

# THE RHODE ISLAND FOOD SECURITY MONITORING PROJECT

Assessing The Prevalence Of Hunger And Food Insecurity  
In Rhode Island

**YEAR 2000  
SUMMARY REPORT**

THE RHODE ISLAND DEPARTMENT OF HEALTH  
DIVISION OF FAMILY HEALTH

JANUARY, 2001

## Executive Summary

The Rhode Island Food Security Monitoring Project (RIFSMP) was established in 1999 by the Rhode Island Department of Health to assess and monitor the prevalence of hunger and food insecurity among households residing in poverty areas across Rhode Island. The first report of the RIFSMP was released in November, 1999.

This report reflects the Rhode Island Department of Health's second year of conducting the RIFSMP to estimate the prevalence of hunger and food insecurity among households residing in poverty areas across the state and describe important characteristics associated with those food insecure households. These efforts are consistent with the national goals and efforts of the United States Department of Agriculture (USDA) to monitor the problem of food insecurity in the United States and reduce in half the incidence of hunger and food insecurity in the United States by the year 2015.

The 2000 survey of the RIFSMP included 401 randomly selected households from the 41 poverty census tracts in RI. The survey was conducted by telephone using USDA's 18-item food security survey with additional demographic questions added.

Among the 401 households surveyed, more than 82% of the households surveyed resided in Providence, Pawtucket, Central Falls and Woonsocket. More than 50% of the households had total household incomes less than 185% of the federal poverty level and the percentage of households that had at least one adult working was 80%. About 41% of the households had children living in the household with more than 20% having children less than 6 years of age. 26% of the respondents surveyed had less than a 12<sup>th</sup> grade education. The respondents were predominantly white (71.1%) and 18.3% of the respondents were of Hispanic or Latino ethnicity.

The results of the 2000 RIFSMP show that among the 401 households surveyed, 100 households (24.9%) were food insecure. Of the 100 food insecure households, 43 ( or 10.7% of the total sample) were food insecure with moderate or severe hunger. 9.5% of the households surveyed used a food pantry or soup kitchen in the preceding 12 months. The prevalence of food insecurity in the households studied was significantly associated with the following factors:

- participation in the Food Stamp Program, Women, Infants and Children's (WIC) Program or the Family Independence Program
- households where no adult is employed
- Hispanic ethnicity
- single parent households
- total household income of less than 185% of the federal poverty level, especially households with incomes less than 100% of the federal poverty level
- children in the household, especially children less than 6 years of age
- less than a 12<sup>th</sup> grade education
- household size of 5 or more individuals

## **Methodology**

### ***Sampling***

The sampling criteria for this survey were households residing in any of the 41 “poverty” census tracts in Rhode Island that were identified based on the 1990 census (Rhode Island Department of Health). A list of the 41 “poverty” census tracts was provided to Survey Sampling, Inc. which generated a randomized digit dial telephone list for those census tracts. Households with no telephone service or unlisted telephone numbers could not be included in the survey. It was determined by the RI Department of Health that a minimum of 400 completed surveys would be collected for this survey.

The survey was conducted during the months of March through May of 2000. When households were contacted by telephone, the interviewer requested to speak to the member of the household who is usually responsible for buying the food for the household. That person will be referred to as “head of the household.” The interviewer would only continue with the survey if the head of the household was available to talk with the interviewer at that time.

### ***The Survey Instrument***

The food security survey instrument that was used for the RIFSMP was developed by the USDA (Hamilton et al.). This 18- question core food security module was designed to assess the prevalence of household food insecurity during the 12 months preceding the survey. This telephone survey is designed to measure only that hunger which is a result of constrained financial resources or general income poverty. The RI Department of Health added selected sociodemographic questions to the core food security module to be able to describe other characteristics potentially associated with food insecure households in Rhode Island. See Appendix A.

### ***Language Capacity***

The survey instrument was translated into Spanish by staff members of the Division of Family Health. If a household was contacted that was only Spanish speaking, the interviewer would either a) proceed if he/she was bilingual, or b) refer that phone number to a bilingual interviewer to conduct the survey in Spanish at a subsequent time. There was no capacity to conduct the survey in languages other than English or Spanish.

### ***Data Analysis***

After the food security surveys were completed, they were scored individually to classify each household into one of four food security status categories: food secure, food insecure without hunger, food insecure with moderate hunger, food insecure with severe hunger. The surveys were scored using the food security scale developed by USDA (Hamilton, et al) which essentially correlates “positive” responses with food insecurity. The greater the number of positive responses on the survey, the higher the level of food insecurity. Responses to all questions on the surveys were entered into a database to generate frequency data and correlations.

## **Sociodemographic Characteristics of the Respondents**

Sociodemographic characteristics of the 401 households surveyed are described below. (See Table 1).

### *Age*

The average age of the respondents was 48 years. 11.2% of the respondents were between the ages of 18-24; 63.9% were between the ages of 25-64; and 24.9% were 65 or older.

### *Residence*

Among the 401 households surveyed, 82.2% resided in Providence, Pawtucket, Central Falls, and Woonsocket. 189 (47.1%) resided in Providence, 90 (22.4%) resided in Pawtucket or Central Falls and 51 (12.7%) resided in Woonsocket. A total of 80 households (20.0% of the total sample) resided in other cities or towns including, Cranston, Cumberland, Newport, East Providence, Lincoln, North Providence and others.

### *Race/Ethnicity*

Race and ethnicity were self-reported in the survey. The respondents were predominantly white (71.1%). 14.3% were Black/African American, 2.8% were Asian, and 1.7% were Native American. 10.2% classified themselves as "Other." 18.3% of the respondents were of Hispanic or Latino origin.

### *Household Members*

Of the 401 households, 227 (57.2%) had either 1 or 2 members. 120 (30.2%) of the households had 3 or 4 members and 50 (12.6%) had 5 or more members. In regards to the number of households with children, 163 (40.8%) had children under the age of 21 living in the household and 82 (20.6%) of the households had children in the household less than 6 years of age.

### *Marital Status*

Among the 397 respondents who reported on their marital status, 183 (46.1%) were married, 91 (22.9%) were single, 64 (16.1%) were widowed and 59 (14.9%) were divorced or separated.

### *Education*

Among the households surveyed, 101 respondents (25.9%) had less than a 12<sup>th</sup> grade education, 159 (40.8%) had a 12<sup>th</sup> grade education, and 130 (33.3%) had more than a 12<sup>th</sup> grade education.

### *Household Income*

Household income was based on the 2000 US Department of Health and Human Services Poverty Guidelines. Among the 300 respondents who provided information on annual household income, 78 (26.0%) reported total household incomes that were less than 100% of the Federal Poverty Level (FPL), 83 (27.7%) reported incomes between 100-185% of the FPL, 55 (18.3%) reported incomes between 185-250% of the FPL, and 84 (28.0%) reported incomes greater than

250% of the FPL. In summary, more than two-thirds of our sample had total household incomes of less than 250% of the FPL.

### *Employment Status*

Employment status was assessed for each household; households with only retired adults were excluded (n = 83). ‘Employed’ was defined as having at least one adult in the household who was working. Among the 316 households which had at least one adult who was not retired, 253 (80.1%) were employed and 63 (19.9%) were unemployed.

### *Program Participation*

Survey respondents were asked if they or any member of their household had participated in certain programs during the preceding 12 months. The number of households participating in those programs is as follows:

Food Stamp Program	68	(17.1%)
Family Independence Program (FIP)	20	(5.1%)
Women, Infants and Children’s Program (WIC)	41	(10.4%)
Meals on Wheels	7	(1.8%)
Senior Mealsite Program	14	(3.5%)
SERVE Program	7	(1.8%)
Food pantry or soup kitchen	38	(9.5%)

Participation in some of the federally funded programs was also assessed by income status. 39 (50.6%) of 77 households with total annual household incomes < 100% of the FPL indicated participation in the Food Stamp Program during the preceding 12 months; 8 (10%) of 81 households with incomes between 100 –185% of the FPL indicated participation. 11 (33.3%) of 33 households with children and < 100% of the FPL indicated participation in the Family Independence Program. Among the 37 households with children < 6 years of age and total annual household incomes < 185% of the FPL, 23 (62.2%) indicated participation in the Women, Infants, and Children’s Program.

**Table1:  
Profile of Respondents to the Food Security Survey  
by Selected Demographics, Rhode Island, 2000**

<b>Characteristics</b>	<b>Total</b>	<b>Percent</b>
<b>Total Respondents</b>	401	
<b>Age</b>		
18-24	43	11.2
25-49	184	47.8
50-64	62	16.1
65+	96	24.9
Total	385	100.0
<b>Race</b>		
White	258	71.1
Black/African American	52	14.3
Asian	10	2.8
Native American	6	1.7
Other	37	10.2
Total	363	100.0
<b>Ethnicity</b>		
Hispanic/Latino	69	18.3
Non-Hispanic/Latino	309	81.7
Total	378	100.0
<b>Marital Status*</b>		
Married	183	46.1
Single	214	53.9
Total	397	100.0
<b>Household Size</b>		
1-2	227	57.2
3-4	120	30.2
5-9	50	12.6
Total	397	100.0
<b>Households with Children</b>		
Yes	163	40.8
No	237	59.3
Total	400	100.0
<b>with Children Aged &lt;6</b>		
Yes	82	20.6
No	317	79.4
Total	399	100.0
<b>Education</b>		
<12th	101	25.9
12th	159	40.8
>12th	130	33.3
Total	390	100.0

**Table1 (continued):  
Profile of Respondents to the Food Security Survey  
by Selected Demographics, Rhode Island, 2000**

Characteristics	Total	Percent
<b>Federal Poverty Level</b>		
<100%	78	26.0
100-185%	83	27.7
185-250%	55	18.3
250-350%	45	15.0
350-500%	21	7.0
>500%	18	6.0
Total	300	100.0
<b>Employed*</b>		
Yes	253	80.1
No	63	19.9
Total	316	100.0
<b>Family Independence Program</b>		
Yes	20	5.1
No	374	94.9
Total	394	100.0
<b>Food Stamp Program</b>		
Yes	68	17.1
No	330	82.9
Total	398	100.0
<b>WIC Program</b>		
Yes	41	10.4
No	352	89.6
Total	393	100.0
<b>Food Pantry</b>		
Yes	38	9.5
No	362	90.5
Total	400	100.0
<b>Meals on Wheels</b>		
Yes	7	1.8
No	389	98.2
Total	396	100.0
<b>Senior Mealsite Program</b>		
Yes	14	3.5
No	381	96.5
Total	395	100.0
<b>SERVE Program</b>		
Yes	7	1.8
No	388	98.2
Total	395	100.0

\*Notes: Marital Status: "Married" = married or living with a partner; "Single" = single, divorced, widowed or separated; Employment = at least one adult in household working; households with only retired persons were excluded.

Source: Rhode Island Food Security Survey, Division of Family Health, RI Department of Health

## Results

Among the 401 households surveyed, 301 (75.1%) were food secure and 100 (24.9%) were food insecure. Specifically, 57 (14.2%) of the total households were food insecure *without* hunger and 43 (10.7%) were food insecure *with* moderate or severe hunger (Figure 1).

### *Food Insecurity Related to Sociodemographic Characteristics*

Table 2 summarizes the sociodemographic characteristics relative to food security status.

#### *Age*

Age was not a significant factor for food insecurity. The average age of the food secure group was 49 years and the average age of the food insecure group was 44 years. Households where the respondents were 65 years and older had a lower prevalence of food insecurity (15.6%) compared to the other age categories: 18-24 years (32.6%), 25-49 (27.7%), 50-64 (30.6%); however, this difference was not statistically significant.

#### *Race/Ethnicity*

There were no statistically significant differences in food security status among the racial groups, but there were significant differences between those of Hispanic/Latino ethnicity and those who were not of Hispanic/Latino ethnicity. Of the 69 households where the household heads identified themselves as Hispanic, 29 (42.0%) were food insecure, compared to 67 (21.7%) of the 309 household heads who were not of Hispanic/Latino ethnicity ( $p < .001$ ) (Figure 2).

#### *Household Size*

Households with 5 or more members were more likely to be food insecure as households with less than 5 members. 38.0% of the households with 5 or more members were food insecure compared to 21.6% of households with 1-2 members and 25.0% of households with 3-4 members ( $p < .05$ ) (Figure 3). The prevalence of food insecurity was significantly higher when there was only 1 adult compared to 2 or more adults in the household. 36.4% of households with just 1 adult were food insecure compared to 16.9% of households with 2 adults and 17.5% with 3 or more adults ( $p < .001$ ).

#### *Marital Status*

There were significant differences in food security status among the marital status categories. In general, 17.5% of married households were food insecure compared to 30.8% of non-married households ( $p < .002$ ). The percentage of non-married households that were food insecure are 29.7% (single), 25% (widowed) and 39% (divorced/separated) ( $p < .005$ ) (Figure 2).

#### *Children*

Among the 100 food insecure households determined in this survey, 52 (52%) were households with children. There was a difference in food security between households with children and households without children. Of the 163 households with children, 52 (31.9%)

were food insecure compared to 48 (20.3%) of the 237 households with no children ( $p < .008$ ). Households with children  $< 6$  years of age were almost twice as likely to be food insecure compared to households with no children  $< 6$  years of age. Of the 82 households with children  $< 6$  years of age, 32 (39.0%) were food insecure compared with 21.5% of the households with no children  $< 6$  years of age ( $p < .001$ ) (Figure 2).

Children from single headed households were almost twice as likely to be food insecure compared to children in married households. 42.0% of single headed households with children were food insecure compared to 23.3% of households with married couples and children ( $p < .01$ ) (Figure 2).

### ***Education***

The higher the education level of the household head, the less likely the household was to be food insecure.

- Of the 101 households where the head had  $< 12^{\text{th}}$  grade education, 39 (38.6%) were food insecure.
- Of the 159 households where the head had graduated high school, 40 (25.2%) were food insecure.
- Of the 130 households where the head had  $> 12^{\text{th}}$  grade education, 19 (14.6%) were food insecure ( $p < .001$ ) (Figure 2).

### ***Income***

Households with annual incomes less than 100% the FPL were more than 3 times as likely to be food insecure as households with incomes between 100 – 185% the FPL and more than 10 times as likely to be food insecure as household with incomes  $> 250\%$  the FPL ( $p < .001$ ).

Of the 78 households with incomes less than 100% the FPL, 49 (62.8%) were food insecure. This compares to 20.5% of households with incomes between 100-185% the FPL, 7.3% of households with incomes between 185-250% of the FPL and 6.0% of households with incomes  $> 250\%$  of the FPL (Figure 3).

### ***Employment Status***

‘Employed households’ was defined as households where at least one adult was working. Households with only retired adults were excluded ( $n = 83$ ). Of the 316 households with at least one non-retired adult, 253 were employed and 63 were unemployed. There was a significant difference ( $p < .001$ ) in food security status between those who were employed and unemployed. More than half (52.4%) of the “unemployed” households were food insecure compared with 21.3% of the employed households (Figure 3).

### ***Food and Nutrition Program Participation***

There was a statistically significant correlation between households that participated in certain food and nutrition related programs and the prevalence of food insecurity. The prevalence of food insecurity was significantly greater for households that participated in the Family Independence Program (75.0%) compared to those households that did not participate (21.9%). 61.8% of the households that participated in the Food Stamp Program were food insecure compared to 17.3% who did not participate. 56.1% of the households that participated in the WIC Program were food insecure compared to 21.3% that did not participate. 68.4% of

households indicating use of a food pantry or soup kitchen were food insecure compared to 20.4% who did not use any emergency food resources ( $p < .001$  for all).

The difference in the prevalence of food insecurity was also assessed by program participation in the 37 households that had children  $< 6$  years of age and were  $< 185\%$  of the FPL. For these 37 households there was no significant difference in the prevalence of food insecurity if they did or did not participate in either the WIC Program or the Food Stamp Program.

**Table 2:  
Prevalence of Food Insecurity Among those Living in Poverty Areas\*  
by Selected Demographics, Rhode Island, 2000**

Characteristics	Total	Percent	Food Insecure		
			n	Percent	p-value
<b>Total Respondents</b>	401	100.0	100	24.9	
<b>Age</b>					
17-24	43	11.2	14	32.6	
25-49	184	47.8	51	27.7	
50-64	62	16.1	19	30.6	
65+	96	24.9	15	15.6	
Total	385	100.0	99		
<b>Race*</b>					
White	258	71.1	51	19.8	
Black/African American	52	14.3	14	26.9	
Asian	10	2.8	4	40.0	
Native American	6	1.7	2	33.3	
Other	37	10.2	11	29.7	
Total	363	100.1	82		
<b>Ethnicity</b>					
Hispanic/Latino	69	18.3	29	42.0	0.001
Non-Hispanic/Latino	309	81.7	67	21.7	
Total	378	100.0	96		
<b>Marital Status*</b>					
Married	183	46.1	32	17.5	
Single	214	53.9	66	30.8	0.002
-Single	91	22.9	27	29.7	
-Divorced/Separated	59	14.9	23	39.0	0.005
-Widowed	64	16.1	16	25.0	
Total	397	100.0	98		
Married with Children	90	56.6	21	23.3	
Single with Children	69	43.4	29	42.0	0.01
Total	159	100.0	50		
<b>Household Size</b>					
1-2	227	57.2	49	21.6	
3-4	120	30.2	30	25.0	
5-9	50	12.6	19	38.0	0.05
Total	397	100.0	98		
<b>Households with Children</b>					
Yes	163	40.8	52	31.9	0.008
No	237	59.3	48	20.3	
Total	400	100.0	100		
<b>with Children Aged &lt;6</b>					
Yes	82	20.6	32	39.0	0.001
No	317	79.4	68	21.5	
Total	399	100.0	100		
<b>Education</b>					
<12th	101	25.9	39	38.6	0.001
12th	159	40.8	40	25.2	
>12th	130	33.3	19	14.6	
Total	390	100.0	98		

**Table 2 (continued):  
Prevalence of Food Insecurity Among those Living in Poverty Areas  
by Selected Demographics, Rhode Island, 2000**

Characteristics	Total	Percent	Food Insecure		
			n	Percent	p-value
<b>Federal Poverty Level</b>					
<100%	78	26.0	49	62.8	0.001
100-185%	83	27.7	17	20.5	
185-250%	55	18.3	4	7.3	
>250%	84	28.0	5	6.0	
Total	300	100.0	75		
<b>Employed*</b>					
Yes	253	80.1	54	21.3	
No	63	19.9	33	52.4	0.001
Total	316	100.0	87		
<b>Family Independence Program</b>					
Yes	20	5.1	15	75.0	0.001
No	374	94.9	82	21.9	
Total	394	100.0	97		
<b>Food Stamp Program</b>					
Yes	68	17.1	42	61.8	0.001
No	330	82.9	57	17.3	
Total	398	100.0	99		
<b>WIC Program</b>					
Yes	41	10.4	23	56.1	0.001
No	352	89.6	75	21.3	
Total	393	100.0	98		
<b>Food Pantry Use</b>					
Yes	38	9.5	26	68.4	0.001
No	362	90.5	74	20.4	
Total	400	100.0	100		
<b>Meals on Wheels</b>					
Yes	7	1.8	2	28.6	NS
No	389	98.2	97	24.9	
Total	396	100.0	99		
<b>Senior Mealsite Program</b>					
Yes	14	3.5	3	21.4	NS
No	381	96.5	97	25.5	
Total	395	100.0	100		
<b>SERVE Program</b>					
Yes	7	1.8	3	42.9	NS
No	388	98.2	96	24.7	
Total	395	100.0	99		

\*Notes:

1) Poverty Areas = 41 poverty census tracts as defined by a factor cluster analysis of the 1990 census data; 2) Marital Status: "Married" = married or living with a partner; "Single" = single, divorced, widowed or separated; 3) Race: Numbers are too small for statistical reliability; 4) Employment = at least one adult in household working; excludes households where all adults are retired.

Source:

Rhode Island Food Security Survey, Division of Family Health, Rhode Island Department of Health

# FIGURES

Figure 1

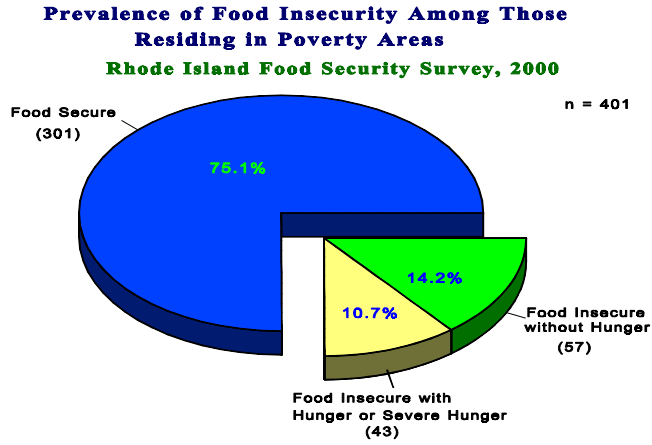


Figure 2

**Food Insecurity by Selected Characteristics**  
**Rhode Island Food Security Survey, 2000**

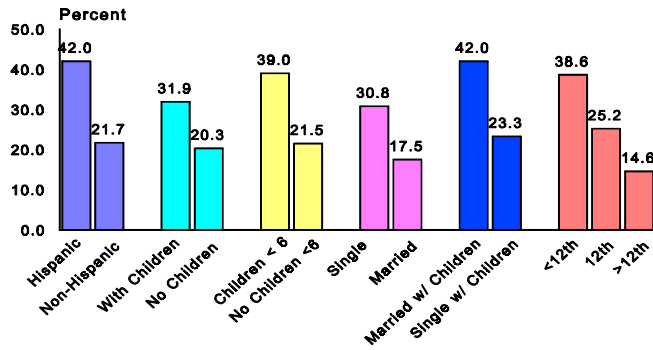
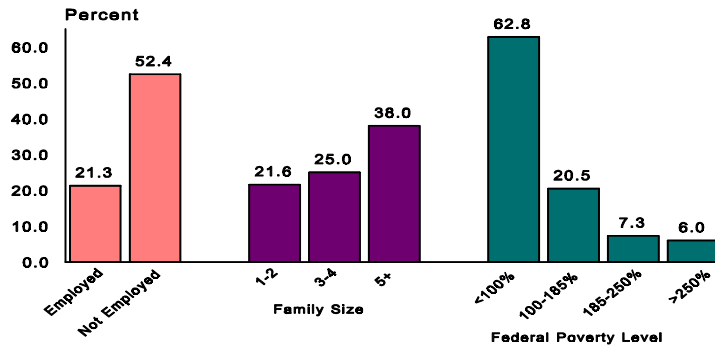


Figure 3

**Food Insecurity by Selected Characteristics**  
**Rhode Island Food Security Survey, 2000**



## Discussion

The 2000 RIFSMP report is the second annual report that estimates the prevalence of hunger and food insecurity among Rhode Islanders living in poverty areas. This project has been designed to provide policy makers, program planners, community leaders, and others with information that describes who is at risk of hunger in Rhode Island and monitors changes in the prevalence of hunger and food insecurity from year to year.

The results of the 2000 RIFSMP indicate that there has been no significant change in the overall prevalence of food insecurity from 1999 to 2000. The 1999 RIFSMP report indicated that 24.4% of the households surveyed were food insecure compared to 24.9% in 2000. There has been a slight shift, however, in the percentage of households that are 'food insecure with moderate or severe hunger.' An increase from 8.8% of total households in 1999 to 10.7% in 2000 experienced 'food insecurity with moderate or severe hunger' while the prevalence of food insecurity without hunger decreased from 15.6% of households in 1999 to 14.2% in 2000. This indicates that while the overall prevalence of food insecurity has remained relatively unchanged in the past 2 years, a slightly higher percentage of households are experiencing moderate or severe hunger.

The prevalence of hunger and food insecurity in Rhode Island can be compared to rates in other states through USDA's annual monitoring of food security nationwide. Based on the USDA report, "Prevalence of Food Insecurity and Hunger by State, 1996 – 1998" (Nord, M., et al.), it was estimated that 8.7% of *all* Rhode Islanders were food insecure and 2.6% were food insecure with moderate or severe hunger. Rhode Island ranked slightly lower than the national average for that same time period. The results of the national survey indicated that 9.7% of all US households were food insecure and 3.5% were food insecure with moderate or severe hunger.

Approximately one in four individuals in our sample were food insecure justifying both the concern and need for action to improve food security in Rhode Island. The sampling methods of our survey did not capture the homeless, or those in temporary housing/shelters, those households that have either unlisted phone numbers or no phones at all. It can be hypothesized that the prevalence estimates of food insecurity in this report underestimate the true prevalence of food insecurity in the target areas surveyed. There would be value in future research that includes these missing groups in the estimation of hunger and food insecurity in Rhode Island.

The risk factors associated with food insecurity in the 2000 RIFSMP were essentially identical to the risk factors identified in the 1999 survey. This consistency may lend more credibility to the association of these risk factors to food insecurity since they have now been observed for 2 consecutive years. Those risk factors that had a statistically significant association with food insecurity in both 1999 and 2000 include:

- Unemployment
- Poverty

- Hispanic ethnicity
- Single parent household
- Household with children < 6 years of age
- Household head with < a 12<sup>th</sup> grade education
- Household with 5 or more individuals

The 2000 RIFSMP survey asked questions regarding participation in various food and nutrition related programs that were not asked in the 1999 survey. One of the observations in this area was that only 68.4% of the households that reported using a food pantry or soup kitchen at any time during the year were actually ‘food insecure.’ It would seem reasonable to expect that all of these households should be ‘food insecure.’ Although a certain explanation for this apparent discrepancy cannot be provided, the possibility should be considered that these households in question consider ‘food pantries and soup kitchens’ to be a reliable source of food and nutritious meals which was reflected in their responses to the survey questions.

In addressing the possible solutions to improving food security among families living in poverty, the utilization of food and nutrition programs should be examined. In this report, it was observed that a significant percentage of potentially eligible households did not participate in the Food Stamp, WIC Program or Family Independence Program. Even the SERVE Program was only utilized by a very small percentage of households that could significantly benefit from its services. This report may suggest that outreach efforts to increase participation in these programs may not only be needed to reach potentially eligible participants but may also help to reduce the prevalence of hunger and food insecurity in families living in poverty.

For the second year in a row, the results of the 2000 RIFSMP emphasize the problem of children at risk of hunger in Rhode Island. The results show that a disproportionate percentage of households with children are at risk of hunger, especially households that have children less than 6 years of age. Any efforts that are undertaken to improve food security in Rhode Island should certainly include children as a high priority.

## Terms and Definitions

The following terms and definitions that are used in this report are consistent with those established and used by the USDA and generally accepted by other organizations involved in food security and hunger.

### General Terms

**Food Security** - “Access by all people at all times to enough food for an active, healthy life. Food security includes at a minimum: (1) the ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).”

**Food Insecurity** – “Limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”

**Hunger** – “The uneasy or painful sensation caused by a lack of food. The recurrent and involuntary lack of access to food. Hunger may produce malnutrition over time.... Hunger... is a potential, although not necessary, consequence of food insecurity.”

(Anderson, S.A.)

### Household Food Security Status Categories

**Food Secure** – Households show no or minimal evidence of food insecurity.

**Food Insecure Without Hunger** - Food insecurity is evident in households’ concerns and in adjustments to household food management, including reduced quality of diets. Little or no reduction in household members’ food intake is reported.

**Food Insecure With Moderate Hunger** – Food intake for adults in the household has been reduced to an extent that it implies that adults have repeatedly experienced the physical sensation of hunger. Such reductions are not observed at this state for children in the household.

**Food Insecure With Severe Hunger** – Households with children have reduced the children’s food intake to an extent that it implies that the children have experienced the physical sensation of hunger. Adults in households with and without children have repeatedly experienced more extensive reductions in food intake at this stage.

(Hamilton, W.L., et al.)

## References

Anderson, S. A. (ed.), "Core Indicators of Nutritional State for Difficult-to-Sample Populations." *Journal of Nutrition* 120 (11S): 1557-1600, 1990. A report prepared by the Life Sciences Research Office, Federation of American Societies for Experimental Biology for the American Institute of Nutrition under Cooperative Agreement with the Office of Disease Prevention and Health Promotion, Department of Health and Human Services.

Hamilton, W.L., et al., "Household Food Security in the United States in 1995: Summary Report of the Food Security Measurement Project." Alexandria, VA: U.S. Department of Agriculture, Food and Consumer Service, September 1997.

Nord, M., et al., "Prevalence of Food Insecurity and Hunger by State, 1996 – 1998." U.S. Department of Agriculture, Economic Research Service, Food Assistance and Nutrition Research Report No. 2, September 1999.

Price, C., et al., " Household Food Security in the United States: Guide to Implementing the Core Food Security Module." Alexandria, VA: U.S. Department of Agriculture, Food and Consumer Service, September 1997.

Rhode Island Department of Health, Office of Health Statistics. "Factor Cluster Analysis of the 1990 Census for Rhode Island."

Rhode Island Department of Health, Division of Family Health. " Rhode Island Food Security Monitoring Project, 1999 Report.

## Acknowledgements

We would like to recognize and thank the following individuals for their efforts and commitment to this project.

Our survey interviewer from the Division of Family Health, **Margarita Jaramillo**.

Our survey interviewer from the University of Rhode Island Hunger Center, **Kristy Arnold**

Our survey interviewer from Providence College, **Erin Newman**.

Our survey interviewers from the RI Community Food Bank, **Donna La Plante and Michael Smith**.

Our survey interviewer from Johnson & Wales University Feinstein Community Service Center, **Laura Sidlavskas**.

**Rachel Cain, Hanna Kim and Rose Monti** from the Division of Family Health's Data and Evaluation Unit for their data entry and analysis.

**William Hollinshead**, Medical Director of the Division of Family Health, for his interest, support, and commitment to actively involve the RI Department of Health in efforts to assess and improve food insecurity in Rhode Island.

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