Statistics for Nursing A Practical Approach 3rd edition Heavey Test Bank

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Statistics for Nursing: A Practical Approach, Third Edition

Elizabeth Heavey

Answer Key for Even-Numbered Review Questions

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Chapter 1 Review Questions

1. D

2. D

3. A

4. C

5. C

6. A

7. Preoperative blood pressure

8. Postoperative hematocrit

9. Answers may vary—actual blood pressure-ratio, lab reported hematocrit-ratio, and so on.

10. Transfusion status

11. Depression

12. Answers may vary: transfusion status, yes/no, nominal, Beck's depression scale, interval, and so on.

13. Answers may vary.

14. Ordinal

15. Use of interval data, such as Beck's depression scale

16. Increases analysis options

17. Quantitative

18. Answers may vary, including that this group may have realized they had a grave health risk and are simply happy to be alive.

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19. Answers may vary, including IQ, school enrollment, crime, pregnancy, hematocrit, learning disabilities, growth, hearing, and behavior.

20. Answers will vary.

21. Answers will vary.

22. Lead level

23. Answers may vary and include, “It requires a blood draw,” “There are different testing mechanisms,” “The level may change depending on when the exposure occurred and the time that has lapsed since then,” “Levels may differ from fingersticks versus serum draws.”

24. Answers will vary.

25. Answers will vary.

26. dosage administered

27. side effects, nausea, headache, weight gain, weight loss, lethargy, skin rash

28. nominal

29. ratio, continuous

30. ordinal, categorical

31. ratio

32. Answers will vary but may include: the lower dose because there are fewer side effects with the same outcomes, May want to know the cose, the means and frequency of the dose administration, etc.

33. signs and symptoms of neuropathy

35. Ordinal

36. Nominal

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37. Interval- Because collecting the data at a higher LOM gives you more analysis options

38. Compliance with the DASH diet

39. Stage of high blood pressure, categorical

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Chapter 2 Review Questions

1. 33%

2. 78%

3. 20%

4. Answer includes graph, with histogram columns are touching.

5. Answer includes line graph; beginning in October there is a substantial decrease in cases.

6. The flu vaccine is usually administered in the fall; so the cases that occur in August and September are before the vaccine was given.

7. Yes, there was a substantial decrease in cases beginning in October after the vaccine was administered.

8. Answer includes bar chart.

9. 27.2%, 49.4%, qualitative

10. Pregnancy, student status, mother's marital status, and employment status are nominal.

Age and number in household are ordinal.

11. Yes, age, number in household, years in school, years employed

12. Answer includes histogram graph; answers will vary, the majority of the subjects were over age 15 with about half under 17 and about half over 17.

13. No, all of the adolescents were waiting for pregnancy or family planning–related services.

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14. Nurses with three or fewer years of experience should go to the rescue team; nurses with 4–6 years of experience to the stadium team; nurses with 7–10 years of experience to the hospital team; and nurses with 11–40 years to the ICU team.

15.

Number correct on the post test	Number of patients who answered this number of questions correctly (Frequency)	Number who answered this many or less questions correctly (Cumulative Frequency)
0	1	1
1	1	2
2	2	4
3	6	10
4	5	15

16. 5/15 = 33.3%

17.

% who answered this many or less questions correctly (Cumulative %)
1/15 = 6.7%
2/15 = 13.3%
4/15 = 26.7%
10/15 = 66.7%
15/15 = 100%

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18.

	Frequency	Percent
Subjects scoring less than 70%	4	26.7%
Subjects who passed the exam (> 70%)	11	73.3%

19. A scatterplot

20. Answers may vary but may include, the person was incorrectly diagnosed, the data was incorrectly entered, the person has significantly less inflammation than his/her peers, this individual is responding better to treatment, etc.

21. A histogram better illustrates the continuum of time from one month to the next with an order involved.

22. Answers will vary but may include January is when New Years occurs and more people are right handed than left handed.

23. The winery

24. eye injuries

25.

	New Cases	Deaths	Population	Mortality Rate
Men	5	2	25,000	**0.008%**
Women	3	1	25,000	**0.004%**
White	7	3	40,000	**0.0075%**

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African American	1	0	10,000	**0**

26. Answers will vary but may include: Different skin color- melanin protects from UV, different cultures have different prevention behaviors, different exposure time, difficulties diagnosing on darker skin, differences in access to health care, etc.

27.

Age range	Frequency	Cumulative Frequency
0-5	1	1
6-10	2	3
11-15	4	7
16-20	1	8
21-25	3	11
26-30	4	15
31-35	6	21

28. Though the absolute number of deaths is higher in California the population is also substantially higher in California. When we look at the mortality rate per 100,000 we find that the death rate is substantially higher in Delaware.

29. Putting the rates rather than the absolute numbers in the bar chart helps to clearly illustrate the different mortality rates between two vastly different sizes of states.

30.)

Date	# of Cases	Cumulative Frequency Cases	# of Deaths	Cumulative Frequency Deaths

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Test Bank

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Chapter 1

1. Researchers study the impact of internalized bias on patient care. Nurses complete a survey which determines a score for their internalized bias from 0-100. Without knowing the internalized bias score, patients are asked to rank the subsequent care they receive from the nurse as poor, fair, good or exemplary. In this study your independent variable is measured at what level of measurement?
   a.) Nominal
   b.) Ordinal
   c.) Interval
   d.) Ratio

Answer: D

2. Researchers study the impact of internalized bias on patient care. Nurses complete a survey which determines a score for their internalized bias from 0-100. Without knowing the internalized bias score, patients are asked to rank the subsequent care they receive from the nurse as poor, fair, good or exemplary. In this study your dependent variable is measured at what level of measurement?
   a.) Nominal
   b.) Ordinal
   c.) Interval
   d.) Ratio

Answer: B

3. Researchers study the impact of internalized bias on patient care. Nurses complete a survey which determines a score for their internalized bias from 0-100. Without knowing the internalized bias score, patients are asked to rank the subsequent care they receive from the nurse as poor, fair, good or exemplary. In this study what type of variable is your independent variable?
   a.) Nominal
   b.) Ordinal
   c.) Continuous
   d.) Categorical

Answer: C

4. Researchers study the impact of internalized bias on patient care. Nurses complete a survey which determines a score for their internalized bias from 0-100. Without knowing the internalized bias score, patients are asked to rank the subsequent care they receive from the nurse as poor, fair, good or exemplary. In this study what is your dependent variable?
   a.) Nominal
   b.) Quantitative
   c.) Interval
   d.) Ordinal

Answer: D

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5. A study examines the relationship between interpersonal violence and health in women. They include an independent variable of exposure to violence from an intimate partner, other personal violence or both. The independent variable is measured at what level?
    a. Nominal
    b. Ordinal
    c. Interval
    d. Ratio

Answer: A

6. You are asked to answer a question about the quality of your nurse manager's interpersonal interactions with colleagues and patients as part of her annual evaluation. The options are poor, fair, strong. You know this means:
    a. The variable is poorly measured.
    b. The variable is at an interval level.
    c. The variable is at a nominal level.
    d. The variable is at an ordinal level.

Answer: D

7. You are asked to rank the quality of your nurse manager's interpersonal interactions with colleagues and patients on a Likert scale of 1-7. You know this means the data can be analyzed at what level.
    a. interval level
    b. nominal level
    c. ordinal level
    d. it cannot be analyzed because it is qualitative

Answer: A

8. You are interested in studying nursing engagement and wellbeing after the nursing licensing requirements changed in your state. You randomly select 10 hospitals and outpatient centers throughout the state and survey the 2,400 nurses that work there. The 2,400 nurses are an example of:
    a. a population
    b. a sample
    c. a quantitative cohort
    d. personal that should be excluded

Answer: B

9. You are interested in studying the discharge time for surgical patients on your service in the past three months. You determine that this data is available for all surgical patients on your service in the past three months utilizing a basic electronic medical record search. Your budget supports this work so you decide to collect data on all the patients involved. Your study includes:
    a. The population
    b. The sample
    c. The interval data
    d. All patients admitted in the past year.

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Answer: A

10. Researchers examine the impact of nonpharmacologic therapies on vasomotor symptoms. The therapies are recorded as yes or no to the use of acupuncture, exercise, relaxation, yoga, vitamin E or Omega-3 fatty acids. This is an example of what level of measurement?
    a. interval level
    b. nominal level
    c. ordinal level
    d. it cannot be analyzed because it is qualitative

Answer: B

11. Researchers examine the role of nonpharmacologic therapies on vasomotor symptom management in menopausal women. Subjects in the study are asked to keep a journal with any vasomotor symptoms they experience and how the nonpharmacologic therapies impact those symptoms. This is an example of what type of data?
    a. interval level
    b. qualitative
    c. quantitative
    d. it cannot be determined because it is only a pilot

Answer: B

12. Researchers examine the impact of Omega-3 fatty acids on vasomotor symptoms in menopausal women. Subjects in the study are given either a placebo (0g daily), 1g daily or 1.8g daily and asked to record any vasomotor symptoms they experience. The Omega-3 fatty acid variable is an example of what type of data?
    a. interval level
    b. nominal
    c. ordinal
    d. ratio

Answer: C

13. Researchers examine the impact of Omega-3 fatty acids on vasomotor symptoms in menopausal women. Subjects in the study are given either a placebo (0g daily), 1g daily or 1.8g daily and asked to record the level of the vasomotor symptoms they experience on a scale of 0-10 each day. The level of vasomotor symptoms is an example of what type of data?
    a. interval level
    b. nominal
    c. ordinal
    d. ratio

Answer: D

14. A study examines the relationship between educational preparation and scores on a cultural competency exam. Subjects included are nurses with an associate's degree,

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nurses with a baccalaureate degree, nurses with a master's degree, and nurses with a doctoral degree. In this example, educational level is the:

a. Independent variable
b. Dependent variable
c. Outcome
d. Most significant variable

Answer: A

15. A study examines the relationship between educational preparation and scores on a cultural competency exam. Subjects included are nurses with an associate's degree, nurses with a baccalaureate degree, nurses with a master's degree, and nurses with a doctoral degree. In this example, cultural competency is measured at what level?

a. Nominal
b. Ordinal
c. Interval
d. Ratio

Answer: D

16. In order for a variable to be at the interval level you know it must be:

a. Rank ordered
b. Show a difference
c. Have equal intervals
d. All of these criteria must be met

Answer: D

17. A survey asks your patient to identify his primary language. The choices are:

1.) Spanish
2.) English
3.) Arabic
4.) Other

You know this is an example of what type of variable?

a. quantitative
b. qualitative
c. ordinal
d. continuous

Answer: B

18. You are reading a study that examines the impact of stress on ulcerative colitis. What is the independent variable?

a. stress
b. ulcerative colitis
c. unable to determine
d. stress and ulcerative colitis

Answer: A

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19. You are reading a study that examines the relationship between being over age 65 and prostate cancer. Age is measured as greater than or less than 65 years. The dependent variable is:
    a. age
    b. prostate cancer
    c. ordinal
    d. nominal

Answer: B

20. Your dependent variable is measured at the ratio level. You know this also means it must be:
    a. categorical
    b. qualitative
    c. unable to determine
    d. quantitative

Answer: D

21. A researcher wishes to determine if adolescent girls are more or less likely than adolescent boys to require hospital admission for suicidal ideation. The dependent variable is:
    a. gender
    b. hospital admission for suicidal ideation
    c. ratio
    d. nominal

Answer: B

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Chapter 2

1. A nurse orientation program director is examining data about nurses in their first year of practice at her hospital. Use the table below to answer the following question.

Number of months of experience	Number of medication errors made	Cumulative Frequency of Medication Errors
1-3	6	6
4-6	17	23
7-9	12	35
10-12	10	45

During what time frame were the most medication errors made?

a. 1-3 months
b. 4-6 months
c. 7-9 months
d. 10-12 months

Answer: B

2. A nurse orientation program director is examining data about nurses in their first year of practice at her hospital. Use the table below to answer the following question.

Number of months of experience	Number of medication errors made	Cumulative Frequency of Medication Errors
1-3	6	6
4-6	17	23
7-9	12	35
10-12	10	45

What percentage of the medication errors were made in the first nine months of practice?

a. 77.8%
b. 26.7%
c. 35.0%
d. 34.3%

Answer: A

3. A nurse orientation program director is examining data about nurses in their first year of practice at her hospital. She notices that the number of medication errors increases after the three month supervised orientation ends and then slowly drops down again. The time period immediately after orientation is considered a critical juncture. What might she suggest to address this concern?

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Number of months of experience	Number of medication errors made	Cumulative Frequency of Medication Errors
1-3	6	6
4-6	17	23
7-9	12	35
10-12	5	40

a.) Changing orientation to one month
b.) Eliminating the math exam required of all nurses
c.) Requiring double signed med administration documentation through the first six months of practice
d.) Requiring all nurses to be oriented for a 15 months

Answer: C

4. Researchers examined the relationship between interpersonal violence and health in college age women. They include an independent variable of exposure to violence from an intimate partner, other personal violence or both. The researchers wish to present a table showing the frequencies for each of these exposures. What might you suggest to best display the data?
    a. Line graph
    b. Scatterplot
    c. Grouped Frequency table
    d. Bar chart

Answer: D

5. Researchers examined the relationship between interpersonal violence and health in college age women. They received 490 responses. Of those responses 89 women reported being abused at some point in their lifetime and 355 reported no history of abuse. What percentage of the sample were abused?
    a. 25.1%
    b. 18.2%
    c. 79.4%
    d. 92.0%

Answer: B

6. Researchers examined the relationship between interpersonal violence and health in college age women. Of those responses 92 women reported being abused at some point in their lifetime and 355 reported no history of abuse. 174 of the non-abused women and 58 of the abused women had a score of three or greater on the psychological distress scale. What was the cumulative frequency of scores less than three in non-abused women?
    a. 174
    b. 34

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c. 181
d. 355

Answer: C

7. A study reports the frequency of passing a cultural competency exam for nurses with an associate's degree, nurses with a baccalaureate degree, nurses with a master's degree, and nurses with a doctoral degree. If the researchers were to present this information in a table which one would you recommend?
   a. Scatter plot
   b. Bar chart
   c. Line graph
   d. Histogram

Answer: D

8. Your hospital had 317 reports of patients having allergic reactions in 2016. In 2017, you implemented the hospital wide use of latex free products and eliminated approximately 76% of the allergic reactions among patients. How many allergic reactions were reported in 2017?

   a. 76

   b. 241

   c. 300

   d. Unable to determine

Answer: A

9. Which state has the largest percentage of adults with asthma who have fair or poor health?

	Fair of Poor Health Among Adults with Asthma	**Fair or Poor Health Among Adults without Asthma**
STATE	%	%
U.S. Total*	33.1	15.9
AL	47.8	19.3
AK	25.5	12.3
AZ	34.3	17.1
AR	43.6	21.4
CA	29.1	17.0
CO	26.3	12.6

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CT	28.3	13.2

https://www.cdc.gov/asthma/asthma_stats/default.htm

a. AL
b. AZ
c. AR
d. Unable to determine
Answer: A

10. Use the following graph.

	Fair of Poor Health Among Adults with Asthma	**Fair or Poor Health Among Adults without Asthma**
STATE	%	%
U.S. Total*	33.1	15.9
AL	47.8	19.3
AK	25.5	12.3
AZ	34.3	17.1
AR	43.6	21.4
CA	29.1	17.0
CO	26.3	12.6
CT	28.3	13.2

https://www.cdc.gov/asthma/asthma_stats/default.htm

Which state has the largest number of people who are do not have asthma and live with fair to poor health?

a. AL
b. AZ
c. AR
d. Unable to determine
Answer: D

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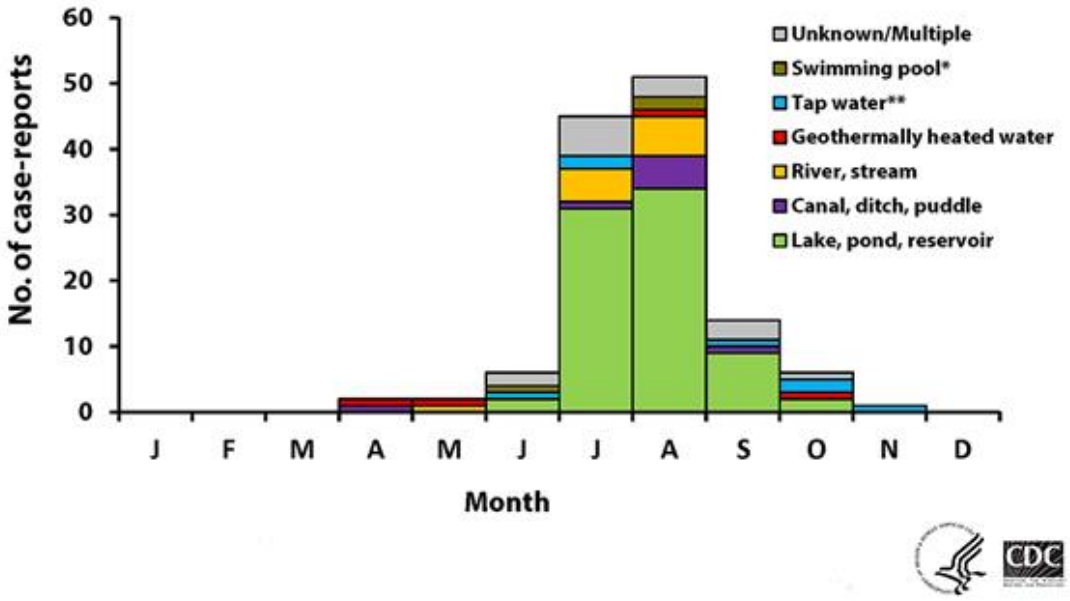
11. The following is an example of what type of graph?



https://www.cdc.gov/parasites/naegleria/graphs.html

a. bar chart
b. line graph
c. scatterplot
d. histogram

Answer: D

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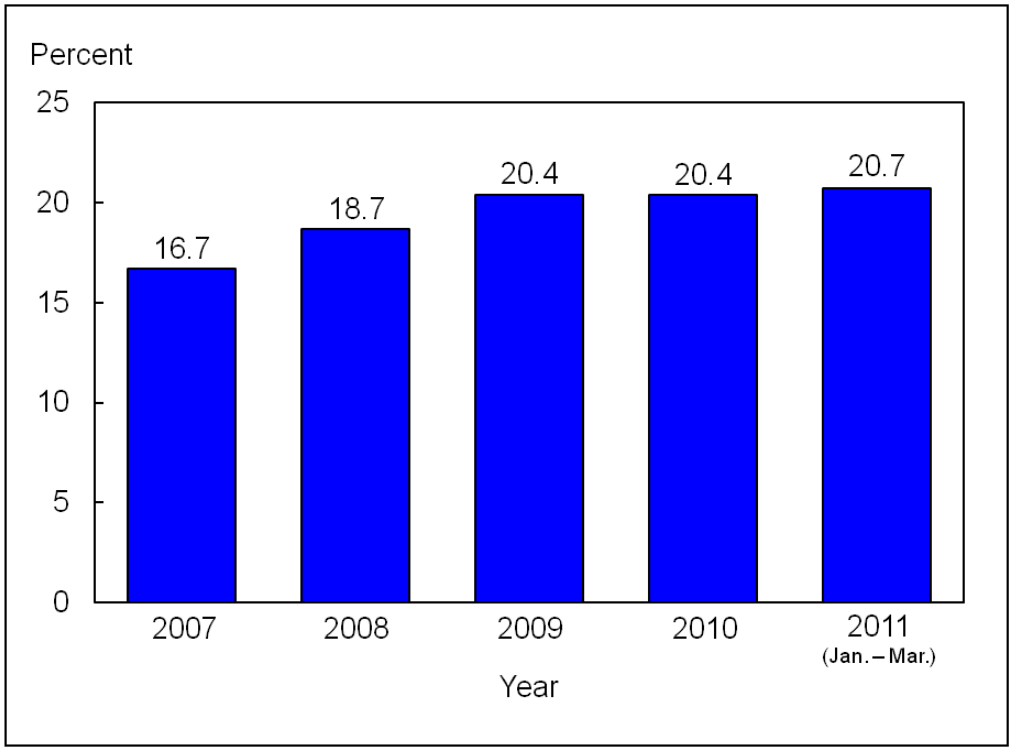
12. The following table is an example of what type of graph?



(https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201109_fig_05.PNG)

a. bar chart

b. line graph
c. scatterplot
d. histogram

Answer: A

13. Each dot on the following scatterplot indicates:

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