Counting more than calories

Professor Jane Kolodinsky is using data from a number of nationally representative surveys to identify patterns in Americans’ activities and relationships with food to ultimately develop policy recommendations.

A typical finding is that a person’s lower economic status is associated with being overweight. If income is a predictor of obesity, then all policy makers would have to do is give people more money to solve obesity. This, of course, is an incorrect assumption as there are many people of higher socioeconomic status who are overweight. Low income, in this case, serves as a proxy for lifestyle choices; constraints on the ability to purchase healthy food or the time to devote to healthy behaviours including cooking and exercise; and/or a lack of knowledge about any of the above.

What methods are you using and are you confident your data is representative of the American population?

We are using the ATUS, the only US federal survey that provides data on the full range of nonmarket activities, from childcare to volunteering. ATUS data files are used by researchers to study a broad range of issues. The data files include information collected from over 136,000 interviews conducted from 2003 to 2012.

We also use the Consumer Expenditure survey (CE), another federal survey. It is used by economic policy makers to examine the impact of policy changes on economic groups, as well as by businesses and academic researchers to study consumers’ spending habits and trends. CE is used by other federal agencies, for example to revise the Consumer Price Index’s ‘market basket’ of goods and services and their relative importance. We are currently investigating the potential of linking the National Health and Nutrition Examination Survey (NHANES) with the CE in order to examine time use and actual consumption in addition to time use and food expenditures.

In the future, we hope to begin using data from the US Department of Agriculture (USDA)’s new National Household Food Acquisition and Purchase Survey (FoodAPS).

Will this project help to tailor policy for certain demographics? What advice would you give?

I think that recommendations based on our findings to date are appropriate for all demographic groups. Taking time to eat and prepare foods is a clear recommendation – Europeans call this conviviality. It does not mean eat as much as you can, but given a meal, sit down and enjoy it. It takes time to realise when you have had enough to eat.

Be mindful – do not sit in front of a computer or television and snack mindlessly. People should be aware of how much they eat. Learn to prepare meals from unprocessed ingredients. This does not mean spending hours slaving over a hot stove; it could be as simple as preparing a meal with basic ingredients. Processed food is known to be higher in calories, fat and sodium.

These recommendations are the same common sense ones our grandmothers told us – eat your vegetables first. Sit down and eat your food. Go outside and play. Now we have empirical evidence; anecdotal evidence doesn’t work in science.

How are you benefiting from collaboration with other disciplines?

The world of academia is headed towards transdisciplinarity. It is not enough to take a reductionist approach and study individual nutrients, for example. Obesity is complicated – nutritionists, economists, psychologists, marketers, anthropologists and a host of other specialists all have something to contribute to the conversation; and the research. Economists and nutritionists measure different things – acquisition of food does not equal consumption of food, however, perhaps food acquisition is a good proxy for consumption. It is not the discipline that should define the method – the problem should define the method, and because obesity is a complex issue that is not just about food, it takes a team approach to come up with solutions.
A balancing act

In one of the first studies of its kind, University of Vermont, USA, researchers are exploring the connection between how people spend their time and a healthy weight, so the public can be advised on mindful approaches to weight loss and maintenance.

IN ORDER TO maintain a healthy body weight, the number of calories consumed must be balanced with the number of calories used. This is known as the energy balance equation. When a person takes in more energy than they expend, the result is an increase in body weight. Conversely, if the scales are tipped in the other direction and a person uses more energy than they consume, weight loss will occur.

It seems like a simple rule to follow, but maintaining this balancing act is a challenge, especially in developed countries where food is fast but lifestyles are sedentary. There are a number of factors that make it difficult to maintain a healthy body weight. For instance, technology has made it easier to choose an inactive lifestyle, such as sitting inside to watch television or playing games on a computer or mobile phone. Moreover, instilling the importance of being active at an early age is being lost, as budget cuts are reducing sport and outdoor activities from the school day.

People’s food behaviours have also changed. People are eating food on the go, rather than sitting down to a meal, and pre-packaged foods are replacing freshly cooked dishes. In fact, 35 per cent of the total food eaten at home in the US is in the form of packaged, prepared goods. The amount of time spent preparing food and cleaning up has dropped by nearly 50 per cent since the 1960s for both working and non-working women.

TIME USE PATTERNS

Clearly there are many components to take into account when trying to understand why a person is overweight. Professor Jane Kolodinsky at the University of Vermont is engaged in research that seeks to fill gaps in understanding of the relationship between time use and energy balance. She is exploring time use patterns related to purchasing food, preparing meals and cleaning up, eating and drinking, and travel associated with food consumption. She explains the motivation for her research further: “The energy balance equation does not elucidate what influences an excess of calorie consumption or what prompts people to have an active lifestyle. Unless we can unpack the decisions people make, we will be unable to promulgate policy that can help ease the obesity epidemic”.

Indeed, there is a strong need for Kolodinsky’s work. According to the US Centers for Disease Control and Prevention (CDC), more than a third of adults in the US are obese. This has serious negative health effects for the individual, putting them at higher risk for heart disease, stroke, Type 2 diabetes and certain types of cancer. It also affects society as a whole, with the annual medical cost of obesity in the US estimated to be US $150 billion.

SURVEYING THE NATION

Using a transdisciplinary approach, Kolodinsky’s research project is investigating the relationship between family composition and competing time demands on weight. The results will be used to inform policy makers and generate recommendations for individual groups on how to maintain a healthy lifestyle.

Kolodinsky is analysing data from a number of nationally representative surveys, including the American Time Use Survey (ATUS), the Consumer Expenditure survey (CE) and the National Health and Nutrition Examination Survey (NHANES) to estimate consumers’ demand for a healthy weight. The ATUS offers a pictures of how, where, and with whom, Americans spend their time. The CE, which consists of two surveys, the Quarterly Interview Survey and the Diary Survey, is the only federal survey to provide insights into the complete spectrum of how much consumers earn and what they spend their money on, as well as the characteristics of those consumers.

The study is also making use of cluster analysis in order to group people based on a number
Kolodinsky found an associated increase in BMI that is 0.13 points lower when BMI exceeded 25 (overweight).” However, given that a person is overweight, it was difficult to find if these groups, or clusters, are related to being overweight or obese, we can begin to suggest broader policy solutions.

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”

The study also provided an insight into links between cooking and BMI. If an individual is overweight, but is the primary cook in their household, there is an associated BMI reduction of 1.73 points compared to secondary cooks. Also, spending just 10 minutes more cooking and cleaning up meals is associated with a BMI that is 0.13 points lower. “Through a mindful approach to food, we will likely cut down on discretionary calories, which Americans eat too many of,” Kolodinsky suggests. “Perhaps this is why we see a relationship between more time spent cooking and a healthy weight.”