

## Supplemental Online Content

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### **eAppendix**

**eTable.** Questions used in the current analyses from the 2002, 2012, and 2022 National Health Interview Survey (NHIS)

### **eReferences**

This supplemental material has been provided by the authors to give readers additional information about their work.

## **eMethods**

### **Conduct of the NHIS**

The National Health Interview Survey (NHIS) is an annual survey of the health of the U.S. civilian, non-institutionalized population conducted by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. Originally, an in-person survey, telephone interviews have increased over time, peaking during the COVID pandemic and continuing into 2022 where 55.7% of the Sample Adult interviews were conducted at least partially by telephone. The survey uses a multi-stage clustered sample design and oversampled non-Hispanic black and Hispanic persons and Asians.

Each year, the NHIS collects health and health-related information from randomly chosen Sample Adults, aged 18 years or older. The NHIS also contains supplemental questions/modules on a yearly basis. The 2002, 2012 and 2022 NHIS included a module that asked about the use of various complementary health approaches (e.g., acupuncture, massage therapy, meditation, yoga, etc.).

### **2019 NHIS redesign:**

The NCHS, who conduct the NHIS, have accounted for declining response rates (from 74.3% final adult response rate in 2002 to 49.6% in 2022) in a number of ways. First, as part of the 2019 redesign (NCHS, 2020a,b), NCHS dramatically reduced the length of the surveys and instituted a rotating schedule in which specific questions are asked only

once every 2 to 5 years. This was to reduce item-specific nonresponse rates and incompleteness of the survey because of excess burden. In the case of the complementary health approach (CHA) supplements, which were asked every 5 years, the supplement length went from 456 questions in 2002, to 1,008 in 2012 to only 17 in 2022. Therefore, the current analysis primarily considers only prevalence data on CHA queried similarly in all three survey years: 2002, 2012 and 2022. Second, NCHS responded to the declining response rate by employing increasingly sophisticated approaches for calculating accurate sampling weights that more accurately account for nonresponse bias (NCHS, 2020a,b).

### **Inclusion of Complementary Health Approaches in the NHIS:**

The NHIS began including questions on CHA beginning in 2002, repeating the CHA supplement every five years (2002, 2007, 2012, 2017, 2022) with supplement funding provided by the NIH National Center for Complementary and Integrative Health. The development of the CHA surveys has been previously described in detail (Stussman et al 2013). The CHA questions across these 5 timepoints have varied considerably, preventing meaningful trend analysis for some approaches (Clarke et al). For instance, in 2002, 2017, and 2022, a question was asked about whether a participant saw a chiropractor for care, while in 2007 and 2012, the question was modified to ask a much more specific question: whether a person saw a chiropractor for spinal manipulation. Similarly, in 2002, 2007, and 2022, individuals were asked if they used any type of

meditation, while in 2012 and 2017 individuals were asked about three specific types of meditation (eTable 1).

eTable. Questions used in the current analyses from the 2002, 2012, and 2022 National Health Interview Survey (NHIS)

<b>Questions to establish prevalence in the US Adult population</b>			
<b>2002 NHIS</b>	<b>2012 NIHS</b>	<b>2022 NHIS</b>	<b>Comments</b>
During the past 12 months, did you see a practitioner for acupuncture?	During the past 12 months, did you see a practitioner for acupuncture?	During the past 12 months, did you see a practitioner of acupuncture?	
DURING THE PAST 12 MONTHS, did you see a practitioner for chiropractic care?	DURING THE PAST 12 MONTHS, did you see a practitioner for chiropractic or osteopathic manipulation?	During the past 12 months, have you seen or talked to a chiropractor?	Comparison of the 2012 data with the 2002 and 2022 data is inappropriate because the 2012 survey asked about use of chiropractic manipulation (one specific type of procedure used by chiropractors) instead of asking whether the participant saw a chiropractor, as in 2002 and 2022.
DURING THE PAST 12 MONTHS, did you use guided imagery?	DURING THE PAST 12 MONTHS, did you use guided imagery?	During the past 12 months, did you use guided imagery or progressive relaxation?	To be consistent with the 2022 data, the data for guided imagery and progressive muscle relaxation were combined for 2002 and 2012.
DURING THE PAST 12 MONTHS, did you use progressive relaxation?	DURING THE PAST 12 MONTHS, did you use progressive relaxation?		
DURING THE PAST 12 MONTHS, did you	DURING THE PAST 12 MONTHS, did	During the past 12 months, did you see a	

see a practitioner for massage?	you see a practitioner for massage?	practitioner of massage?	
DURING THE PAST 12 MONTHS, did you use meditation?	DURING THE PAST 12 MONTHS, did you use Mantra Meditation, Transcendental Meditation (y/n), Relaxation Response (y/n) or Clinically Standardized Meditation (y/n)?	During the past 12 months, did you use any of type of meditation?	Comparison of the 2012 data with the 2002 and 2022 data is inappropriate because the 2012 survey asked about specific types of meditation instead of asking whether the participant used any meditation, as in 2002 and 2022.
DURING THE PAST 12 MONTHS, did you see a practitioner for naturopathy?	DURING THE PAST 12 MONTHS, did you see a practitioner for naturopathy?	During the past 12 months, did you see a practitioner of naturopathy?	
DURING THE PAST 12 MONTHS, did you practice yoga?	DURING THE PAST 12 MONTHS, did you practice yoga?	During the past 12 months, did you practice Yoga as part of a class or on your own?	
<b>Questions analyzed to establish pain or pain management as reason for use</b>			
For what health problems or conditions did you use acupuncture?	For what health problems, symptoms, or conditions did you see a practitioner for acupuncture?	During the past 12 months, did you see a practitioner of acupuncture ...to treat or manage physical pain?	
For what health problems or conditions did you use chiropractic care?	For what health problems, symptoms, or conditions did you see a practitioner for chiropractic manipulation?	During the past 12 months, did you see a chiropractor ...to treat or manage physical pain?	Comparison of the 2012 data with the 2002 and 2022 data is inappropriate because the 2012 survey asked about use of chiropractic manipulation (one specific type of procedure used by chiropractors) instead of asking whether the

			participant saw a chiropractor, as in 2002 and 2022.
For what health problems or conditions did you use guided imagery?	For what health problems, symptoms, or conditions did you use guided imagery?	During the past 12 months, did you use guided imagery or progressive relaxation ...to treat or manage physical pain?	To be consistent with the 2022 data, the data for guided imagery and progressive muscle relaxation were combined for 2002 and 2012.
For what health problems or conditions did you use progressive muscle relaxation?	For what health problems, symptoms, or conditions did you use progressive muscle relaxation?		
For what health problems or conditions did you use massage?	For what health problems, symptoms, or conditions did you see a practitioner for massage?	During the past 12 months, did you see a practitioner of massage to treat or manage physical pain?	
For what health problems or conditions did you use meditation?	For what health problems, symptoms, or conditions did you use meditation?	During the past 12 months, did you use meditation to treat or manage physical pain?	Comparison of the 2012 data with the 2002 and 2022 data is inappropriate because the 2012 survey asked about specific types of meditation instead of asking whether the participant used any meditation, as in 2002 and 2022.
For what health problems or conditions did you use naturopathy?	For what health problems, symptoms, or conditions did you see a practitioner naturopathy?	During the past 12 months, did you see a naturopathy to treat or manage physical pain?	
For what health problems or conditions did you use yoga?	For what health problems, symptoms, or	During the past 12 months, did you use Yoga to treat or manage physical pain?	

	conditions did you use yoga?		
<b>Health Conditions included in measuring use of complementary health approaches for pain in 2002 and 2012:</b>		<b>Questions used to code for pain in 2022</b>	
Arthritis Back pain Carpal tunnel syndrome, other nerve damage Dental pain Fibromyalgia Fracture, bone/joint injury Gout Jaw pain Joint pain or stiffness Lupus Neck pain Recurring or chronic pain Severe headache or migraine Sprains or strains		During the past 12 months, did you use [approach].to treat or manage physical pain?	The list of painful conditions in 2002 and 2012 would cover the majority of pain conditions reported in the US population but would miss certain types of cancer-related pain, non-chronic abdominal pain, and non-chronic pain associated with reproductive systems. The broad question asked in 2022 would likely capture painful conditions in addition to those on the 2002 and 2012 list.

**eReferences**

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