region2	primo, 3	1	-2.1282	1.1248	3.5803	0.0585
item*region2	primo, 4	1	-0.9426	0.7106	1.7595	0.1847
item*region2	primo, 5	1	-0.8473	0.8997	0.8868	0.3463
item*region2	primo, 6	0	0.0000	0.0000	.	.
item*region2	shot, 1	1	26.3652	1.3257	395.5002	**0.0001**
item*region2	shot, 2	1	-0.0002	216811.094	0.0000	1.0000
item*region2	shot, 3	1	25.5920	1.1552	490.7826	**0.0001**
item*region2	shot, 4	1	25.7292	1.1229	525.0374	**0.0001**
item*region2	shot, 5	0	23.9673	0.0000	.	.
item*region2	shot, 6	0	0.0000	0.0000	.	.
scale	0	1.00	0.0000	.	.	

Purr Comp by Main Region and Decile in Northern and Central Regions only

Analysis Of GEE Parameter Estimates – Empirical 95% Confidence Limits

parameter		Est.	Std Err	Lower	Upper	Z	Pr>|Z|
intercept	0.0000	.	.	.	.	.	
item	dbomb	0.2886	0.4859	-0.6639	1.2410	0.5939	0.5526
item	primo	-1.2889	0.6434	-2.5500	-0.0278	-2.003	0.0452
item	shot	-2.4344	0.9827	-4.3605	-0.5083	-2.477	0.0132
item*region1	dbomb, 1	0.6552	0.3661	-0.0624	1.3728	1.7894	0.0735
item*region1	dbomb, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	primo, 1	-0.6880	0.5623	-1.7901	0.4142	-1.223	0.2212
item*region1	primo, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
item*region1	shot, 1	2.6200	0.7891	1.0734	4.1667	3.3201	**0.0009**
item*region1	shot, 2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
decile*item	dbomb	-0.1557	0.0706	-0.2940	-0.0174	-2.206	**0.0274**
decile*item	primo	-0.0350	0.0875	-0.2065	0.1365	-.3999	0.6893
decile*item	shot	-0.2077	0.1075	-0.4184	0.0029	-1.933	0.0532
scale	0.9712	.	.	.	.	.	