Socio-demographic composition of the raw sample

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Socio-demographic Analysis of the raw Kiev and Zhitomyr sample
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- Computerfiles associated with this report are sociodemogray2.do, SubjDxDescriptives.do, chwide11dec2011master.dta, and sociodemogray2.pdf

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1 Socio-demograaphic composition of the Kiev and Zhitomyr sample

1.1 Organization of this chapter

We describe the salient sociodemographic characteristics of our raw sample by addressing the gender and age distributions first. By raw, this is the sample

Table 1 Gender distribution of the sample

Respondent's gender	Freq.	Percent	Cum.
1. male	340	48.36	48.36
2. female	363	51.64	100.00
Total	703	100.00	

prior to weighting by the number of telephones in each of the raions. We briefly discuss the residential geography of the sample before addressing the educational attainments and then aspects of employment and occupational prestige. Another aspect of socio=economic status is the relative income level of the respondent and the sufficiency of that income to meet the demands of the person and his family. Last but not least, we turn to the family structure and the size of the family. Because we focus on the health of the respondents later in the analysis, we provide a multiple response analysis by gender of the recalled past health of our respondents. As a rule, we round the percentages to the nearest tenth, unless we explicitly specify otherwise. First, we address the gender distribution of our sample.

1.2 Gender

Our sample of 703 respondents consists of 48.4% (340) males and 51.6% (363) females. Ordinarily, we would compare the summary statistics with those of the Ukrainian Census to provide evidence of the representativeness of our sample. However, the most recent Ukrainian census took place 8 year before our data collection began, in 2001. Because of the financial and political crises within the Ukraine, the next census has been post- poned till 2012. Since the previous census, the population has probably changed enough to render the 2001 census statistics obsolete with respect to a basis for comparison. For this reason, we merely present the summary statistics of the sociodemographic composition of the sample as we find them. But because our analysis will focus on psycho-soscio-medical aspects of the population, we analyze the subject matter by gender.

2 Age group by gender

In Table two, the age by gender distribution is presented. The average age of the males is 49 and that of the women is 50, with standard deviations being respectively 12.2 for the males and 11.9 for the women. From the base of Table two, it can be observed that there is not a statistically significant difference between the distribution of the males and that of the female ages, according to the Pearson $\chi^2(6) = 0.375$. There are somewhat more women than there are men, but the difference is not a significant one.

The age distribution for both men and women is weighted more toward the years from 30 through 59. Very few individuals younger than 30 are in the sample and the sample tapers off in age as the ages range above 69 years old. We might expect this to be the case if those interviewed believed that they had been affected at all by Chornobyl. They key by which the cells in the table are interpreted is provided in Table two. Unless specifically otherwise stated, this is the key that will be used in our crosstabulations henceforth.

3 Geographical distribution of residence

In a survey of the Kiev and Zhitomyr Oblasts, it is not surprising that the vast majority–603 or approximately, 86 % reside in Kiev. Only 99 respondents– approximately 14.08 %– report a residence in the Zhtiomyr oblast.

4 Educational attainment by gender

This sample is highly literate. We can see from Table 3 that more 99% of the respondents had more than a high school diploma. Among both males and females, about one third have at least some sort of technical degree and more than a third have a masters level or a specialist degree. The sample consist of persons who take educational seriously in that less than three percent of the males and eight percent of the females have only graduated high school. Similarly, less than five percent of the males and seven percent of the females only have had some college. In general, pluralities of males and females have a technical or graduate degree.

When males are ccompared to females, there is not a statistically significant difference between their educational distributions. The percentages of either sex who attain a doctorate are tiny when compared to the percentages that attain lesser degrees. That is frequently the case in most societies.

5 Employment status by gender

In Table 4, we observe almost all individuals— at least 98% of the respondents answered this question. It is possible that a few of them were uncertain as to whether they were being offered employment or not or had decided to accept

such an offer. Most respondents reported working fulll time. In 1986, 68.4% of the respondents indicated that they had a full-time job. From 1987 thru 1997, 75% of the respondents maintained that they were fully employed, whereas since 1997, almost 65% of the respondents said that they had full-time jobs.

Regardless of the time period (wave) in our study, approximately 10% of the males indicated that they had a part-time job. For the women, however, this was generally not the case.In 1986, approximately 5% of the women reported being part-time employed, but this proportion grew to 85% in the following decade, but diminished since then to only 6.6 % of the women.

Unemployment dimished as time passed. In 1986, almost 19% of the males and 20% of the women maintained that they were unemployed. In the following time period of 1987 through 1996, these levels dropped to 4.5% and 6.4% respectively. Before the study was completed, these levels declined further, to 2.3% and 5.1% respectively.

Although we observe that retirement increased, this is a function of the age and period during which we interviewed the respondents. Approximately, one fourth of our sample consisted of retirees. Almost 22% were males and 28% were females. The likelihood ratio $\chi^2(4)$ tests at the base of Table 4 reveal a signficant difference in gender distribution of employment, regardless of the time period.

6 Occupational status by gender

When we examine their occupational status in Table 5, we find that their situation changed over the years. In 1986, approximately one third of the sample of respondents were stutents. Almost 38% of the males and 29% of the females at that time were students. In wave two, the proportion of students declined to 10% of the sample, and in more recent years (during wave three), the percentage dropped off to about one percent. The age cohort being interviewed would place them for the most part in school in the first wave.

About one fifth (21% of the sample) of the respondents in 1986 were serving in professional, executive, or administrative positions in 1986, with 20% of the males and 23% of the women occupying professional, executive, and administrative positions at that time. We find that this proportion gradually rises from wave to wave. In recent years the proportion of the sample serving in this occupational status rises to almost 27%, one fourth of whom are males and almost 29% being females. For the most part, women have a slightly higher percentage in this upper status category than do the men, regardless of the period of time.

As for technical sales and administrative support roles, these percentages rise dramatically from about 14% in 1986 to about 18% in the following decade. They decline only about one percent in more recent years. In this occupational status, males are more predominant than females throughout our three waves of time.

There is a clear growth in the service and protective service occupations over the three waves.The greatest increase in the proportion of these jobs takes place

Table 2: Age group by Gender

Key
frequency
row percentage
column percentage
cell percentage

Age group	Respondent's Gender 1. male	2. female	Total
Less than 30 yrs	0	1	1
	0.00%	100.00%	100.00%
	0.00%	0.28&	0.14%
	0.00%	0.14%	0.14%
30 to 39 yrs	93	90	183
	50.82	49.18	100.00
	27.35	24.79	26.03
	13.23	12.80	26.03
40 to 49 yrs	86	79	165
	52.12	47.88	100.00
	25.29	21.76	23.47
	12.23	11.24	23.47
50 to 59 yrs	83	106	189
	43.92	56.08	100.00
	24.41	29.20	26.88
	11.81	15.08	26.88
60 - 69 yrs	54	64	118
	45.76	54.24	100.00
	15.88	17.63	16.79
	7.68	9.10	16.79
70-79 yrs	24	21	45
	53.33	46.67	100.00
	7.06	5.79	6.40
	3.41	2.99	6.40
80+ yrs	0	2	2
	0.00	100.00	100.00
	0.00	0.55	0.28
	0.00	0.28	0.28
Total	5 340	363	703
	48.36	51.64	100.00
	100.00	100.00	100.00
	48.36	51.64	100.00

Pearson chi2(6) = 6.4470 p = 0.375
likelihood-ratio chi2(6) = 7.6070 p = 0.268

as the middle wave emerges. By the middle wave, about 10% of the jobs are classified according to this category. For the most part, females slightly surpass males in having these jobs.

The precision production, mechanical, craft, and construction positions constitute about 6 percent of the jobs in recent years. But the proportion of these jobs increased during the middle wave and declined slightly more recently. This is a job classification in which males outnumbered females throughout all three waves.

With respect to factor labor, women and men had almost an equal proportion of these jobs in 1986. But males came to predominate in this category by the middle period. They continued to outnumber females here in recent years as well.

As far as farming, forestry, fishing, trapping, and logging is concerned, this sector of the labor market was occupied by less than 2 percent of the positions no matter what the wave under consideration. Equal distributions of males and females held these positions.

Homemaking and caregiving grew as a portion of the labor market over time. In 1986, only about 3% of the jobs were classified as such. However, in recent years this proportion grew, as did the ages of the respondents to include about almost one-fourth (23.8%) of the respondents, with females dominating this sector by occuping a fourth of it while males filled about one-fifth of it.

7 Income sufficiency by gender

Table 6 reveals the levels of reported income sufficiency for our respondents, by gender. Over the three waves of our study, we observe that a growing proportion of the respondents maintain that their income is not sufficient to provide them with basic necessities. Actually, this level declines in the middle period but rises to almost (13.9% what it used to be in 1986(14.2%). A much larger percentage (42.1%) of the sample maintains that their income is just sufficient for basic necessities, representing n increase of about two percent since 1986. Only about 29% of the sample maintain that their income is adequate for basic necessities plus some extra purchases and savings. The proportion of the popullation who say that their income affords them comfort and luxuries decreases from 6.8% in 1986 to a mere 3.1% now.

If we examine the gender differential for income sufficiencies, we observe some interesting phenomena. In 1986,the males more than the females maintained that their income was inadequate, whereas in more recent years, greater percentages of females (15.7%) than males (12.1%) complained about this inadequacy. In 1986, 29.7% of males and 25.6% of females reported bare sufficiency of income, whereas . in recent years this proportional difference grew to (55.6%) males and females (39.9%) complaining about it. When reporting an adeuate or better than adequate income, males in greater proportions than females expressed these sentiments, regardless of the time period (Table 6).

Table 3: Highest educational attainment by gender

	Respondent's gender 1. male	2. female	Total
Grade school	0	1	1
	0.5	0.5	1.0
	0.00	100.00	100.00
	0.00	0.28	0.14
	0.00	0.14	0.14
High school grad	10	26	36
	17.4	18.6	36.0
	27.78	72.22	100.00
	2.94	7.16	5.12
	1.42	3.70	5.12
Tech degree	114	128	242
	117.0	125.0	242.0
	47.11	52.89	100.00
	33.53	35.26	34.42
	16.22	18.21	34.42
Some collage	14	24	38
	18.4	19.6	38.0
	36.84	63.16	100.00
	4.12	6.61	5.41
	1.99	3.41	5.41
Bachelors degree	50	47	97
	46.9	50.1	97.0
	51.55	48.45	100.00
	14.71	12.95	13.80
	7.11	6.69	13.80
Masters or specialist degree	146	135	281
	135.9	145.1	281.0
	51.96	48.04	100.00
	42.94	37.19	39.97
	20.77	19.20	39.97
PhD	4	2	6
	2.9	3.1	6.0
	66.67	33.33	100.00
	1.18	0.55	0.85
	0.57	0.28	0.85
MD	2	0	2
	1.0	1.0	2.0
	100.00	0.00	100.00
	0.59	0.00	0.28
	0.28	0.00	0.28
Total	340	363	703
	340.0	363.0	703.0
	48.36	51.64	100.00
	100.00	100.00	100.00

8 Marital status and family size

8.1 Martial status and gender

In Table 7, we can observe the nature of martial structure over the three waves of our study, as reported by the respondents. Most of the respondents are married, regardless of the period of time. Actually, the proportion of respondents who are married increases from wave one (52.4%) to wave two (68.4%). The same proportion increases a little more in more recent years to almost 70% during wave three. Over time we note that the proportion of the respondents who are married increasees slightly.

However, the proportion of the respondents who are single declines over time. It is highest during 1986 when almost 43 percent of the sample are single. By wave two, this percentage declines to about 23 percent and by the time of the interview, the proportiono of the sample who are single diminishes to 9.1%.

The stability of the marriage remains intact over time as well. By wave three, only a little more than one percent are separated whereas 7 percent are divorced, which is less than the 8.7% of the sample who are widowed

According to the Likelihood ratio $\chi^2(5)$ tests, the distributions of males and females for each wave appear to be significantly different from one another, in that more males are single than females no matter which wave we consider. For all waves, the proportions of males that are cohabiting is larger than that of females in the study. In the first two waves, the proportions of married women in the study seem larger than those of the males. But during the last wave, the proportion of married males exceeds that of married females slightly. The tests of significance can be found at the base of Table 7.

8.2 Family size and the number of children

From Table 8, we can see that by the end of the third wave a plurality (42.8%) of families have two children. A smaller fraction (36.1%) of families have one child and an even smaller proportion (15.5%) have no children at all.

If we search for childbearing trends, we note that most families who have children have two of them regardless of the period of time. During 1986, 26% had two children, and by wave two this percentage rose to 35%. By the third wave, this had risen to 42.8%. The proportion of families with no children declined over the waves from 48.4%in 1986 to a little less than 16% in 2009-2010.

The proportion of families who had three or more children were three or more remained very small throughout the study. By wave three only 5% of those respondent reported having three children and less than one percent reported having four or more children.

9 Recollection of past illnesses

A person's sense of self-health and wellbeing is a function of experienced earlier health, resilience, and past illnesses. Although a single individual may have experienced multiple illnesses, destroying to some extent the independence of such experiences, it is nonetheless helpful to examine them during time periods under consideration. Because of the lack of independence of these observations, we draw no probabalistic inferences from these variables. However, they are presented as multiple response crosstabulations by gender.

In Figures one through three, the reader may review the reported illnesses on the part of the respondents. The first graph displays the relative number of reports of the mean and the women about their past illnesses from 1977 up through 1986. In the second graph, their reports of illnesses from1987 through 1996 are displayed. The third graph reveals their reports of illnesses from 1997 through 2009.

Table 4 Employment status by gender over the three periods of time

Employment status	Wave one: 1986			Wave two: 1987-1996			Wave three: 1997 - 2009		
	Male	*Female*	*total*	*Male*	*Female*	*Total*	*Male*	*Female*	*total*
unanswered	2 14.3% 0.6% 0.3%	12 85.7% 3.3% 1.7%	14 100.0% 2.00% 2.00%	1 14.3 0.3 0.1	6 85.7 1.7 0.9	7 100 1.0 1.0	0	0	0
Full time	226 47.0 66.5 32.2	255 53.0 70.3 36.3	481 100.0 68.4 68.4	262 49.4 77.1 37.3	268 50.6 73.8 38.1	530 100 75.4 75.4	225 51.8 66.2 32.0	209 48.2 57.6 29.7	434 100 61.7 61.7
Part time	47 73.4 13.8 6.7	17 26.6 4.7 2.4	64 100.0 9.1 9.1	44 58.7 12.9 6.3	31 41.3 8.5 4.4	75 100.0 10.7 10.7	33 57.9 9.7 4.7	24 42.1 6.6 3.41	57 100 8.1 8.1
Voluntary	1 50.0 0.3 0.1	1 50.0 0.3 0.1	2 100.0 0.3 0.3	1 50.0 0.3 0.1	1 50.0 0.3 0.1	2 100.0 0.3 0.3	0 0.00 0.00 0.0	1 100.00 0.3 0.1	1 100.00 0.1 0.1
Retired	1 20.0 0.3 0.1	4 80.0 1.1 0.6	5 100.0 0.7 0.7	16 35.6 4.7 2.3	28 63.4 7.7 4.0	44 100 6.3 6.3	74 42.3 21.8 10.5	101 57.7 27.8 14.4	175 100 24.9 24.9
Unemployed	63 46.0 18.5 9.0	74 54.0 20.4 10.5	137 100.0 19.5 19.5	16 35.6 4.7 2.3	29 64.4 8.0 4.1	45 100 6.4 6.4	8 22.2 2.3 1.1	28 77.8 7.7 4.0	36 100.00 5.1 5.1
Total	340 48.4 100 48.4	363 51.6 100 51.64	340 48.4 100 48.4	340 48.4 100 48.4	363 51.6 100 51.64	703 100.0 100.0 100.0	340 48.4% 100.0% 48.4%	363 51.6% 100.0% 51.6%	703 100% 100.0% 100.0%
Chi square Test for each wave	**LR Chi^2(4) =26.36 P = 0.000**			**LR Chi^2 = 12.67 P=0.027**			**LR Chi^2 (4) = 17.55 p=0.002**		

Table 5 Job classification by gender over the three periods of time

precision: rounded to nearest 0 .1

Employment status	Wave one: 1986			Wave two: 1987-1996			Wave three: 1997 - 2009		
	Male	*Female*	*total*	*Male*	*Female*	*Total*	*Male*	*Female*	*total*
Professional	65	82	147	86	121	207	85	104	189
Executive	44.2%	55.8%	100%	41.6	59.5	100	45.0	55.0	100
Administration	19.1%	22.6%	20.9%	25.3	33.3	29.5	25.0	28.7	26.9
	9.3%	11.7%	20.9%	36.1	17.2	29.5	12.1	14.8	26.9
Technical sales,	56	33	89	83	43	126	84	37	121
admin support	62.9	37.1	100	65.9	34.1	100	69.4	30. 6	100
	16.5	9.1	12.7	24.4	11.9	17.9	24.7	10.2	17.2
	8.0	4.7	12.7	11.8	6.1	17.9	12.0	5.3	17.2
Service	15	31	46	23	48	71	26	49	75
occupation	32.6	67.4	100	32.4	67.6	100	34.7	65.3	100
/protective	4.4	8.5	6.5	6.8	13.2	10.1	7.7	13.5	10.7
services	2.1	4.4	6.5	3.3	6.8	10.1	3.7	7.00	10.7
Precision prod/	33	16	49	42	17	59	35	8	43
Mechanical/	67.4	32.7	100	71.2	28.8	100	81.4	18.6	100
craft/	9.7	4.4	7.0	12.4	4.7	8.4	10.3	2.2	6.1
construction	4.7	2.3	7.0	6.0	2.4	8.4	5.0	1.1	6.1
Factory laborer	12	11	23	21	9	30	18	5	23
Machinist/	52.17	47.8	100	70.0	30.0	100	78.3	21.7	100
transp./cleaner	3.5	3.0	3.3	6.2	2.5	4.3	5.3	1.4	3.3
	1.7	1.6	3.3	3.0	1.3	4.3	2.6	0.7	3.3
Agricultural/	5	9	14	5	9	14	4	4	8
forestry/fishing	35.7	64.3	100	35.7	64.3	100	50.0	50.0	100
Trapping/logging	1.5	2.5	2.0	1.5	2.5	2.00	1.2	1.1	1.1
	0.7	1.3	2.0	0.7	1.3	2.00	0.6	0.6	1.1
Homemaking/	4	15	19	14	33	47	70	97	167
caregiving	21.1	79.1	100	29.8	70.2	100	41.9	58.1	100
	1.1	4.13	2.7	4.1	9.1	6.7	20.6	26.7	23.8
	0.6	2.13	2.7	2.0	4.7	6.7	10.0	13.8	23.8
Student	129	105	234	47	24	71	0	1	1
	55.1	44.9	100	66.2	33.8	100	0.0	100	100
	37.9	28.9	33.3	13.8	6.6	10.1	0.0	0.3	0.1
	18.4	14.9	33.3	6.7	3.4	10.1	0.0	0.1	0.1
Total	340	363	703	340	363	703	340	363	703
	48.4	51.6	100	48.4	51.6	100	48.4	51.6	100
	100	100	100	100	100	100	100	100	100
	48.4	51.64	100	48.4	51.64	100	48.4	51.6	100

Table 6 Income sufficiency by gender Over three periods of time

Income Sufficiency	Wave one: 1986			Wave two: 1987-1996			Wave three: 1997 - 2009		
	Male	*Female*	*total*	*Male*	*Female*	*Total*	*Male*	*Female*	*total*
Income insufficient for basic necessities	48 52.8 14.2 6.83	43 47.3 11.9 6.12	91 100 12.9 12.9	23 30.3 6.8 3.3	53 69.8 14.6 7.5	76 100 10.8 10.8	41 41.8 12.1 5.8	57 58.2 15.7 8.11	98 100 13.9 13.9
Income just sufficient for basic necessities	137 48.2 40.3 19.5	145 51.4 39.9 20.6	282 100 40.1 40.1	162 52.4 47.7 23.1	147 47.6 40.5 20.9	309 100 44.0 44.0	151 51.0 55.6 26.9	145 49.00 39.94 20.6	296 100 42.1 42.1
Income sufficient for basics + extra purchases and savings	101 52.1 29.7 14.4	93 47.9 25.6 13.3	194 100.00 27.6 27.6	120 55.8 35.3 17.1	95 44.2 26.2 13.5	215 100 30.6 30.6	110 53.7 32.5 15.7	95 46.3 26.2 13.5	205 100 29.2 29.2
Income allows comfortable living and luxuries	30 62.5 8.8 4.3	18 37.5 5,0 2.6	48 100 6.8 6.8	13 59.1 3.8 1.9	9 40.9 2.5 1.3	22 100 3.1 3.1	14 63.6 4.12 2.0	8 36.4 2.20 1.1	22 100 3.1 3.1
Total	340 48.4 100 48.4	363 51.6 100 51.6	703 100 100 100	340 48.4 100 48.4	363 51.6 100 51.6	703 100 100 48.4	340 48.4 100 51.6	363 51.6 100 48.4	703 100 100 51.6

Table 7 Marital status by gender
Over three periods of time

Martial status	Wave one: 1986			Wave two: 1987-1996			Wave three: 1997 - 2009		
	Male	*Female*	*total*	*Male*	*Female*	*Total*	*Male*	*Female*	*total*
no answer	3 33.3 0.9 .0.4	6 66.7 1.7 0.9	9 100.0 1.3 1.3	0 100.0 0.3 0.1	1 0.0 0.0 0.0	1 100 0.1 0.1			
Single	168 56.0 49.4 23.9	132 44.0 36.4 18.8	300 100.0 42.7 42.7	96 60.0 28.2 13.7	64 40.0 17.6 9.1	160 100.0 22.8 22.8	36 56.3 10.6 5.1	28 43.8 7.7 4.0	32 100.0 9.1 9.1
Cohabiting	6 60.0 1.8 0.9	4 40.0 1.10 0.6	10 100.0 1.4 1.4	11 57.9 3.2 1.6	8 42.1 2.2 1.1	19 100.0 2.7 2.7	24 75.0 7.1 3.4	8 25.0 2.2 1.1	32 100.0 4.6 4.6
Married	160 43.5 47.1 22.8	208 56.5 57.3 29.6	368 100.0 52.4 52.4	219 45.5 64.4 31.2	262 54.5 72.2 37.3	481 100.0 68.4 68.4	244 49.9 71.8 34.7	245 50.1 67.5 34.9	489 100.0 69.6 69.6
Separated	0 0.0 0.0 0.0	3 100.0 1.4 0.7	3 100.0 0.4 0.4	3 75.0 0.9 0.4	1 25.0 0.3 0.1	4 100.0 0.6 0.6	0 0.0 0.0 0.0	8 100.0 2.2 1.1	8 100.0 1.1 1.1
Divorced	3 37.5 0.9 0.4	5 62.5 1.4 0.7	8 100.0 1.1 1.1	6 35.3 1.8 0.9	11 64.7 3.0 2.4	17 100.0 2.42 2.42	23 46.9 6.8 3.3	26 53.1 7.2 3.7	49 100.0 7.0 7.0
Widowed	0 0.0 0.0 0.0	5 100.0 1.4 0.7	5 100.0 0.7 0.7	4 19.1 1.2 0.6	17 81.0 4.7 2.4	21 100.0 3.0 3.0	13 21.3 3.8 1.9	48 78.7 13.2 6.8	61 100.0 8.7 8.7
total	340 48.4 100.0 48.4	363 51.6 100.0 51.6	703 100.0 100.0 100.0	340 48.4 100.0 48.4	363 51.6 100.0 51.6	703 100.0 100.0 100.0	340 48.4 100.0 48.4	363 51.6 100.0 51.6	703 100.0 100.0 100.0
$\chi 2$ test of significance	LR $\chi^2(5)=22.87$ p=0.001			LR $\chi^2(5)=21.6$ p=0.001			LR $\chi^2(5)=41.26$ p=0.000		

Table 8 Number of children by gender Over three periods of time

Number of children	Wave one: 1986			Wave two: 1987-1996			Wave three: 1997 - 2009		
	Male	*Female*	*total*	*Male*	*Female*	*Total*	*Male*	*Female*	*total*
0	184 54.3 54.3 26.3	155 45.7 45.7 22.1	339 100.0 48.4 48.4	120 59.4 35.3 17.1	82 40.6 22.6 11.7	202 100.0 28.7 28.7	63 57.8 18.5 8.9	46 42.2 12.8 6.5	109 100.0 15.5 15.5
1	62 39.5 18.3 8.9	95 60.,5 26.3 13.6	157 100.0 22.4 22.4	101 44.3 29.7 14.4	127 55.7 35.0 18.1	228 100.0 32.4 32.4	123 48.4 36.2 17.5	131 51.6 36.1 18.6	254 100.0 36.1 36.1
2	87 47.3 25.7 12.4	97 52.7 26.9 13.9	184 100.0 26.3 26.3	110 44.4 32.4 15.7	138 55.7 38.0 19.6	248 100.0 35.3 35.3	135 44.9 39.7 19.2	166 55.15 45.7 23.6	301 100.0 42.8 42.8
3	6 33.3 1.8 0.9	12 66.7 3.3 1.7	18 100.0 2.6 2.6	8 36.4 2.4 1.1	14 63.6 3.9 2.0	22 100.0 3.1 3.1	18 51.4 5.3 2.6	17 48,6 4.6 2.4	35 100.0 5.0 5.0
4	0 0.0 0.0 0.0	1 100.0 0.3 0.1	1 100.00 0.1 0.1	1 50.0 0.3 0.1	1 50.0 0.4 0.1	2 100.0 3.1 3.1	1 33.3 0.3 0.1	2 66.7 0.6 0.3	3 100.0 0.4 0.4
5	0 0.0 0.0 0.0	1 100.0 0.3 0.1	1 100.0 0.1 0.1	0 0.0 0.0 0.0	1 100.0 0.3 0.1	1 100.0 0.1 0.1	0 0.0 0.0 0.0	1 100.0 0.3 0.1	1 100.0 0.1 0.1
total	339 48.4 100.0 48.4	361 51.6 100.0 51.6	700 100.0 100.0 100.0	340 48.4 100.0 48.4	363 51.6 100.0 51.6	703 100.0 100.0 100.0	340 48.4 100.0 48.4	363 51.6 100.0 51.6	703 100.0 100.0 100.0
LR χ^2- test of significance	LR $\chi^2(5) = 14.136$ p= 0.21			LR $\chi^2(5)=15.62$ p =0.008			LR $\chi^2(5)=7.12$ p=0.212		

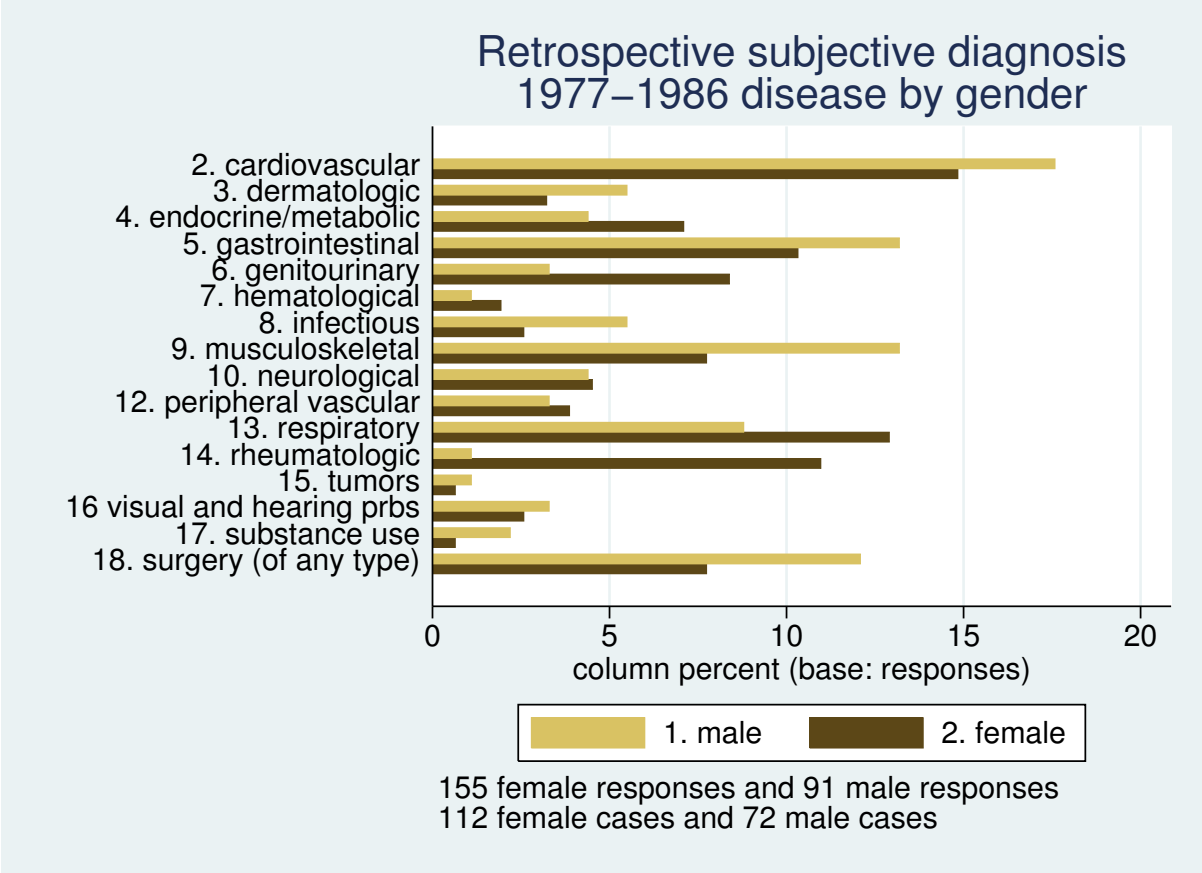

Figure 1: Subjectively recalled disease diagnosis during 1977-1986

A more detailed description of Figure 1 may be found in Table nine below, which provides a tabulation of male and female responses to the types of illnesses they report. This table reports the male and female responses as well as cases for those who were ill during the years from 1977 through 1986. Similar tables, following Figures two and three, will provide elaboration of the Figures immediately preceding them as well.

Table nine reveals the illness reported by both sexes are mostly cardiovascular from 1977 through 1986. A little more than 20% of the respondents complained of cardiovascular problems during this period. Both gastrointestinal and respiratory complaints are tied for second place, with 15.22% of respondents complaining about each of these types of illnesses.. Musculoskeletal illnesses follow in third place with 13.04 % of . respondents reporting this form of illness.

When we examine the most common forms of complaints with respect to

gender specific differences, we observe that proportionally more females (almost 59%) complain of cardiovascular problems than do males (41%), proportionally more females (57%) complain about gastrointestinal problems than do males (43%), and proportionally more females (about 71%) complain of respiratory problems than males(approximately 29%). However, for musculoskeletal complaints, both genders render about the same proportion of complaints(50% for each).

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Table 9

Key
frequency of responses *row percent of responses* *column percent of cases* *column percent of responses*

Restrospective subjective diagnosis of Disease 1977 to 1986	respondent´s gender 1. male	2. female	Total
2 2. cardiovascular	16	23	39
	41.03	58.97	100.00
	22.22	20.54	21.20
	17.58	14.84	15.85
3 3. dermatologic	5	5	10
	50.00	50.00	100.00
	6.94	4.46	5.43
	5.49	3.23	4.07
4 4. endocrine/metabolic	4	11	15
	26.67	73.33	100.00
	5.56	9.82	8.15
	4.40	7.10	6.10
5 5. gastrointestinal	12	16	28
	42.86	57.14	100.00
	16.67	14.29	15.22
	13.19	10.32	11.38
6 6. genitourinary	3	13	16
	18.75	81.25	100.00
	4.17	11.61	8.70
	3.30	8.39	6.50
7 7. hematological	1	3	4
	25.00	75.00	100.00
	1.39	2.68	2.17
	1.10	1.94	1.63
8 8. infectious	5	4	9
	55.56	44.44	100.00
	6.94	3.57	4.89
	5.49	2.58	3.66
9 9. musculoskeletal	12	12	24

		50.00	50.00	100.00
		16.67	10.71	13.04
		13.19	7.74	9.76
10	10. neurological	4	7	11
		36.36	63.64	100.00
		5.56	6.25	5.98
		4.40	4.52	4.47
12	12. peripheral vascular	3	6	9
		33.33	66.67	100.00
		4.17	5.36	4.89
		3.30	3.87	3.66
13	13. respiratory	8	20	28
		28.57	71.43	100.00
		11.11	17.86	15.22
		8.79	12.90	11.38
14	14. rheumatologic	1	17	18
		5.56	94.44	100.00
		1.39	15.18	9.78
		1.10	10.97	7.32
15	15. tumors	1	1	2
		50.00	50.00	100.00
		1.39	0.89	1.09
		1.10	0.65	0.81
16	16 visual and hearing prbs	3	4	7
		42.86	57.14	100.00
		4.17	3.57	3.80
		3.30	2.58	2.85
17	17. substance use	2	1	3
		66.67	33.33	100.00
		2.78	0.89	1.63
		2.20	0.65	1.22
18	18. surgery (of any type)	11	12	23
		47.83	52.17	100.00
		15.28	10.71	12.50
		12.09	7.74	9.35
	Total	91	155	246
		36.99	63.01	100.00
		126.39	138.39	133.70
		100.00	100.00	100.00
	Cases	72	112	184

Valid cases: 184
Missing cases: 519

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After the Chornobyl accident, we observe that cardovascular complaints remain pre-eminent among both males and females with about 29% of the reports being of this type. Almost 23% of the cases were of a gastro-intenstinal illnesses type, so this kind of illness remains in second place. Genitourinary illnesses as-

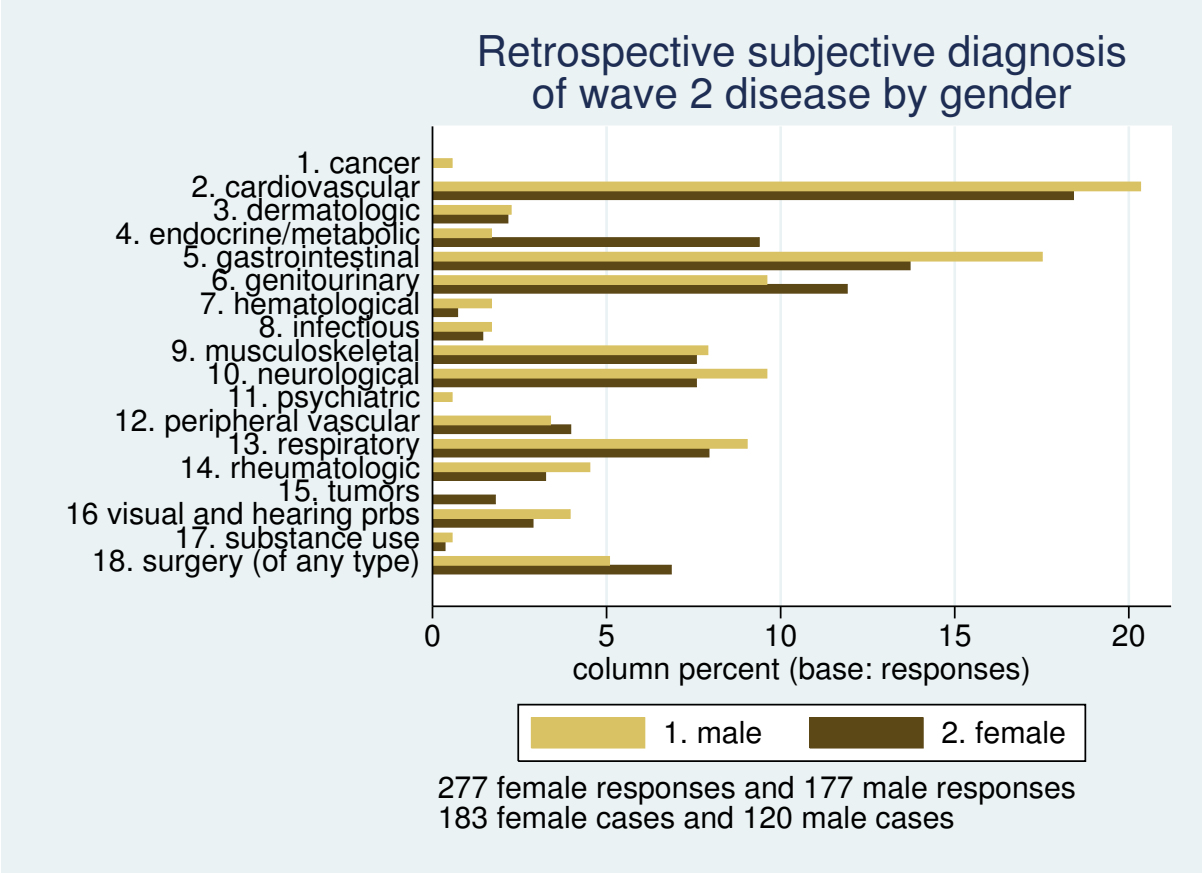

Figure 2: Subjectively recalled disease diagnosis during 1987-1996

sume the position of third place with almost 17% of the cases being categorized as such. Neurological cases constituted about 13 % of the cases, and respiratory illnesses slip into fifth place slightly behind them. Only one cancer related case is reported at this time, probably because this was a random digit-dialing procedure obtaining a representative sample of many people living far away from the exclusion zone.

As for the gender differential regarding the number of reports of illness, proportionally more females than males complain of cardiovasuclar issues (59% compared to 41%, respectively). The figures in Table 10 show that this holds for the gastrointestinal, genitourinary, neurological, as well as respiratory ailments as well.

In the third wave of our study, from 1997 through 2009, Figure three and Table 11 reveal what the respondents report. Cardio-vascular problems remain pre-eminent among the respondent reports of illnesses with about 33 % of the respondents registering this form of complaint. Gastrointestinal problems retains second place with about 27% of the respondents reporting this form of illness. Neurological ailments overtake third place with a litle more than 22% of the cases being of this type. Genitourinary illnesses slip to fourth place with about 18% of the respondents registering this kind of illness. Cancer related illnesses grow to five, less than one percent of the cases being reported. This is a small increase but an potentially threatening one to those affected.

If we examine the gender differential in the responses of illnesses reported, we note that in almost all of the categories described immediately above, females more than males report proportionally more of the cases. This continues to obtain for the cardiovascular, endocrine/ metabolic, gastointestinal genitourinary, neurological, respiratory, and visual/hearing disorders. Males predominate in reporting infections and musculoskeletal conditions.

.Table 10

Key
frequency of responses *row percent of responses* *column percent of cases* *column percent of responses*

Restrospective subjective diagnosis of wave 2 disease		respondent´s gender 1. male	2. female	Total
1	1. cancer	1	0	1
		100.00	0.00	100.00
		0.83	0.00	0.33
		0.56	0.00	0.22
2	2. cardiovascular	36	51	87
		41.38	58.62	100.00
		30.00	27.87	28.71
		20.34	18.41	19.16
3	3. dermatologic	4	6	10
		40.00	60.00	100.00
		3.33	3.28	3.30
		2.26	2.17	2.20
4	4. endocrine/metabolic	3	26	29
		10.34	89.66	100.00
		2.50	14.21	9.57
		1.69	9.39	6.39
5	5. gastrointestinal	31	38	69
		44.93	55.07	100.00
		25.83	20.77	22.77
		17.51	13.72	15.20
6	6. genitourinary	17	33	50
		34.00	66.00	100.00
		14.17	18.03	16.50
		9.60	11.91	11.01
7	7. hematological	3	2	5
		60.00	40.00	100.00
		2.50	1.09	1.65
		1.69	0.72	1.10
8	8. infectious	3	4	7
		42.86	57.14	100.00
		2.50	2.19	2.31
		1.69	1.44	1.54
9	9. musculoskeletal	14	21	35
		40.00	60.00	100.00
		11.67	11.48	11.55
		7.91	7.58	7.71
10	10. neurological	17	21	38
		44.74	55.26	100.00
		14.17	11.48	12.54

		9.60	7.58	8.37
11	11. psychiatric	1	0	1
		100.00	0.00	100.00
		0.83	0.00	0.33
		0.56	0.00	0.22
12	12. peripheral vascular	6	11	17
		35.29	64.71	100.00
		5.00	6.01	5.61
		3.39	3.97	3.74
13	13. respiratory	16	22	38
		42.11	57.89	100.00
		13.33	12.02	12.54
		9.04	7.94	8.37
14	14. rheumatologic	8	9	17
		47.06	52.94	100.00
		6.67	4.92	5.61
		4.52	3.25	3.74
15	15. tumors	0	5	5
		0.00	100.00	100.00
		0.00	2.73	1.65
		0.00	1.81	1.10
16	16 visual and hearing prbs	7	8	15
		46.67	53.33	100.00
		5.83	4.37	4.95
		3.95	2.89	3.30
17	17. substance use	1	1	2
		50.00	50.00	100.00
		0.83	0.55	0.66
		0.56	0.36	0.44
18	18. surgery (of any type)	9	19	28
		32.14	67.86	100.00
		7.50	10.38	9.24
		5.08	6.86	6.17
	Total	177	277	454
		38.99	61.01	100.00
		147.50	151.37	149.83
		100.00	100.00	100.00
	Cases	120	183	303

Valid cases: 303
Missing cases: 400

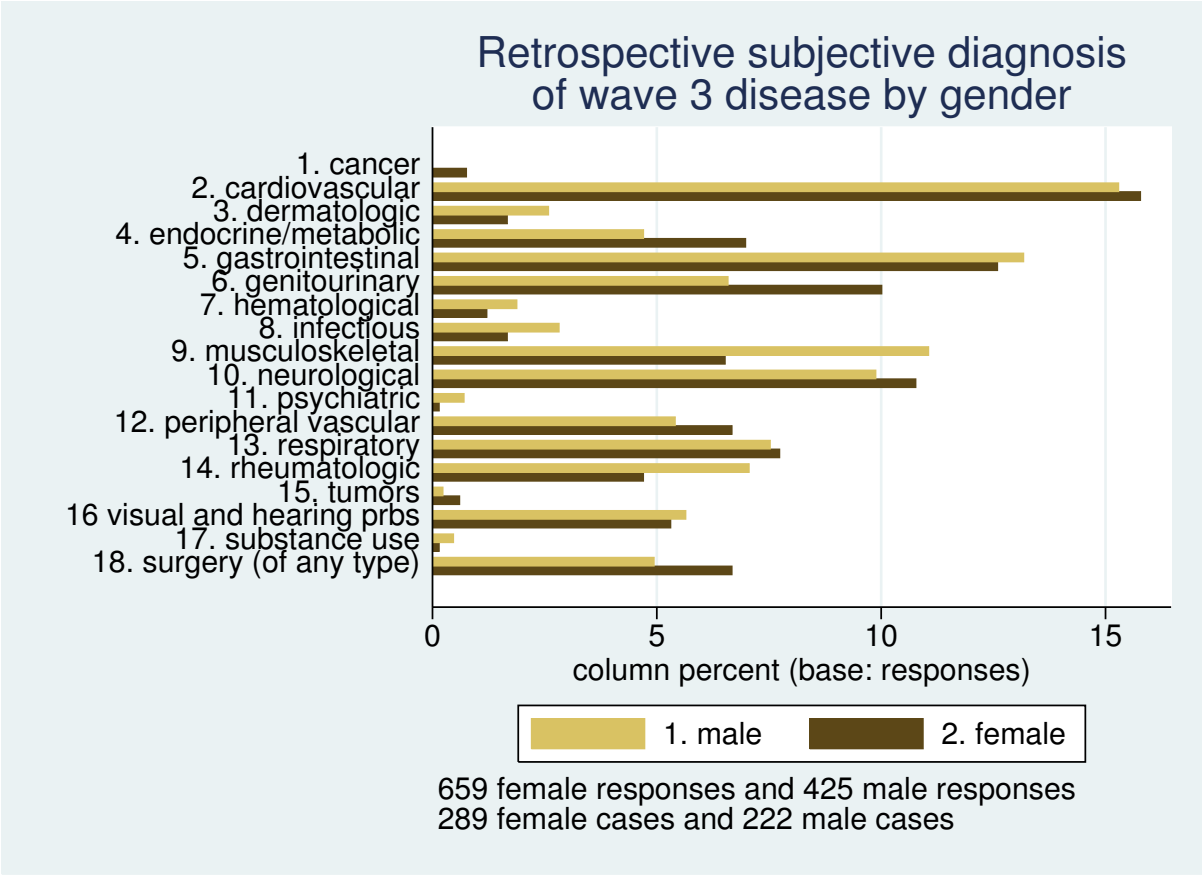

Figure 3: Subjectively recalled disease diagnosis during 1977-2009

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Table 11

Key
frequency of responses *row percent of responses* *column percent of cases* *column percent of responses*

Restrospective subjective diagnosis of wave 3 disease by gender	respondent´s gender 1. male	2. female	Total
1 1. cancer	0	5	5
	0.00	100.00	100.00
	0.00	1.73	0.98
	0.00	0.76	0.46
2 2. cardiovascular	65	104	169
	38.46	61.54	100.00
	29.28	35.99	33.07
	15.29	15.78	15.59
3 3. dermatologic	11	11	22
	50.00	50.00	100.00
	4.95	3.81	4.31
	2.59	1.67	2.03
4 4. endocrine/metabolic	20	46	66
	30.30	69.70	100.00
	9.01	15.92	12.92
	4.71	6.98	6.09
5 5. gastrointestinal	56	83	139
	40.29	59.71	100.00
	25.23	28.72	27.20
	13.18	12.59	12.82
6 6. genitourinary	28	66	94
	29.79	70.21	100.00
	12.61	22.84	18.40
	6.59	10.02	8.67
7 7. hematological	8	8	16
	50.00	50.00	100.00
	3.60	2.77	3.13
	1.88	1.21	1.48
8 8. infectious	12	11	23
	52.17	47.83	100.00
	5.41	3.81	4.50
	2.82	1.67	2.12
9 9. musculoskeletal	47	43	90
	52.22	47.78	100.00
	21.17	14.88	17.61
	11.06	6.53	8.30

10	10. neurological	42	71	113
		37.17	62.83	100.00
		18.92	24.57	22.11
		9.88	10.77	10.42
11	11. psychiatric	3	1	4
		75.00	25.00	100.00
		1.35	0.35	0.78
		0.71	0.15	0.37
12	12. peripheral vascular	23	44	67
		34.33	65.67	100.00
		10.36	15.22	13.11
		5.41	6.68	6.18
13	13. respiratory	32	51	83
		38.55	61.45	100.00
		14.41	17.65	16.24
		7.53	7.74	7.66
14	14. rheumatologic	30	31	61
		49.18	50.82	100.00
		13.51	10.73	11.94
		7.06	4.70	5.63
15	15. tumors	1	4	5
		20.00	80.00	100.00
		0.45	1.38	0.98
		0.24	0.61	0.46
16	16 visual and hearing prbs	24	35	59
		40.68	59.32	100.00
		10.81	12.11	11.55
		5.65	5.31	5.44
17	17. substance use	2	1	3
		66.67	33.33	100.00
		0.90	0.35	0.59
		0.47	0.15	0.28
18	18. surgery (of any type)	21	44	65
		32.31	67.69	100.00
		9.46	15.22	12.72
		4.94	6.68	6.00
	Total	425	659	1084
		39.21	60.79	100.00
		191.44	228.03	212.13
		100.00	100.00	100.00
	Cases	222	289	511

Valid cases: 511
Missing cases: 192

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