

Self-Perceived Oral Health Status, Untreated Decay, and Utilization of Dental Services Among Dentate Adults in the United States: NHANES 2011-2012

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OUTLINE

- Introduction
- Methods
- Results
- Conclusion



Background



Oral Health Leading Health Indicator

Increase utilization of dental services (in the past year) among children, adolescents, and adults



Exploring predictors of utilization

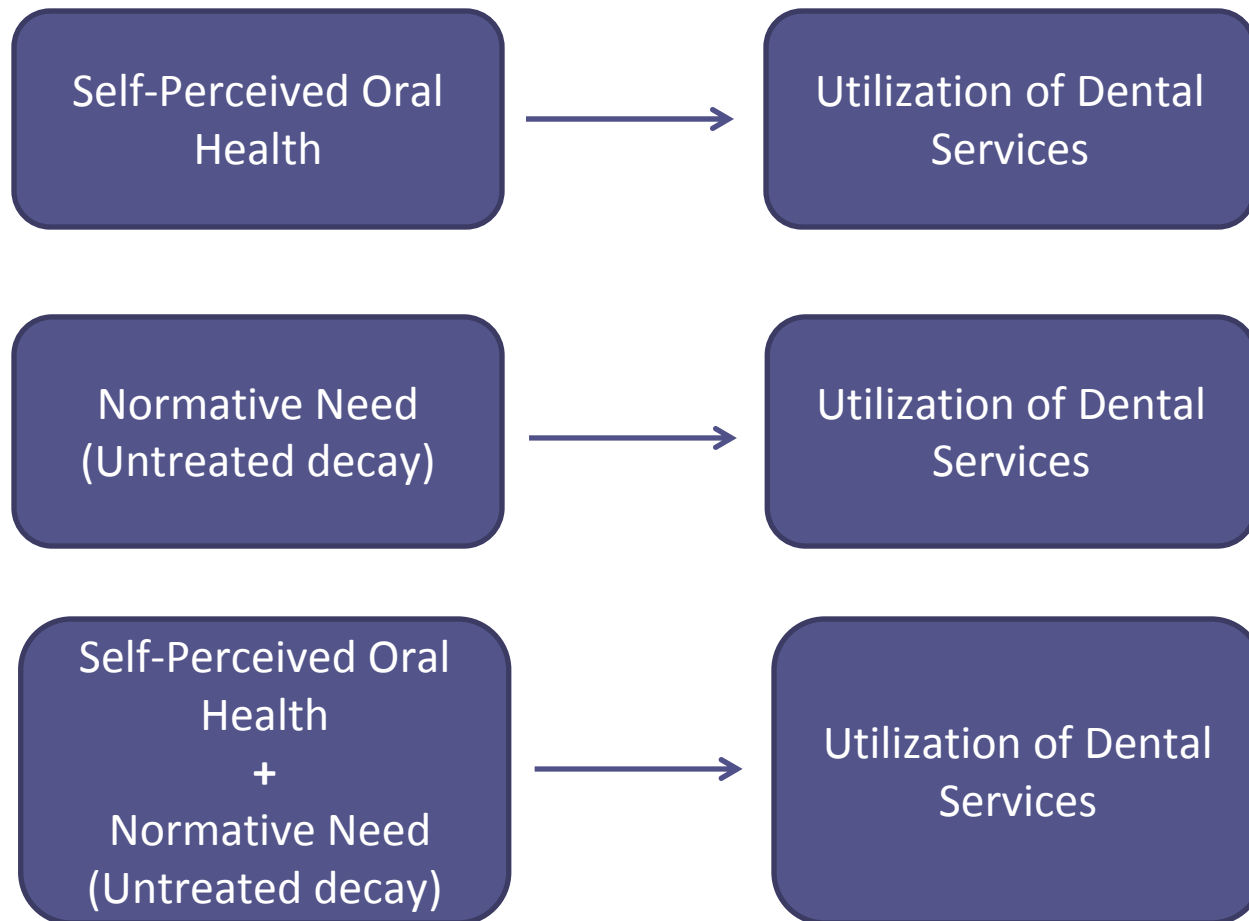
- Self-perceived oral health
- Normative need
 - Clinically defined need/treatment need



Research Gap

- No studies have assessed the influence of both (perception and normative need) on utilization using a nationally representative sample of adults in the U.S.

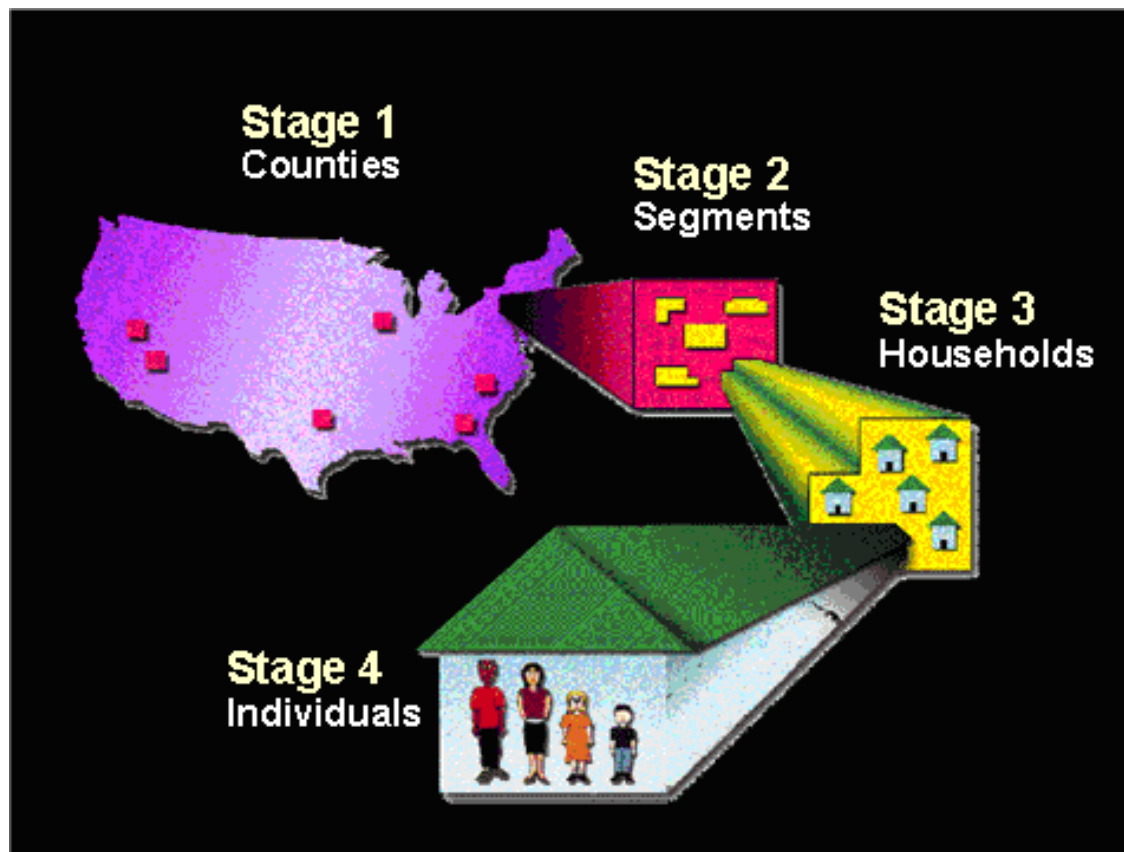
Objectives



Data Source



2011-2012



Exclusion Criteria

2011-2012 NHANES
Adults 30+ with interview data (n = 4,566)
Exclude edentulous individuals (n = 359)
Missing utilization data (n = 6)
Missing self-perceived oral health data (n = 7)
Missing data on overall recommendation of care (n = 584)
Missing clinical data (n = 284)
Missing data on covariates (n = 604)
Final Sample (n = 2,722)

Conceptual Framework

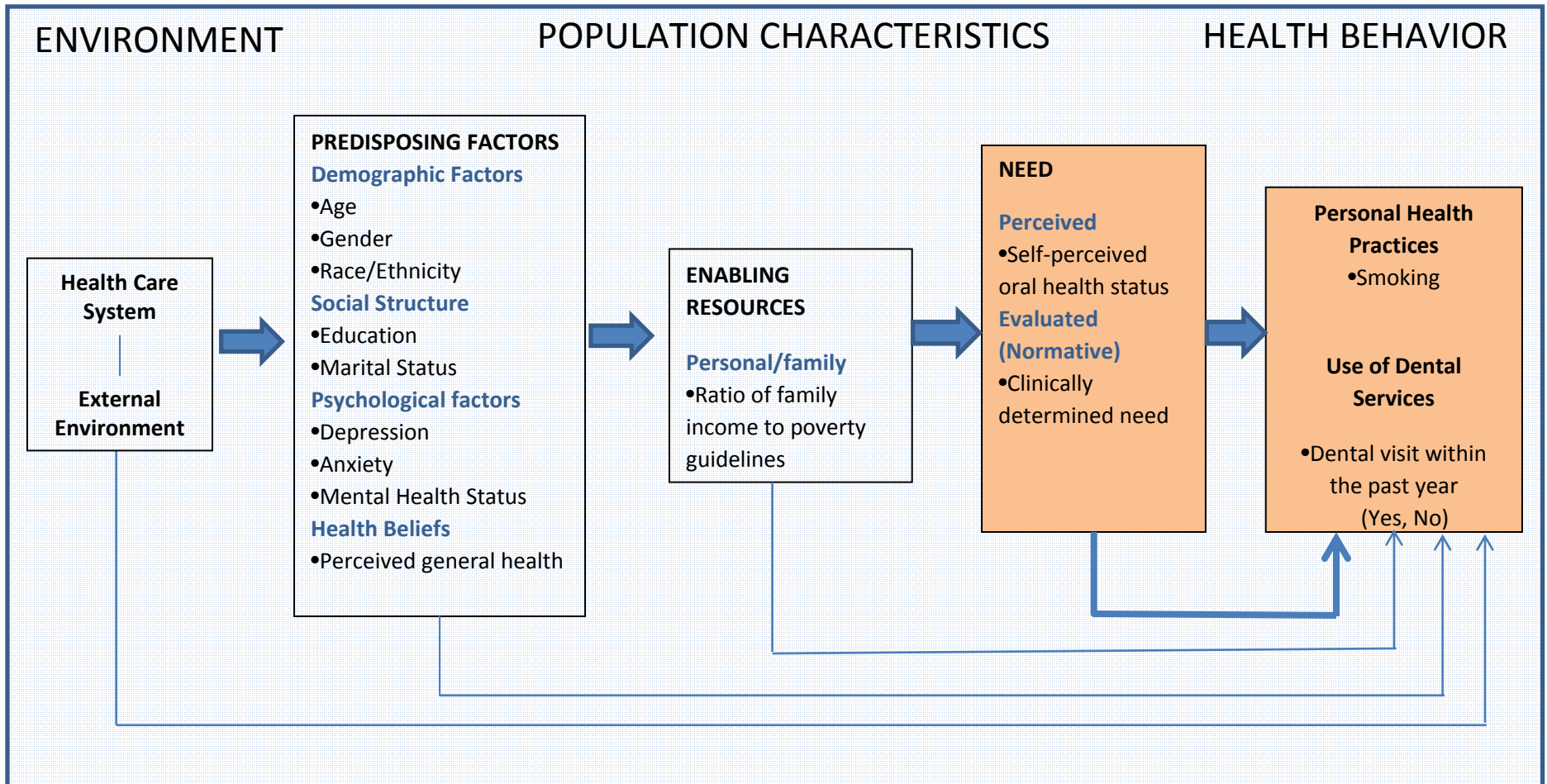


Figure 1: Modification of the Andersen's emerging model [adapted from Andersen]

Dependent Variable

“About how long has it been since you last visited a dentist?”

Self-reported dental visit

Dental visit in the past 12-months
Recoded: (Yes or No)



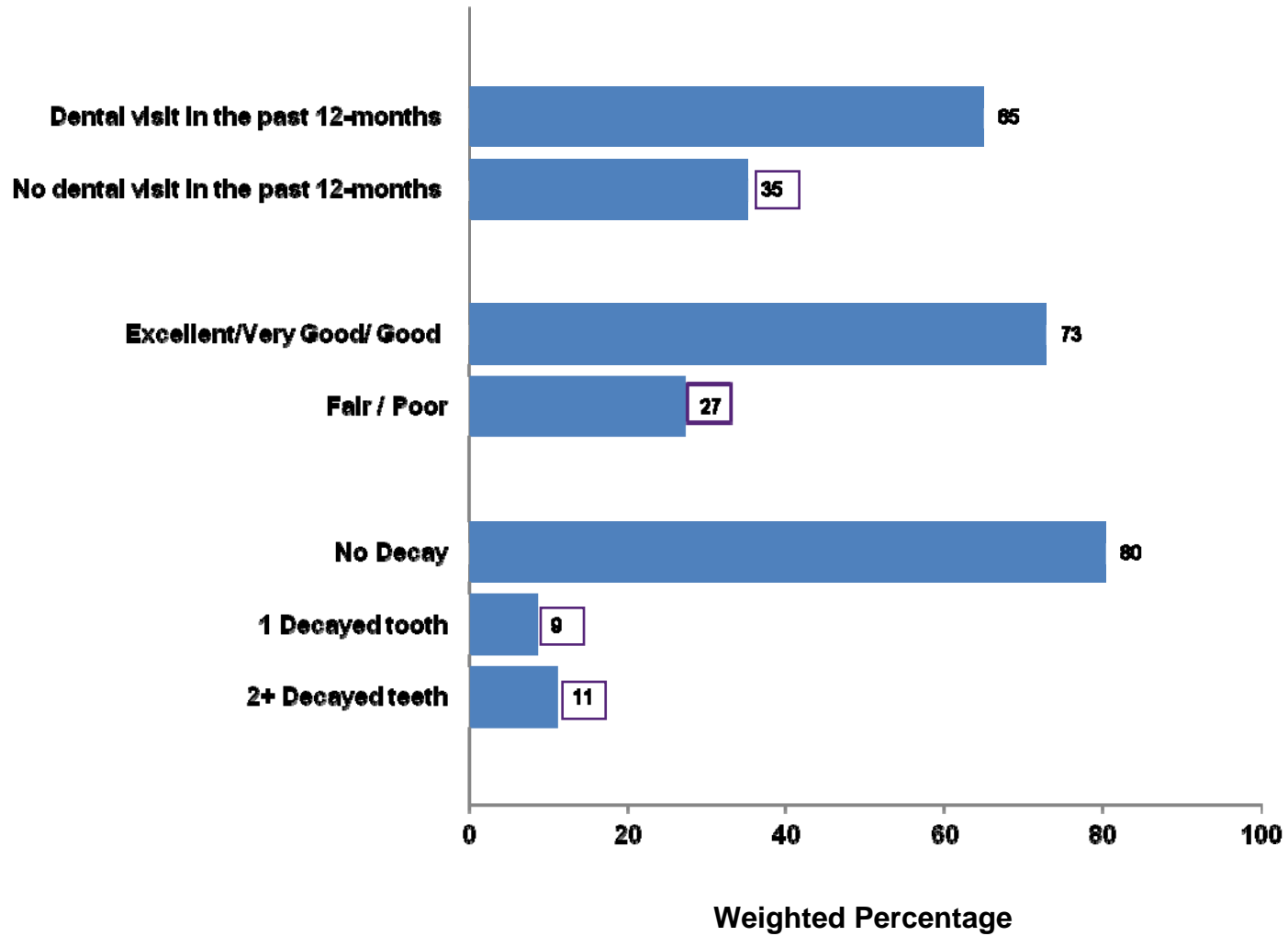


Independent Variables

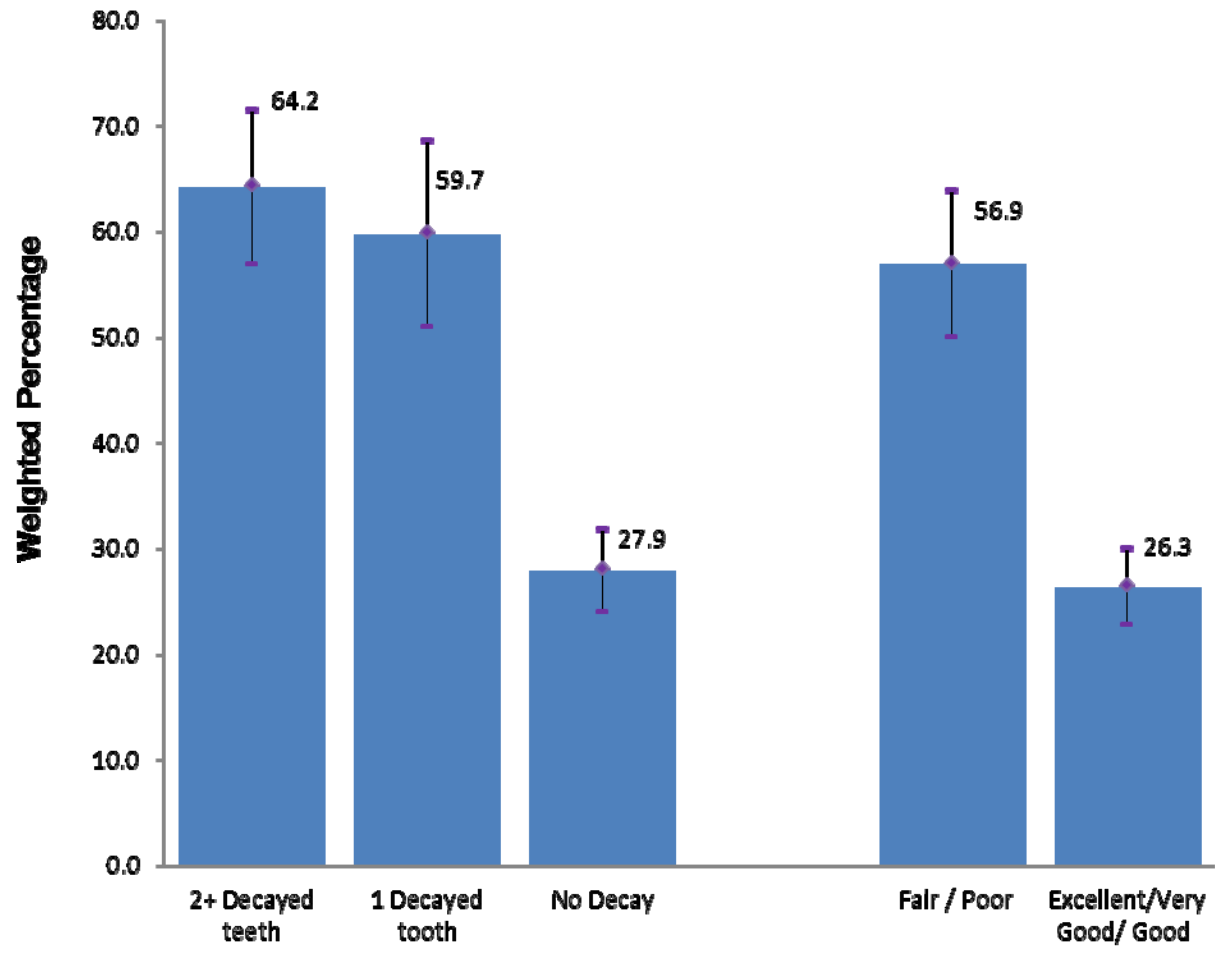
Predisposing Factors	Enabling Resource	Personal Oral Health Behavior	Need
<ul style="list-style-type: none">• Age• Gender• Race/ethnicity• Education• Marital status• Depression• Anxiety• Mental health status• Perceived general health	<ul style="list-style-type: none">• Ratio of family income to poverty guidelines (PIR)	<ul style="list-style-type: none">• Smoking	<ul style="list-style-type: none">• Perceived Need<ul style="list-style-type: none">➤ Self perceived oral health• Normative Need<ul style="list-style-type: none">➤ Untreated Decay

RESULTS

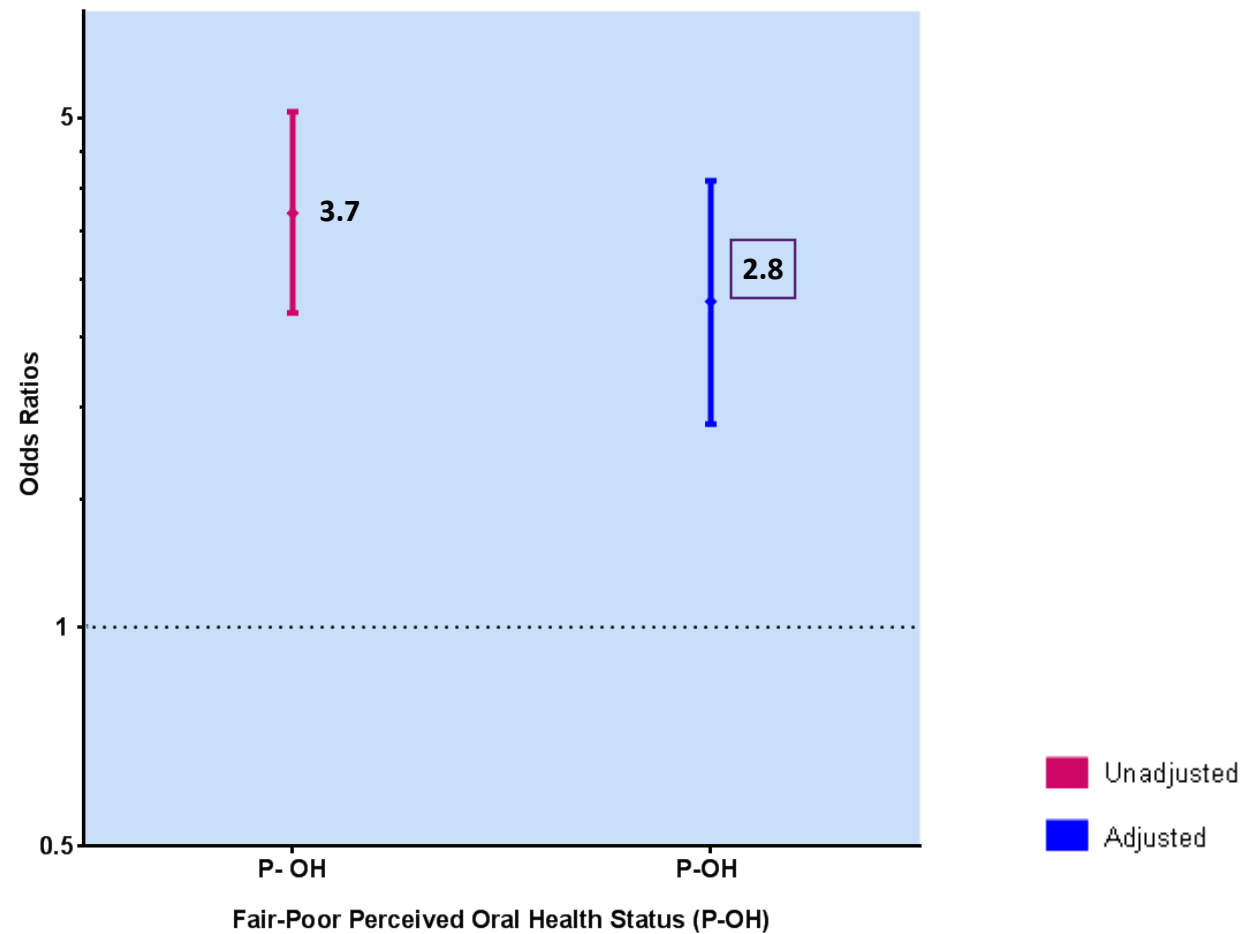
Distribution of Select Factors in the U.S., 2011-2012



Percent of Adults (30+ Years) **Not Having a Dental Visit** in the Past 12-months by **Decay Status** and **Self-Perception** in the U.S., 2011-2012

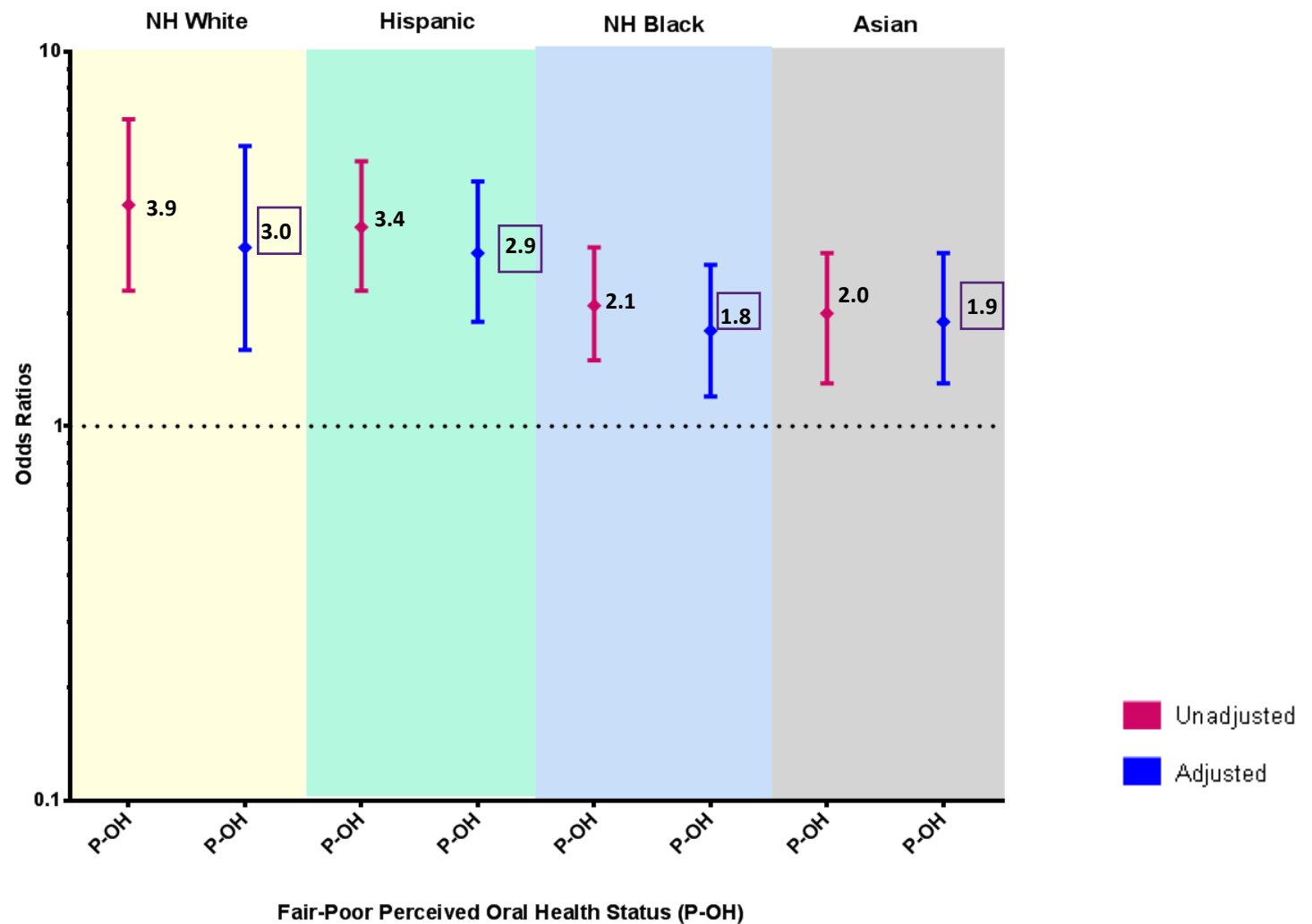


Multivariable Odds Ratios for **Not Having a Dental Visit** in the Past 12-months According to **Self-Perceived Oral Health** Among Adults (30+ years) in the U.S., 2011-2012



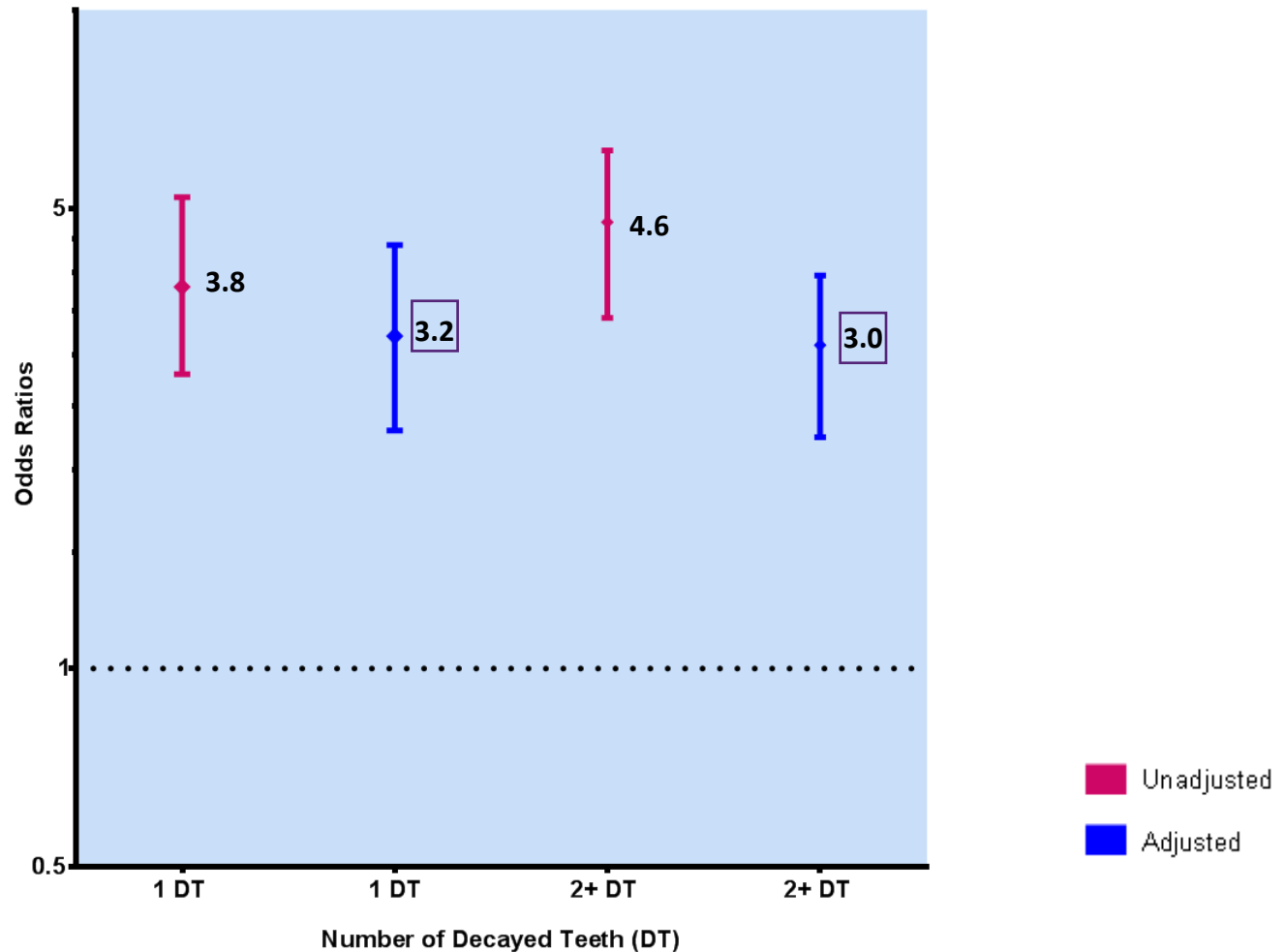
Adjusted for Age, Poverty Income Ratio, Gender, Race
Odds ratios and 95% confidence intervals calculated from logistic regression models

Multivariable Odds Ratios for **Not Having a Dental Visit** in the Past 12-months According to **Self-Perceived Oral Health by Race/Ethnicity** Among Adults (30+ years) in the U.S, 2011-2012



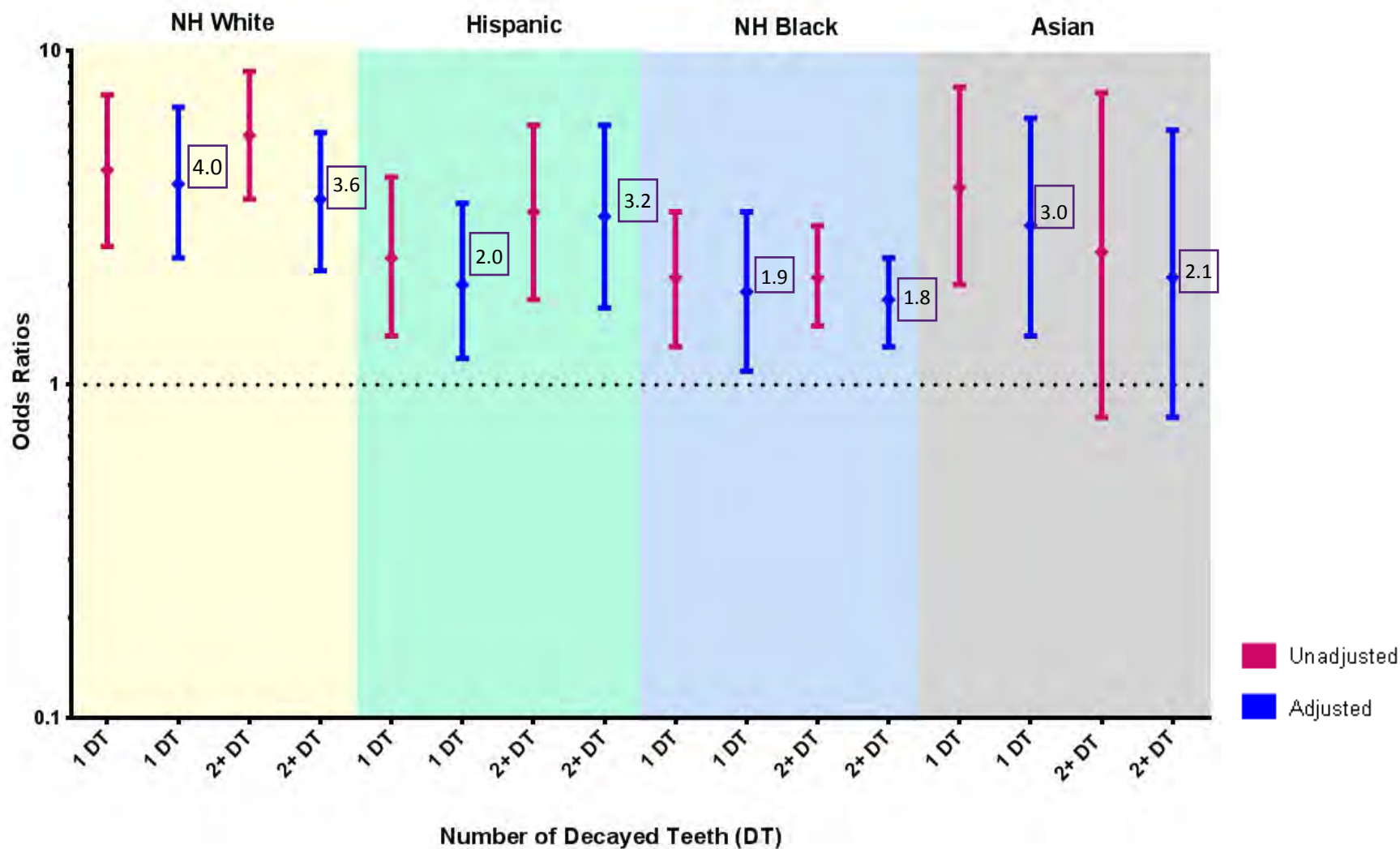
Adjusted for Age, Poverty Income Ratio, Gender
 Odds ratios and 95% confidence intervals calculated from logistic regression models

Multivariable Odds Ratios for **Not Having a Dental Visit** in the Past 12-months According to **Decay Status** Among Adults (30+ Years) in the U.S., 2011-2012



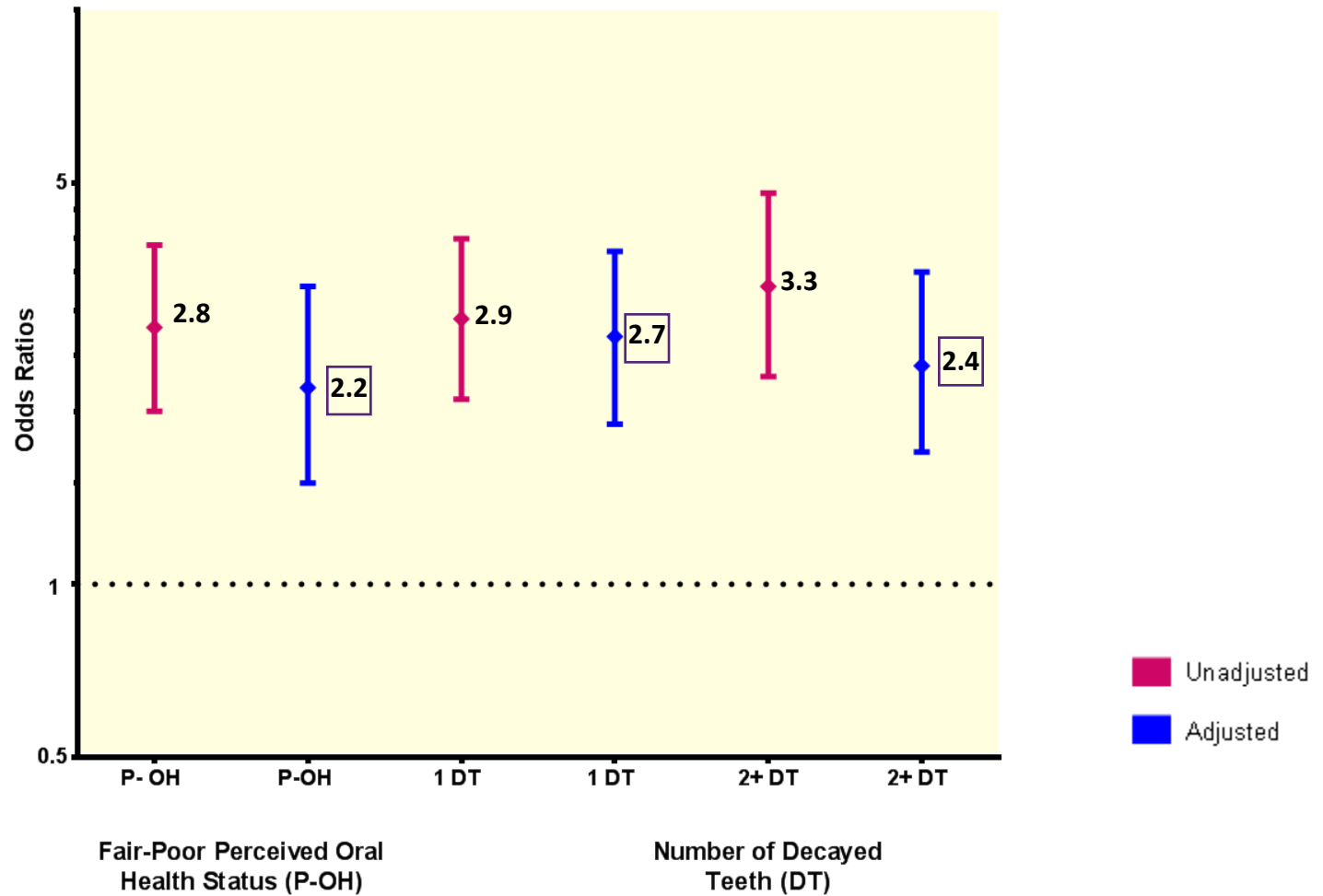
Adjusted for Age, Poverty Income Ratio, Gender, Marital Status, Race
Odds ratios and 95% confidence intervals calculated from logistic regression models

Multivariable Odds Ratios for **Not Having a Dental Visit** in the Past 12-months According to **Decay Status by Race/Ethnicity** Among Adults (30+ Years) in the U.S., 2011-2012



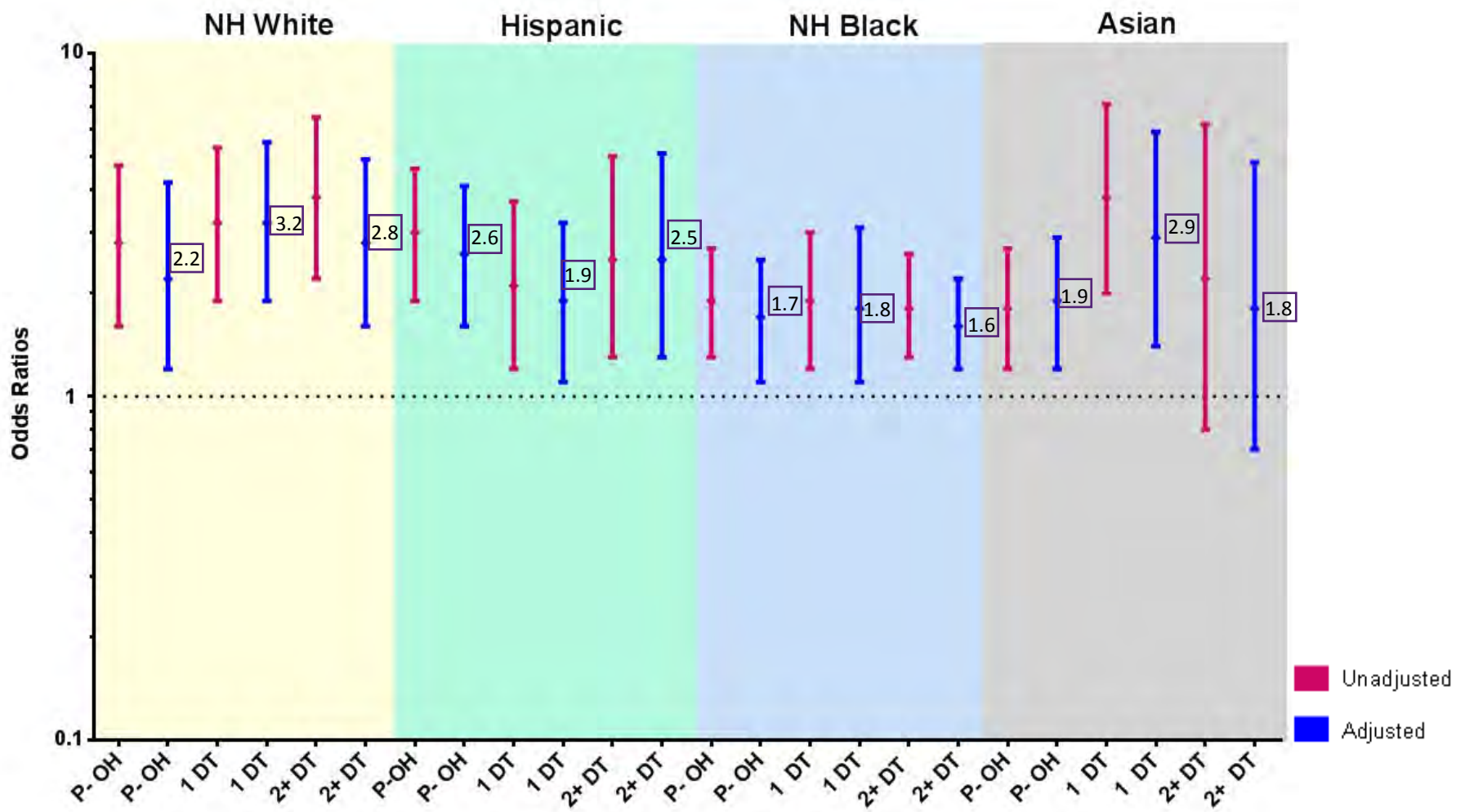
Adjusted for Age, Poverty Income Ratio, Gender, Marital Status
 Odds ratios and 95% confidence intervals calculated from logistic regression models

Multivariable Odds Ratios for **Not Having a Dental Visit** in the Past 12-months According to **Self-Perceived Oral Health** and **Decay Status** Among Adults (30+ Years) in the U.S., 2011-2012



Adjusted for Age, Gender, Poverty Income Ratio, Marital Status, Race
 Odds ratios and 95% confidence intervals calculated from logistic regression models

Multivariable Odds Ratios for **Not Having a Dental Visit** in the Past 12-months According to **Perception and Decay Status**, by **Race/Ethnicity** Among adults (30+ Years) in the U.S., 2011-2012



Adjusted for Age, Gender, Poverty Income Ratio, Marital Status
 Odds ratios and 95% confidence intervals calculated from logistic regression models

CONCLUSION

- Those with fair-poor perceived oral health were more likely to not have a dental visit in the past 12-months compared to those with excellent-very good-good perceived oral health
- Association varied by race/ethnicity

Race/Ethnicity	Perception
NH-Whites	3x
Hispanics	2.9x
Asian	1.9x
NH Blacks	1.8x

CONCLUSION

- Those with **untreated tooth decay** were **more likely to not have a dental visit** in the past 12-months compared to those with no decay
- Association varied by race/ethnicity

Race/Ethnicity	1 Decayed tooth	2+ Decayed teeth
NH-Whites	4.0x	3.6x
Hispanics	2.0x	3.2x
Asian	3.0x	2.1x (ns)
NH Blacks	1.9x	1.8x

CONCLUSION

- Similar associations even when perception and untreated decay were included in the same model but lower odds ratio.
- Perception and untreated decay predict non-utilization

Race/Ethnicity	Perception	1 Decayed tooth	2+ Decayed teeth
NH-Whites	2.2x	3.2x	2.8x
Hispanics	2.6x	1.9x	2.5x
Asian	1.9x	2.9x	1.8x (ns)
NH Blacks	1.7x	1.8x	1.6x

Public Health Implications



- Improve public perception
- Facilitate access to oral health care



Guide resource allocation

Acknowledgements

- Dr. Bruce Dye
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- Dr. Shadi Boroumand
- Dr. Margo Adesanya
- Dr. Isabel Garcia
- Dr. Kathy Atchison

CONCLUSION

Race/ Ethnicity	Seek Care (Immediately- Earliest Convenience)	Mild Perio	Moderate / Severe Perio	Missing Teeth (1-8)	Missing Teeth (9-27)
NH-Whites	4.1	1.8	3.8	1.1 (ns)	2.5
Hispanics	2.9	2.1	2.4	0.8 (ns)	0.8 (ns)
Asian	4.0	2.9	4.9	0.6 (ns)	0.8 (ns)
NH Blacks	2.4	1.6	2.1	0.8 (ns)	0.7 (ns)

CONCLUSION

Race/ Ethnicity	Self-Perceived Oral Health Status	Seek Care (Immediately- Earliest Convenience)
NH-Whites	2.0 (ns)	3.4
Hispanics	2.5	2.3
Asian	1.5 (ns)	3.8
NH Blacks	1.6 (ns)	2.0

CONCLUSION

Race/ Ethnicity	Self-Perceived Oral Health Status	Mild Perio	Moderate- Severe Perio
NH-Whites	2.5	1.6 (ns)	3.0
Hispanics	2.7	1.7	1.8
Asian	1.5 (ns)	2.8	4.9
NH Blacks	1.8	1.5	1.7

CONCLUSION

Race/ Ethnicity	Self-Perceived Oral Health Status	Missing Teeth (1-8)	Missing Teeth (9-27)
NH-Whites	2.6	0.9 (ns)	1.8
Hispanics	3.2	0.6 (ns)	0.6 (ns)
Asian	1.9	0.5 (ns)	0.7 (ns)
NH Blacks	2.0	0.7 (ns)	0.6 (ns)