

# Adventist Health and Lifestyle Surveys 1989, 2001, and 2012: Australia and New Zealand, South Pacific Division

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The Adventist Health Department, South Pacific Division, planned, coordinated, and administered the 1989, 2001, and 2012 health survey. These surveys provided a valuable baseline of health behaviors on a large sample of members across the church spectrum.

## Introduction

Since its beginning, in the 1860s, the Seventh-day Adventist Church has promoted a healthy and wholistic lifestyle as part of its core beliefs. It has strongly advocated abstinence from alcohol, tobacco, and other harmful drugs, and recommended that members avoid caffeine beverages and adopt a balanced vegetarian diet.

Figure 5.1: Self-assessed Health Status: % Adventist Females by Age, 2012

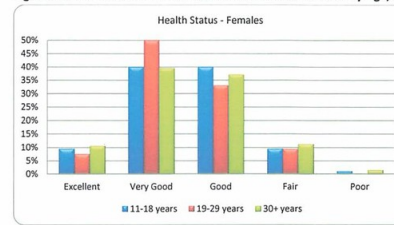
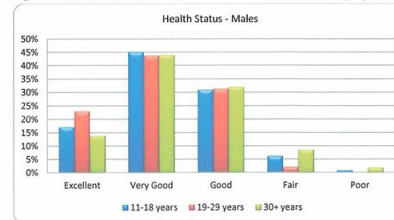


Figure 5.2: Self-assessed Health Status: % Adventist Males by Age, 2012



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Page from the Report of the 2012

Adventist Health and Lifestyle Survey, Australia and New Zealand, South Pacific Division.

Photo courtesy of Terry Butler.

Australian society and to a lesser extent New Zealand has had a tradition of heavy alcohol and tobacco consumption. In 1986, among Australians 15 years of age and older, 31 percent were current smokers<sup>1</sup> and 85 percent regularly consumed alcohol.<sup>2</sup>

The Seventh-day Adventist Church, the Salvation Army, and the Church of Latter-day Saints have maintained an abstinence stance on alcohol. However, in the past few decades, many other Protestant churches have shifted to a more liberal viewpoint on alcohol drinking. It is likely some of this change has resulted from societal changes, increased alcohol advertising, and a relaxation of supply controls.<sup>3</sup> Seventh-day Adventists are not immune to such commercial, cultural, and societal influences. General perceptions and anecdotal evidence indicated that some Adventists had a less strict stand toward alcohol use. However, no objective, quantitative data yet existed to confirm the level of adherence to Adventist lifestyle behavior in Australia and New Zealand.

A North American study of Adventist students in 1985 indicated that at least 15 percent of the youth surveyed were drinking alcohol. Another study conducted by Andrews University in 1988 revealed that of the 2,319 North American Adventists surveyed, 12.4 percent had drunk wine within the previous year. Fourteen percent perceived that alcohol was acceptable, with a further 4.6 percent still undecided.<sup>4</sup>

In 1989, in consideration of these various concerns, the South Pacific Division (SPD) executive committee established a Substance Abuse and Chemical Dependency Committee. One of its term of reference was to survey the extent of chemical dependency and drug abuse among church members in Australia and New Zealand.

## Overview

The Adventist Health Department, South Pacific Division, planned, coordinated, and administered the 1989 health survey. The South Pacific Division, and the two union conferences in Australia and New Zealand provided the funding. All levels of Seventh-day Adventist church administration in Australia and New Zealand, their boards of education, and Avondale University College<sup>5</sup> endorsed the study. The 1989 health survey provided a valuable baseline of health behaviors on a large sample of members across the church spectrum.

Subsequently, in 2001 and 2012 the Adventist Health Department conducted follow-up surveys to analyze time-trend changes. Each of the three cross-sectional prevalence surveys had the same study design, terms of reference, methodology, and key questions.

The cross-sectional prevalence surveys were anonymous and did not allow further follow-up of individual subjects. However, they did provide comprehensive snapshots of various health behaviors and lifestyle beliefs of both adolescent and adult Seventh-day Adventists in Australia and New Zealand.

The data findings contributed to the knowledge of factors associated with healthy behaviors and wellbeing in a broad cross-section of the Adventist community and thus enabled assessment of changes in health beliefs and

behaviors during 10 and 20-year periods. The information supported the development and review of evidence-based health initiatives for schools, families, and young people in general.

## 1989 Health and Lifestyle Survey

In 1989-90 Adventist Health conducted the first comprehensive lifestyle survey of Adventist members and school students throughout Australia and New Zealand. Of the 5,607 participants surveyed, 4,197 responded (78.3 percent). The data collected provided a baseline of lifestyle activities and the attitudes toward, and the prevalence of, drug use within the Seventh-day Adventist Church.

### Research Objectives:

To determine the prevalence of substance use in the 12-65 age group within the Seventh-day Adventist Church in Australia and New Zealand.

To identify factors, characteristics, and attitudes associated with the both use and non-use of such substances

To provide data for a relevant, evidence-based strategy for promoting a drug-free lifestyle in the church and community.

### Study Design:

The investigators designed the cross-sectional study to obtain a proportional representation of ethnic as well as rural and city church members in the target population of Seventh-day Adventists in Australia and New Zealand. The study restricted itself to those baptized members and adherents 12-65 years of age who attended church regularly. The investigators selected three groups of participants.

1. Church Members: The investigators stratified churches in Australia and New Zealand according to whether they were rural, city/urban, or ethnic. From the field of 463 churches, they randomly selected 155 to ensure a proportional representation. Turning to the membership lists, they randomly chose 1 in 4 members (a total of 2,919 members) to receive a mailed questionnaire.<sup>6</sup> The response rate was 69.1 percent.
2. Avondale University College Students: The study mailed the adult questionnaire to all 677 students enrolled at Avondale College and Sydney Adventist Hospital, and 517 individuals completed and returned them (76.4 percent).
3. Adventist High School Students: Twenty high schools in Australia and New Zealand participated in the survey. Altogether the investigators randomly selected 103 classes to ensure at least one class from each year in each school. Teachers administered the survey in class groups to a total of 2,011 students, of whom 1,754 completed the questionnaire (87.2 percent response).

## Questionnaires:

The researchers developed two similar self-administered questionnaires: one for adults and the other for high school students. Both questionnaires were 12 pages in length, took 20-30 minutes to answer, and included questions about alcohol, tobacco, caffeine, marijuana, other licit and illicit substances, diet, childhood, social and religious activities, and attitudes to Adventist lifestyle.<sup>7</sup> In the process of developing the survey instrument, the researchers consulted several questionnaires from states in Australia, New Zealand, and North America. The inclusion of substance use questions and format from the Australian Secondary Students' Alcohol and Drug survey (ASSAD)<sup>8</sup> enabled some comparisons between the Adventist survey and the national student survey.

## 1989 Survey Findings:

The data collected provided the baseline on the attitudes to and the prevalence of drug use within the Seventh-day Adventist Church at that time. The reports supported anecdotal evidence that there existed a low-level prevalence of alcohol and tobacco use and a very low use of illicit drugs in the church among both young people and older people. The following is a brief synopsis of key findings from the 1989 survey as presented in the 1991 report.<sup>9</sup>

Demographics: 84.4 percent were white (Caucasians), 4.7 percent Polynesian, and 2.9 percent Asian. Of the participants, 74.1 percent were baptized church members. Most of the unbaptized respondents were young people. Of all the subjects, 78 percent had grown up in a home in which at least one parent was a Seventh-day Adventist. The majority of the respondents, 58.4 percent, lived in urban or city areas.

Usual diet of all respondents: 3.3 percent vegan, 46.1 percent lacto-ovo vegetarian, and 50.6 percent non-vegetarian.

Tobacco use: 3.9 percent occasional or regular smoking, 32 percent had used in the past or sampled, and 64.3 percent had never tried cigarettes

Alcohol use: 10.9 percent occasional or regular drinking, 38 percent had used in the past or tried alcohol, and 51.1 percent had never consumed it.

Compared to the general population, illicit drug use was extremely low. Almost 99 percent reported never trying the illicit substances such as hallucinogens, cocaine, and heroin. About 10 percent indicated they had used cannabis.

The survey noted a positive relationship between religious beliefs and the non-use of substances.

Subsequently, during the 1990s, the church implemented a number of the recommendations from that report. They included Adventist Health week features during May of each year and supporting special annual themes

with promotional and educational resource materials, such as videos, brochures, and posters.<sup>10</sup>

## 2001 Health and Lifestyle Survey

Through the 1990s Australia and New Zealand continued their tradition of heavy alcohol and tobacco consumption. While the proportion of tobacco smokers declined in both countries, 25 percent of people over the age of 15 were current smokers.<sup>11</sup> Alcohol consumption also declined in recent years but, 85 percent of people in the community over the age of 15 had drunk alcohol during the previous 12 months.<sup>12</sup> The 1990s witnessed considerable media and alcohol industry coverage of the so-called benefits of alcohol in reducing the risk of heart disease.<sup>13</sup> Such alcohol marketing glossed over the problem of alcohol effects and abuse in the community. Continuing anecdotal evidence emerged of an increase in alcohol consumption among Seventh-day Adventist church members.

### Study Design:

The 2001 survey measured substance use trends since 1989 and member attitudes toward alcohol, tobacco and drugs employing the same study design and research objectives as the 1989 survey. The 2001 Planning and Steering Committee comprised Terry Butler, Bryan Craig, John Hammond, Gail Ormsby, Jonathan Duffy, Percy Harrold, Judy McAnulty, Andrew Kingston, and Ross Grant

The cross-sectional prevalence study surveyed a wide representative sample of those baptized members and adherents aged 12 to 65 years of age who regularly attended. The researchers examined three separate groups.

1. Church members: A mailed self-administered survey went out to a stratified random sample of 3,392 church members in Australia and New Zealand. They returned 60 percent of the surveys.
2. Avondale University College students: The college registrar addressed and distributed a questionnaire to every student.
3. Adventist High School students: Twenty-eight Adventist high schools in Australia and New Zealand participated, administering questionnaires in class groups to 2,316 students who consented to take part in the study.

### Questionnaire:

In 2001 the investigators used one questionnaire for both adults and students, except that only the final section asked high school students about adolescent risk behaviors.<sup>14</sup> The completely anonymous questionnaire included as much as possible of the questions and format from the 1989 survey and the triennial national (ASSAD) survey.<sup>15</sup>

### 2001 Survey Findings

The researchers restricted their data analyses to the 3,485 valid responses from Seventh-day Adventists: 1,607 Australian church members, 311 New Zealand church members, 247 Avondale University College students, 1,118 Australian high school students, and 180 New Zealand high school students. The study did exclude non-Adventist high school students. It chose three age groups for specific age comparisons: 11-18 years, 19-29 years, and 30 years and older. Researchers simply reported most analyses of data as frequencies of response, or percent of response by gender and age group. The following is a brief synopsis of key findings from the 2001 survey presented in the detailed 2004 report.<sup>16</sup>

Overall substance use:

Unadjusted data for those reporting having never used or tried substances were: alcohol 48 percent, tobacco 69 percent, marijuana 86 percent, caffeine 12 percent, heroin 99 percent, cocaine 98 percent, and Ecstasy 98 percent.

Tobacco use

More subjects had “never used tobacco” in 2001 compared to 1989. In 2001, about 2 percent of adolescents had never used tobacco.

Factors strongly associated with the “never used” tobacco response in the 11-18 years group included: personal Bible study, frequent church attendance, sharing faith, volunteer work, the belief that “it is satisfying to be a Christian,” and the intention to “remain an Adventist for the rest of my life.”

Alcohol use

About 50 percent of 11-18 age group and 37 percent of 19-29 age groups had “never used” alcohol.

The highest level of “current use” of alcohol was in the 19-29 years (12.1 percent male, 10.6 percent female). Compared to 1989, more Adventists had “tried” or drank alcohol.

Religious factors strongly associated with those who had “never used” alcohol in all three age-groups included: regular family worship, personal Bible study, frequent church attendance, personal prayer life, sharing faith, volunteer work, and the beliefs that “the Bible forbids all alcohol use,” “the Bible forbids excess alcohol (drunkenness),” “it is satisfying to be a Christian,” and the individual’s intention to “remain an Adventist for the rest of my life.”

Cannabis use

There appeared to be an increase in experimentation and use of cannabis since 1989. Still, the current use of marijuana was low: 11-18 years–3 percent (42), 19-29 years– 0.9 percent (4), and 30+ years–0.1 percent (1).

## Health and Diet

By self-reported height and weight, 53 percent of adults were overweight.

Those engaging in vigorous exercise more than once a week: 11-18 years—87 percent; 19-29 years—80.5 percent; 30+ years—78 percent.

Compared to 1989, each age group showed a slight increase in the proportion of those who were total vegetarians (vegan). Overall, 4.7 percent of subjects were total vegetarian, 39.9 percent lacto-ovo vegetarian, and 55.4 percent non-vegetarian.

In the 11-18 age group 23 percent had one or fewer servings of vegetables a day and 27 percent had one or fewer servings of fruit.

A high proportion of subjects ate fast food at least once or more a week: 11-18 years—73 percent, 19-29 years—63 percent, and 30+ years—49 percent.

The report also sampled the prevalence and trends of social activities (such as time spent watching TV, time on the internet and movie attendance); religious activities (frequency of church attendance, personal prayer, Bible study, and family worship); adolescent risk behaviors; and attitudes toward Adventist lifestyle practices (such as alcohol, caffeine, vegetarian diet, and jewelry).

Recommendations from the 2001 survey:

The church needs to continue advocating a healthy lifestyle free from alcohol and drugs.

Each age group should continue to receive relevant and accurate knowledge of the harm caused by various substance use and risk behaviors.

The Avondale curricula should strengthen lifestyle training for ministers and teachers.

Adolescents are a vulnerable group. During this period of change, maturity, peer and societal pressures, and experimentation, it is important to provide support and dialogue from family, school, and church.

School curricula should emphasize the positive aspects of the non-use of drugs and include information on drugs, decision-making skills, and resilience training.

## 2012 Health and Lifestyle Survey

The 2012 cross-sectional quantitative study design was the same as the previous surveys in 1989 and 2001. As a result, it enabled a comparison of the prevalence of healthy and health-risk behaviors and attitudes among Australian and New Zealand Adventists during the previous 23 years. Again the South Pacific Division Adventist Health Department funded the study and all administration units in Australia and New Zealand supported it. The Avondale University College Human Research Ethics Committee approved the study design, project protocols, and questionnaire. Terry Butler and Kevin Price were the principal investigators.

#### Research Objectives:

To determine the current prevalence of health behaviors and substance use within the 12-75 year age group of the Seventh-day Adventist Church in Australia and New Zealand and compare the trends to the 1989 and 2001 surveys and other national health surveys

To identify factors, characteristics, and attitudes associated with healthy behaviors, risky health behaviors, and substance use.

To produce a report of the findings with recommendations to promote healthy lifestyle behaviors and drug-free living.

#### Study Design:

As in 1989 and 2001, the participants comprised three groups from Seventh-day Adventist schools and churches in Australia and New Zealand:

1. Church members: a random selection of 1 in every 20 members aged 12 to 75 years from the electronic membership listing of all Adventist churches in Australia and New Zealand, a process of sample selection differing from the earlier surveys.<sup>17</sup> Of the 4,353 surveys mailed to the randomly selected church members, 1,160 were returned. The response rate of 27 percent was disappointing compared to the 60 percent achieved in 2001.
2. Avondale University College students: the 1,300 students enrolled in Avondale College on the Cooranbong and Wahroonga campuses in 2012 were invited to participate. Of the 192 students who returned questionnaires, 184 did so online.
3. Adventist High School students: the study distributed 4,200 questionnaires to 26 high schools that were then administered to at least one class in each of the class years 7 to 12. Twenty schools participated, and of the 2,063 valid student surveys returned, 837 came from students of non-Adventist background.

#### Questionnaire:



The 20-page questionnaire included questions about health beliefs, eating, drinking, alcohol, tobacco, over-the-counter and illicit substances, exercise, recreation activities, sleep, health and weight status, childhood environment and demographics. For adults, the questionnaire had two extra pages on health care matters.<sup>18</sup> The anonymous, non-identifiable self-administered paper and pencil questionnaire took 20-45 minutes to complete. The randomly selected church members and Avondale College students also had the option to complete the survey securely and anonymously online. For logistical purposes, the online option was not available to high school students.

As much as possible, the wording and format of questions about alcohol, tobacco, other substances, diet, and beliefs were the same as the 1989 and 2001 surveys but modified to make the questions culturally sensitive and acceptable to the non-Adventist students. Most of the questions on alcohol, tobacco, and other substances were also identical to the questions used in the Secondary Schools Health Behaviours Survey.<sup>19</sup>

#### 2012 Survey Findings:

The Health and Lifestyle Survey 2012 Report was presented to the SPD executive committee in November 2013,<sup>20</sup> the Schools' executive summary in March 2014,<sup>21</sup> and the comprehensive electronic report in 2015.<sup>22</sup> The following are highlights from the report.

#### Tobacco use

Smoking rates are very low among Adventists. Among the younger age groups, those who have never smoked has increased significantly since 2001. Numerically, all age-groups contained very few current smokers.

#### Alcohol use

The Adventist respondents are largely a non-drinking or very low drinking group. Those who self-reported as non-drinkers at the time of the 2012 survey were: 82.5 percent of 11-18 years, 68 percent of 19-29 years, and 89 percent of 30+ years. Of the others, the greater majority described themselves as only occasional drinkers.

The trend of the "ever used" alcohol category (either a few sips or more) increased slightly from 1989 to 2001 but then decreased to 2012 for each age group. The trend for the 11-18 years was: 1989-54 percent, 2001-59 percent and 2012-39 percent.

#### Overall drug use

As expected, because of Seventh-day Adventist beliefs and practice, drug use is very significantly lower than that reported in the general population. Overall, it is a very low risk, low drug-using population.

"Ever use" of illicit drugs--heroin, cocaine, amphetamines, steroids, hallucinogens, and ecstasy--remains very low. Of course, we cannot rule out the possibility that some adolescents exaggerated their responses of illicit drug

use, which would mean that drug use rates might be even lower.

### Cannabis use

Rates of ever using or trying cannabis in a lifetime are still very low—less than 10 percent. The highest reported cannabis use in “the past four weeks” was 1.6 percent for the 11-18 years category. The trend showed an increase from 1989 to 2001 and then a decrease in 2012.

### Usual diet

Several key questions explored dietary practices and food frequency. In response to the question, “How would you describe your USUAL diet?” 55.4 percent indicated they were non-vegetarian and 44.6 percent as either vegan, lacto-ovo vegetarian, or pesco-vegetarian. Compared to the 2001 results, it would appear there may be slightly more non-vegetarians in the 11-18 years age group but more vegetarians in the older age groups.

The trend of fish consumption has increased since 1989. In 1989, 12 percent, 9 percent and 16 percent of the 11-18, 19-29, and 30+ years groups respectively ate fish 1+ times/week. Since then, the percentage of consumers in each age-group has more than doubled. The largest increases are in the 11-18 years to 39 percent and 30+ years to 37 percent.

The trend of Adventists eating fast food 2+ times/week has increased from 2001 to 2012, particularly for the 11-18 years (from 34 percent to 43 percent) and for the 19-29 years (from 23 percent to 36 percent).

About 20 percent of young people eat less than the recommended servings of fruit and vegetables.

### Weight

Of the adults 30+ years, who reported self-assessed height and weight, 54 percent of females and 62 percent of males were overweight or obese. The trend shows an increase in both females and males from 2001 to 2012. No data is available from the 1989 survey.

### Beliefs

Attitudes and beliefs associated with alcohol and other drug use appear to have become more tolerant since 1989. For instance, the proportion of agreement to the statement “the Bible clearly forbids all use of alcoholic beverages” has decreased over time, particularly for the younger age groups. For example, the 19-29 years had the following percentage agreement: 1989 (65 percent), 2001 (50 percent), and 2012 (36 percent). The trend may be due to several factors, including changes in attitudes to Bible authority, interpretation of Scripture references to alcohol, and cultural changes in attitudes to alcohol use.

Particularly among adolescents, the survey revealed a widespread misunderstanding about the harmfulness of drugs

Faith and religious factors, if not protective, are closely associated with the non-use of alcohol and tobacco.

The research indicated an overall strong commitment to the church and its teachings.

The greater majority of adolescents value the nurture, love, and communication of their parents and significant others.

Recommendations from the 2012 survey:

The church at all levels and through various media should continue advocating a healthy, balanced lifestyle free from alcohol and drugs, the promotion of healthy eating, and positive physical activity and recreation.

Accurate knowledge of the harm of various substance use and risk behaviors should continue to be disseminated in forms relevant for each age group.

Maintain relevant health and lifestyle education for ministers and teachers in the Avondale curricula and provide opportunities to develop skills in health ministry.

Continue the focus on Health Promoting Churches and Health Promoting Schools as a means to empower church adherents and community members.

Remind parents and older church members of their role as mentors for youth and to provide the training and resources and communications and drug prevention strategies.

## Conclusion

The church has continued to promote its fundamental practices of healthy drug-free living. The legacy of the three comprehensive, cross-sectional surveys in 1989, 2001, and 2012 provides an extensive database of health and lifestyle information about the Adventist community in Australia and New Zealand. Benchmark and trend data are established for numerous health markers, including diet, tobacco, alcohol, and illicit drug use. Thus, the database is a rich resource for hypotheses development and more specific investigation and analyses in lifestyle behaviors. Several published scientific papers have resulted.<sup>23</sup>

## Sources

- Adventist Health South Pacific. March, 2014. "Health and Lifestyle Survey 2012 Adventist Schools Report: Executive Summary." A report of the 2012 survey and lifestyle behaviours and attitudes of students attending Seventh-day Adventist High Schools in Australia and New Zealand, Wairoa.
- Adventist Health South Pacific. November, 2013. "Health and Lifestyle Survey 2012 Report: Executive Summary." A report of the 2012 survey of health and lifestyle behaviours and attitudes of Seventh-day Adventists in Australian and New Zealand Adventist Churches, High Schools and Avondale College, Wairoa.
- Australian Institute of Health. 1990. *Australia's health 1990: the second biennial report of the Australian Institute of Health*. Canberra: AGPS.
- Australian Institute of Health and Welfare. 2011. *2010 National Drug Strategy Household Survey report*. Drug statistics series no. 25. Cat. no. PHE 145, Canberra: AIHW.
- Australian Institute of Health and Welfare. 1998. *Australia's health 1998: the sixth biennial report of the Australian Institute of Health and Welfare*. Canberra: AIHW.
- Butler, Terry. May, 2004. *Lifestyle Survey 2001: Health, Lifestyle and Drugs Prevalence and Relationships among Seventh-day Adventists in Australia and New Zealand*. Wairoa: Adventist Health, South Pacific Division.
- Butler, Terry, and Harley Stanton. 1991. "Adventist Lifestyle Survey 1989: a report prepared for the South Pacific Division of Seventh-day Adventists."
- Butler, Terry, and Kevin Price. December, 2015. *Health and Lifestyle Beliefs and Behaviours of Seventh-day Adventists in Australia and New Zealand: A report of health and lifestyle survey of Seventh-day Adventists in Australian and New Zealand in 2012*. Comparing results with previous surveys in 1989 and 2001, Wairoa: Adventist Health, South Pacific Division of Seventh-day Adventist.
- Centre for Epidemiology and Research. 2009. *New South Wales School Students Health Behaviours Survey: 2008 Report*. Sydney: NSW Department of Health.
- Craig, Bevan, Darren Morton, Lillian Kent, Alva Gane, Terry Butler, Paul Rankin, and Kevin Price. 2017. "Religious Affiliation Influences on the Health Status and Behaviours of Students Attending Seventh-Day Adventist Schools in Australia." *Journal of religion and health* 57. 10.1007/s10943-017-0495-9.
- Craig, Bevan, Darren Morton, Lillian Kent, Terry Butler, Paul Rankin, and Kevin Price. 2017. "The Body Mass Index of Adolescents Attending Seventh-Day Adventist Schools in Australia: 2001-2012." *Journal of School Health*. 87. 630-637. 10.1111/josh.12535.
- Craig, Bevan, Darren Morton, Peter Morey, Lillian Kent, Alva Gane, Terry Butler, Paul Rankin, and Kevin Price. 2018. "The association between self-rated health and social environments, health behaviors and health outcomes: A structural equation analysis." *BMC Public Health* 18. 440. 10.1186/s12889-018-5323-y.

- Craig, Bevan, Darren Morton, Peter Morey, Lillian Kent, Peter Beamish, Alva Gane, Paul Bogacs, Terry Butler, Paul Rankin, and Kevin Price. 2019. "Factors predicting the mental health of adolescents attending a faith-based Australian school system: a multi-group structural equation analysis." *Journal of Mental Health* 1-9. 10.1080/09638237.2019.1608929.
- Craig, Bevan, Darren Morton, Peter Morey, Lillian Kent, Peter Beamish, Alva Gane, Terry Butler, Paul Rankin, and Kevin Price. 2019. "Factors Predicting Alcohol Consumption in Adolescents Attending a Faith-Based School System in Australia: A Multigroup Structural Equation Analysis." *Journal of Child & Adolescent Substance Abuse* 28. 1-10. 10.1080/1067828X.2019.1652717.
- Drug Strategy Branch Australian Government Department of Health and Ageing. December, 2012. "Australian secondary school students' use of tobacco, alcohol, and over-the counter and illicit substances in 2011." Report prepared: Victoria White Deputy Director, Emily Bariola Research Officer.
- Drug Strategy Branch Australian Government Department of Health and Ageing. 2009. "Australian secondary school students' use of tobacco, alcohol, and over-the-counter and illicit substances in 2008." Report prepared by Victoria White and Geoff Smith.
- Guerin N., and V. White. 2018. *ASSAD 2017 Statistics & Trends: Australian Secondary Students' Use of Tobacco, Alcohol, Over-the-counter Drugs, and Illicit Substances*. Cancer Council Victoria.
- Guerin, N., and V. White. 2019. *ASSAD 2017 Statistics & Trends: Trends in Substance Use Among Australian Secondary Students*. Cancer Council Victoria.
- Mutch, Patricia, Robert Cruise, and Roger Dudley. 1986. "Adventist Youth and Drugs." *Human Subjects Research Archive* 110.
- Rimm, E. B., A Klatsky, D. Grobbee, and M. J. Stampher. 1996. "Review of moderate alcohol consumption and reduced risk of coronary heart disease: is the effect due to beer, wine, or spirits?" *BMJ* Mar 23; 312:731-6.
- Stackelroth, Jarrod, and Kevin Price. 2012. "Adventist health survey distributed." *record.net.au*, 17 March: 3.
- Stanton, Harley J. 1989. "Lifestyle Survey Under Way in Australia and New Zealand." *Record*, 7 October: 12.
- Victorian Government Department of Health. 2010. "Victorian secondary school students' use of licit and illicit substances in 2008, Results from the 2008 Australian Secondary Students' Alcohol and Drug Survey."

1. E. M. Greenhaigh, M. Bayly and M. H. Winstanley, "Prevalence of smoking-adults," in M. M. Scollo and M. H. Winstanley, eds., *Tobacco in Australia: Facts and issues*. Melbourne: Cancer Council Victoria; 2019. Available from <http://www.tobaccoinaustralia.org.au/chapter-1-prevalence/1-3-prevalence-of-smoking-adults>
2. Australian Bureau of Statistics, 2011, *Apparent Consumption of Alcohol: Extended Time Series, 1944-45 to 2008-09*, cat. no. 4307.0.55.002.
3. Australian Institute of Health and Welfare, 2010 *National Drug Strategy Household Survey report*. Drug statistics series no. 25. Cat. no. PHE 145. Canberra: AIHW. 2011.
4. Patricia B. Mutch, Robert J. Cruise, and Roger Dudley, "Adventist Youth and Drugs" (1986). *Human Subject Research Archive*. 110. <https://digitalcommons.andrews.edu/hrsa/110>
5. Avondale University College, the Adventist tertiary institution in Australia, at the time of the surveys was known as Avondale College of Higher Education
6. Harley Stanton, "Lifestyle Survey Under Way in Australia and New Zealand," *Record*, October 7. 1989, 12
7. Copies of the questionnaires are appended to the Adventist Lifestyle Survey 1989 report, 1991.
8. The Australian Secondary Students' Alcohol and Drug survey (ASSAD) is a triennial national survey of students' use of licit and illicit substances. It was developed from a triennial national survey assessing students' use of alcohol and tobacco that commenced in 1984 and was conducted collaboratively by Cancer Councils across Australia and the Western Australian Health Department. In 1996, the survey expanded to include questions on the use of illicit substances, and federal, state and territory health departments became collaborators in the project. The ASSAD study was designed to provide estimates of the current prevalence of use of tobacco, alcohol, and illicit substances among Australian school students aged 12 to 17 years, and to examine trends in their use of these substances.
9. Terry Butler, Harley Stanton, *Adventist Lifestyle Survey 1989: a report prepared for the South Pacific Division of Seventh-day Adventists*, 1991.
10. The annual Health Week themes were: 1991--Health Quest 2000 (alcohol, drugs), 1992--Fit for Life (exercise), 1993--Rediscover Life (general health), 1994--Who needs drugs? (alcohol, drugs), 1995--Eating Smart (nutrition), 1996--Living Smart Less Stress, 1997--Alcohol, and 1998--Active for Life (fitness).
11. N. Guerin and V. White V., *ASSAD 2017 Statistics & Trends: Australian Secondary Students' Use of Tobacco, Alcohol, Over-the-counter Drugs, and Illicit Substances*. Cancer Council Victoria; N. Guerin and V. White. 2019. *ASSAD 2017 Statistics & Trends: Trends in Substance Use Among Australian Secondary Students*. Cancer Council Victoria. 2018.
12. Australian Institute of Health and Welfare, *2010 National Drug Strategy Household Survey report*. 2011. Drug statistics series no. 25. Cat. no. PHE 145, Canberra: AIHW.

13. E. B. Rimm, A. Klatsky, D. Grobbee, and M. J. Stampher. 1996. "Review of moderate alcohol consumption and reduced risk of coronary heart disease: is the effect due to beer, wine, or spirits?" *BMJ* Mar 23; 312:731-6.?
14. Copies of the questionnaires are appended to the Lifestyle Survey 2001 Report, May 2004.
15. Drug Strategy Branch Australian Government Department of Health and Ageing. December, 2012. "Australian secondary school students' use of tobacco, alcohol, and over-the counter and illicit substances in 2011." Report prepared: Victoria White Deputy Director, Emily Bariola Research Officer.
16. Terry Butler, *Lifestyle Survey 2001: Health, Lifestyle and Drugs Prevalence and Relationships among Seventh-day Adventists in Australia and New Zealand*. Wairoona: Adventist Health, South Pacific Division. May 2004.
17. In the 1989 and 2001 surveys the random selection was done manually from church member lists sent in by local church clerks and the names and addresses then entered into a mailing database. In 2012 the researchers used the "central online membership database" securely controlled and maintained at the church headquarters in Wairoona, NSW, Australia. Based on the research selection criteria the South Pacific Division Information Technology Department (SPD IT) developed a simple random sample formula to select members proportionately from each conference online database.
18. A copy of the questionnaire is appended to the Health and Lifestyle Survey 2012 Report
19. Drug Strategy Branch Australian Government Department of Health and Ageing, "Australian secondary school students' use of tobacco, alcohol, and over-the counter and illicit substances in 2011." Report prepared: Victoria White, deputy director, and Emily Bariola, research officer. December 2012.
20. Adventist Health South Pacific, "Health and Lifestyle Survey 2012 Report: Executive Summary." A report of the 2012 survey of health and lifestyle behaviours and attitudes of Seventh-day Adventists in Australian and New Zealand Adventist Churches, High Schools and Avondale College, Wairoona. November 2013.?
21. Adventist Health South Pacific, "Health and Lifestyle Survey 2012 Adventist Schools Report: Executive Summary." A report of the 2012 survey of health and lifestyle behaviours and attitudes of students attending Seventh-day Adventist High Schools in Australia and New Zealand. March 2014.
22. Terry Butler and Kevin Price, *Health and Lifestyle Beliefs and Behaviours of Seventh-day Adventists in Australia and New Zealand: A report of health and lifestyle survey of Seventh-day Adventists in Australian and New Zealand in 2012*. Comparing results with previous surveys in 1989 and 2001, Wairoona: Adventist Health, South Pacific Division of Seventh-day Adventist, December 2015.?
23. Morton Craig, et al., Religious Affiliation Influences on the Health Status and Behaviours of Students Attending Seventh-day Adventist Schools in Australia 2017; Morton Craig, et al., The Body Mass Index of Adolescents Attending Seventh-day Adventist Schools in Australia: 2001-2012,

2017; Morton Craig and Morey, et al., The association between self-rated health and social environments, health behaviors and outcomes: A structural equation analysis 2018; Morton Craig and Morey, et al., Factors predicting the mental health of adolescents attending a Faith-Based Australian School System: A Multigroup Structural Equation Analysis 2019.?

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