EXPANDED NATIONAL NUTRITION SURVEY: 2019 RESULTS

HEALTH AND NUTRITIONAL STATUS OF FILIPINO ADULTS, 20-59 YEARS OLD

What does the 2019 data say: Are we on track?

YES  NO
Health and Nutritional Status of Filipino Adults, 20-59 years old

CHONA F. PATALEN
Senior Science Research Specialist
Nutritional Assessment and Monitoring Division
2020 National Nutrition Summit | August 4, 2020
Trends in the Prevalence of Chronic Energy Deficiency and Overweight and Obesity among Adults, 20 years old and above, 1993-2019

- **Prevalence (%)**
- **Based on the WHO Body Mass Index (BMI) cut-off points**
Prevalence of Chronic Energy Deficiency, Overweight and Obesity among ADULTS, 20-59 years old

* significantly different at 5% level of significance between 2015 and 2018, but not between 2018 and 2019
Trends in the Prevalence of High Waist Circumference (WC)° among Adults, 20 years old & above, 2003-2019

° High WC is ≥102 cm (>40in) for males or ≥88 cm (>34in) for females

° High WHR is ≥1.00 for males or ≥0.85 for females
Anemia among ADULTS, 20-59 years old, by sex

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>9.3</td>
<td>8.3</td>
<td>7.2</td>
</tr>
<tr>
<td>Male</td>
<td>6.0</td>
<td>5.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Female</td>
<td>12.7</td>
<td>11.2</td>
<td>10.0</td>
</tr>
</tbody>
</table>
Anemia among ADULTS, 20-59 years old, by place of residence and wealth quintile

Prevalence (%) 2018 2019
Rural 9.0 7.4
Urban 7.6 6.9

Poorest 9.0 7.3
Poor 8.6 6.4
Middle 8.5 7.8
Rich 8.2 6.9
Richest 7.1 8.1

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DOST-FNRI
Trend in the Prevalence of Elevated Blood Pressure among Adults, 20 years old and above, 1993-2019

Based on a single-visit blood pressure measurement, systolic blood pressure of 140 mmHg or higher and/or diastolic pressure of 90 mmHg or higher (JNC VII, 2004)
Elevated Blood Pressure among ADULTS, 20-59 years old

* significantly different at 5% level of significance between 2015 and 2018, and between 2018 and 2019

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Elevated Blood Pressure among ADULTS, 20-59 years old, by sex and place of residence

*significantly different at 5% level of significance*
Elevated Blood Pressure among ADULTS, 20-59 years old, by wealth quintile

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>2015</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>16.5</td>
<td>13.1</td>
<td>11.1</td>
</tr>
<tr>
<td>Poor</td>
<td>19.1</td>
<td>15.1</td>
<td>12.6</td>
</tr>
<tr>
<td>Middle</td>
<td>21.0</td>
<td>16.5</td>
<td>14.7</td>
</tr>
<tr>
<td>Rich</td>
<td>23.1</td>
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<tr>
<td>Richest</td>
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<td>15.8</td>
</tr>
</tbody>
</table>

* significantly different at 5% level of significance
Trend in the Prevalence of High Fasting Blood Sugar among Adults, 20 years old and above, 1998-2019

- **High FBS: ≥126 mg/dL**
- **Impaired fasting glucose: 110-125 mg/dL**
Trend in the Prevalence of High Fasting Blood Sugar among Adults, 20 years old and above, 1998-2019

- High FBS: ≥126 mg/dL
- Impaired fasting glucose: 110-125 mg/dL

Prevalence (%)
Trend in the Prevalence of High Fasting Blood Sugar among Adults, 20 years old and above, 1998-2019

Prevalence (%)

- High FBS: ≥126 mg/dL
- Impaired fasting glucose: 100-125 mg/dL

Prevalence (%) from 1998 to 2019:
- 1998: 3.9%
- 2000: 3.4%
- 2003: 4.8%
- 2005: 7.4%
- 2007: 13.5%
- 2013: 26.4%
- 2019: 29.1%

Prevalence (High FBS) from 2008 to 2019:
- 2008: 7.9%
- 2010: 8.2%

High FBS: ≥126 mg/dL
Impaired fasting glucose: 100-125 mg/dL
High Fasting Blood Sugar among ADULTS, 20-59 years old

Prevalence (%) by Age Group:

- **ALL**
  - 2013: 4.7
  - 2018: 6.7
  - 2019: 7.1
  - *significantly different at 5% level of significance*

- **20-29 y**
  - 2013: 1.0
  - 2018: 1.6
  - 2019: 1.7

- **30-39 y**
  - 2013: 3.2
  - 2018: 4.7
  - 2019: 4.5

- **40-49 y**
  - 2013: 6.3
  - 2018: 8.6
  - 2019: 9.5

- **50-59 y**
  - 2013: 10.6
  - 2018: 12.9
  - 2019: 13.9

*significantly different at 5% level of significance*
High Fasting Blood Sugar among ADULTS, 20-59 years old, by sex and place of residence

* significantly different at 5% level of significance
High Fasting Blood Sugar among ADULTS, 20-59 years old, by wealth quintile

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<th>2019</th>
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<tbody>
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<td>5.7</td>
<td>5.4</td>
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*significantly different at 5% level of significance*
Current Smoking° among Adults, 20 years old and above, 1998-2019

° Are those who either smoke on a “daily” basis (at least one cigarette a day) or on a regular/occasional basis (at least weekly or less often than weekly)

Current Smoking among ADULTS, 20-59 years old

* significantly different at 5% level of significance
Current Smoking among ADULTS, 20-59 years old, by sex and place of residence

* significantly different at 5% level of significance
Current Smoking among ADULTS, 20-59 years old, by wealth quintile
Binge Drinking° among currently drinking ADULTS, 20-59 years old

° Drinking 5 or more standard drinks in a row for men or 4 or more standard drinks in a row for women
Binge Drinking among currently drinking ADULTS, 20-59 years old, by sex and place of residence

* significantly different at 5% level of significance
Binge Drinking among currently drinking ADULTS, 20-59 years old, by wealth quintile

<table>
<thead>
<tr>
<th>Wealth Quintile</th>
<th>2015</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorest</td>
<td>55.5</td>
<td>60.6</td>
<td>53.1</td>
</tr>
<tr>
<td>Poor</td>
<td>59.3</td>
<td>57.8</td>
<td>54.2</td>
</tr>
<tr>
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<td>59.6</td>
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<tr>
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<td>54.9</td>
<td>52.2</td>
</tr>
<tr>
<td>Richest</td>
<td>50.0</td>
<td>48.4</td>
<td>52.1</td>
</tr>
</tbody>
</table>
Insufficiently physically active°
ADULTS, 20-59 years old

° A person not meeting any of the following criteria:
  - 75 mins of vigorous-intensity physical activity per week (≥ 3 days of vigorous-intensity activity of at least 20 mins per day) OR
  - 150 mins of moderate-intensity physical activity per week (≥ 5 days of moderate-intensity activity or walking of at least 30 mins per day) OR
  - an equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes per week

Insufficiently physically active ADULTS, 20-59 years old, by sex and place of residence
Insufficiently physically active ADULTS, 20-59 years old, by wealth quintile

<table>
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<tr>
<th>Wealth Quintile</th>
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<th>2018</th>
<th>2019</th>
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<tbody>
<tr>
<td>Poorest</td>
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<td>29.3</td>
<td>31.1</td>
</tr>
<tr>
<td>Poor</td>
<td>34.4</td>
<td>34.1</td>
<td>33.6</td>
</tr>
<tr>
<td>Middle</td>
<td>40.5</td>
<td>41.6</td>
<td>36.4</td>
</tr>
<tr>
<td>Rich</td>
<td>44.6</td>
<td>47.2</td>
<td>40.1</td>
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<tr>
<td>Richest</td>
<td>50.4</td>
<td>51.3</td>
<td>46.7</td>
</tr>
</tbody>
</table>

*significantly different at 5% level of significance
Summary (Adults)

- Overweight and obesity slightly declined in 2019; but still, 1 in every 3 adults were overweight or obese.
- Android-type of obesity (high WC and high WHR) also slightly declined in 2019.
- Anemia declined, particularly among adults from rural areas and those belonging to the poorest and poor wealth quintiles.
- Elevated blood pressure declined further.
- Smoking declined steadily and evident among young adults.
- Physical inactivity also slightly declined.
Summary (Adults)

- High fasting blood sugar continues to increase
- Impaired fasting glucose (110-125 mg/dL) or prediabetes increased more than three-fold over the past decade
- Chronic energy deficiency (CED) increased in 2019
- More than half of current drinkers were still engaged in binge drinking
Health and Nutritional Status of Filipino Elderly, 60 years old and above
Prevalence of Chronic Energy Deficiency, Overweight and Obesity among ELDERLY, 60 years & over

- Overweight: 13.4% (2015), 24.7% (2018), 22.7% (2019)
- Obese: 4.8% (2015), 6.3% (2018), 5.8% (2019)

* significantly different at 5% level of significance between 2015 and 2018, but not between 2018 and 2019
High Waist Circumference among Elderly MALES, 60 years & over

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>3.3</td>
<td>4.8</td>
<td>4.4</td>
</tr>
<tr>
<td>60-69 y</td>
<td>3.5</td>
<td>5.0</td>
<td>4.9</td>
</tr>
<tr>
<td>70-79 y</td>
<td>2.9</td>
<td>4.9</td>
<td>3.8</td>
</tr>
<tr>
<td>80 y &amp; over</td>
<td>2.7</td>
<td>0.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Prevalence (%)
High Waist Circumference among Elderly MALES, by place of residence and wealth quintile

* significantly different at 5% level of significance

*Poorest*
2015: 2.1
2018: 4.7
2019: 7.5

*Poor*
2015: 2.7
2018: 3.6
2019: 5.9

*Middle*
2015: 1.5
2018: 4.7
2019: 3.0

*Rich*
2015: 2.0
2018: 1.0
2019: 2.4

*Richest*
2015: 0.5
2018: 1.0
2019: 2.6

*High Waist Circumference among Elderly MALES, by place of residence and wealth quintile

* significantly different at 5% level of significance

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High Waist Circumference among Elderly FEMALES, 60 years & over

Prevalence (%)

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>22.2</td>
<td>27.9</td>
<td>26.1</td>
</tr>
<tr>
<td>60-69 y</td>
<td>24.2</td>
<td>25.8</td>
<td>27.9</td>
</tr>
<tr>
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<td>20.0</td>
<td>23.8</td>
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</tr>
<tr>
<td>80 y &amp; above</td>
<td>15.8</td>
<td>20.6</td>
<td>22.5</td>
</tr>
</tbody>
</table>

* significantly different at 5% level of significance
High Waist Circumference among Elderly FEMALES, by place of residence and wealth quintile

*significantly different at 5% level of significance*
High Waist-Hip Ratio among Elderly MALES, 60 years old & over

Prevalence (%)
High Waist-Hip Ratio among Elderly MALES, by place of residence and wealth quintile
High Waist-Hip Ratio among Elderly FEMALES, 60 years & over

*significantly different at 5% level of significance
High Waist-Hip Ratio among Elderly FEMALES, by place of residence and wealth quintile

* significantly different at 5% level of significance
Anemia among ELDERLY, 60 years & over, by sex

<table>
<thead>
<tr>
<th></th>
<th>ALL</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>20.8</td>
<td>23.0</td>
<td>19.1</td>
</tr>
<tr>
<td>2018</td>
<td>20.2</td>
<td>23.3</td>
<td>17.8</td>
</tr>
<tr>
<td>2019</td>
<td>16.9</td>
<td>17.4</td>
<td>16.6</td>
</tr>
</tbody>
</table>
Anemia among ELDERLY, by place of residence and wealth quintile

<table>
<thead>
<tr>
<th>Place of Residence</th>
<th>Rural</th>
<th>Urban</th>
<th>Poorest</th>
<th>Poor</th>
<th>Middle</th>
<th>Rich</th>
<th>Richest</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>21.7</td>
<td>17.8</td>
<td>19.8</td>
<td>14.8</td>
<td>18.5</td>
<td>16.8</td>
<td>17.4</td>
</tr>
<tr>
<td>2019</td>
<td>24.1</td>
<td>18.3</td>
<td>21.1</td>
<td>16.8</td>
<td>21.8</td>
<td>18.5</td>
<td>14.8</td>
</tr>
</tbody>
</table>
Elevated Blood Pressure among ELDERLY, 60 years & over

- Based on a single-visit blood pressure measurement, systolic blood pressure of 140 mmHg or higher and/or a diastolic pressure of 90 mmHg or higher
- 7th Joint National Committee on detection and treatment of high blood pressure (JNC VII, 2004)
Elevated Blood Pressure among the ELDERLY, by sex and place of residence

* significantly different at 5% level of significance
Elevated Blood Pressure among ELDERLY, by wealth quintile

* significantly different at 5% level of significance
High Fasting Blood Sugar among ELDERLY, 60 years & over

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
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</tr>
</tbody>
</table>
High Fasting Blood Sugar among ELDERLY, by sex and place of residence

*significantly different at 5% level of significance*
High Fasting Blood Sugar among ELDERLY, by wealth quintile

Poorest: 2015 - 6.0%, 2018 - 8.5%, 2019 - 8.1%
Poor: 2015 - 10.3%, 2018 - 9.4%, 2019 - 11.7%
Middle: 2015 - 9.0%, 2018 - 15.3%, 2019 - 12.8%
Rich: 2015 - 12.5%, 2018 - 14.5%, 2019 - 15.4%
Richest: 2015 - 16.0%, 2018 - 20.7%, 2019 - 20.7%
Current Smoking° among ELDERLY, 60 years & over old

° Are those who either smoke on a “daily” basis (at least one cigarette a day) or on a regular/occasional basis (at least weekly or less often than weekly)


* significantly different at 5% level of significance

Current Smoking among ELDERLY, by sex and place of residence

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>32.0</td>
<td>9.4</td>
</tr>
<tr>
<td>2018</td>
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<td>28.6</td>
<td>7.8</td>
</tr>
</tbody>
</table>

*significantly different at 5% level of significance*
Current smoking among ELDERLY, by wealth quintile

Poorest | Poor | Middle | Rich | Richest
--- | --- | --- | --- | ---
25.1 | 24.4 | 19.2 | 16.2 | 12.2
23.0 | 23.8 | 18.2 | 15.8 | 14.6
20.1 | 16.2 | 16.2 | 13.6 | 11.1
16.2 | 14.6 | 13.6 | 11.5

Proportion (%)
Binge Drinking° among currently drinking ELDERLY, 60 years & over

° Drinking 5 or more standard drinks in a row for men or 4 or more standard drinks in a row for women

![Chart showing binge drinking proportions among elderly]
Binge Drinking among currently drinking ELDERLY, by sex and place of residence

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>50.0</td>
<td>37.7</td>
</tr>
<tr>
<td>2018</td>
<td>50.4</td>
<td>21.1</td>
</tr>
<tr>
<td>2019</td>
<td>49.7</td>
<td>23.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>49.4</td>
<td>44.6</td>
</tr>
<tr>
<td>2018</td>
<td>48.0</td>
<td>41.2</td>
</tr>
<tr>
<td>2019</td>
<td>46.5</td>
<td>43.9</td>
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Binge Drinking among currently drinking ELDERLY, by wealth quintile

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Insufficiently physically active°
ELDERLY, 60 years & over

A person not meeting any of the following criteria:
- 75 mins of vigorous-intensity physical activity per week (≥ 3 days of vigorous-intensity activity of at least 20 mins per day) OR
- 150 mins of moderate-intensity physical activity per week (≥ 5 days of moderate-intensity activity or walking of at least 30 mins per day) OR
- an equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes per week

Insufficiently physically active ELDERLY, by sex and place of residence

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>42.9</td>
<td>59.9</td>
<td>47.9</td>
<td>58.5</td>
</tr>
<tr>
<td>2018</td>
<td>44.7</td>
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Insufficiently physically active ELDERLY, by wealth quintile

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</tbody>
</table>
Summary (Elderly)

- Overweight and obesity, as well as android-type of obesity (high WC and high WHR) slightly declined in 2019.
- Anemia declined in 2019, and this is to some extent notable among males and those belonging to the poorest and poor wealth quintiles.
- Physical inactivity also slightly declined.
Chronic energy deficiency slightly increased in 2019

Binge drinking among currently drinking elderly also slightly increased, this is evident to some extent in females

Elevated blood pressure and high fasting blood sugar did not differ after one year, though rates were high among the elderly

One in every three (34.4%) elderly had elevated blood pressure and 13.7% had high fasting blood sugar

Proportion of current smokers did not change
Team 1  
Team 3  
Team 5  
Team 7  
Team 2  
Team 4  
Team 6  
Team 8
Thank you!!!