

Health and Lifestyle Survey 2012 Report

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



Executive Summary

Adventist Health (South Pacific)

November 2013

2

What's in the Report?

Synopsis

This report presents highlights of the 2012 Health & Lifestyle Survey conducted in Seventh-day Adventist High Schools and Churches in Australia and New Zealand and Avondale College. The questionnaire was very similar to the surveys conducted in 1989 and 2001. So where possible, comparative trends are presented for health behaviours and beliefs covering the 23 year period.

Note: Unless specified the report results are only of Adventist participants.

Contents	Page
Survey Description	3
Participants	4
General and Emotional Health	5
Physical Activity	6
Weight and BMI	7
Perceived Harm of Substances	8
Medications	9
Tobacco	10
Alcohol	11
Marijuana	12
Other Substances	13
Eating and Foods	14
Drinking and Beverages	16
Lifestyle Activities	17
Faith and Religion	18
Home and Family	19
Attitudes and Beliefs	20
School Health	21
Health Care	22
Risk Factor Associations	23
At a Glance - Snapshot Highlights	24

Acknowledgements

Terry Butler: Chief Investigator (research, analysis and report author)

Kevin Price: Co-investigator (coordination, advisory and funding arrangements)

Adventist Health, South Pacific Division, AUC and NZPUC for funding support

SPD Information Technology

Avondale College

Union and Conference administrations, Education Directors and Health Directors

High School Principals

High School students and church member participants

3

Survey Description

Background

- This is the third health survey conducted by Adventist Health (South Pacific) during the last 23 years.
- The 1989 and 2001 surveys were comprehensive snapshots of health behaviours and lifestyle beliefs of Seventh-day Adventists in Australia and New Zealand.
- The 2012 survey uses similar methods and questions and thus allows trend comparisons.

Objectives

- Determine the current prevalence of health behaviours and substance use of Seventh-day Adventists, aged 12-75 years, in Australia and New Zealand.
- Compare findings to the 1989 and 2001 surveys and other national health surveys.
- Identify factors and attitudes associated with healthy behaviours and risky behaviours.

Design

- A cross-sectional quantitative survey to examine the prevalence of healthy and health-risk behaviours among a broad representation of Adventists in Australia and New Zealand.
- Participation was voluntary and the survey was completely anonymous.
- Standard instruction and information protocols ensured consistency in survey administration.

Sample

- High school students in all 26 Adventist High Schools in Australia and New Zealand.
- Avondale College students on the Cooranbong and Wahroonga campuses .
- A random selection of 4,353 Adventist church members in Australia and New Zealand.

Questions

- The 20-page questionnaire included questions on health beliefs, eating, drinking, alcohol, tobacco and substance use, exercise, weight, childhood, lifestyle and religious activities.
- Adults had two extra pages related to health care matters.
- The non-identified, self-administered paper questionnaire took 20-45 minutes to complete.
- Adult participants also had the option to complete the survey anonymously online.

Method

- All levels of church and school administration in Australia and New Zealand supported the study; Avondale College Human Research Ethics Committee gave ethics approval.
- High School Principals organized informed consent and the administration of the survey in class settings.
- Avondale College students were invited to complete the survey via the paper version or online.
- The SPD IT Department randomly selected the church sample from the online membership database and Conference s mailed the survey packs to their selected members.
- All survey forms were returned to the Adventist Health (SPD) office, checked and then electronically scanned by Educational Assessment Australia. Analysis was conducted using SPSS software.

4

Participants

Key Points

- Of the 4,353 surveys mailed to church members, 1,160 were returned, an overall response rate of 27% (Table 4.1). Response rates from church members in previous surveys were much higher 1989 (68%) and 2001 (60%) and there were more respondents in the younger age groups (Table 4.2).
- 184 (96%) of the 192 Avondale student responses were online compared to only 8% from church members.
- Six high schools elected not to participate. Ninety nine of the 2,162 returned school questionnaires were invalid (Table 4.3). Of the 2,063 valid student surveys, 837 (41%) were from non-Adventist students.
- 57.6% of all respondents were female and of those aged 30+ years 78% were married.
- Ethnic representation: 66.3% Caucasian, 7.4% Asian, 7.3% Pacific Islander, 2.9% Aboriginal/TI, 1.4% Maori.

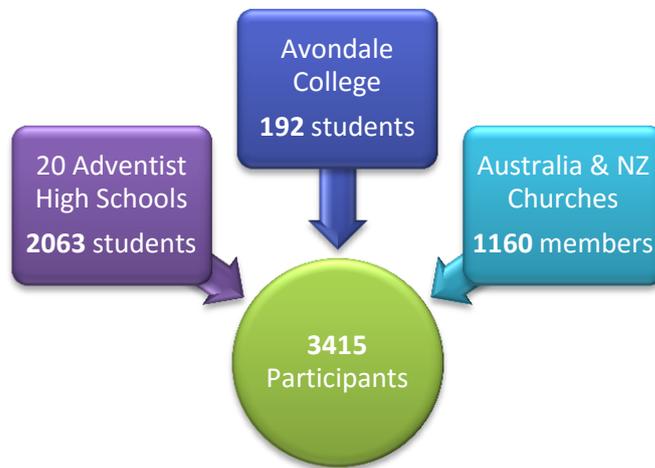


Table 4.1: Number of Respondents by Conference with % rate of survey return, 2012

Conference	Female	Male	Total	% Return
Greater Sydney	61	30	91	20%
North NSW	94	77	171	30%
Northern Aust.	36	18	54	24%
South Australia	60	47	107	35%
South NSW	36	30	66	26%
South QLD	101	69	170	29%
Tasmania	21	21	42	36%
Victoria	90	44	134	23%
Western Aust.	86	46	132	27%
North NZ	76	29	105	21%
South NZ	27	26	53	34%
Total	688	437	1125	27%

Table 4.2: Number of SDA Respondents in Surveys by Age Group and Year of Survey

	1989	2001	2012
11-18 years	1699	1420	1077
19-29 years	741	462	154
30-49 years	930	777	283
50-69 years	412	645	468
70+ years	33	51	300
Total	3815	3355	2282

Table 4.3: Number of Respondents by High School includes SDA and non-SDA valid returns only, 2012

School	Female	Male	Total
Auckland	54	19	73
Avondale School	112	74	186
Blue Hills College	49	36	85
Brisbane Adventist	90	100	190
Carlisle Christian	1	0	1
Carmel Adventist	30	28	58
Central Coast SDA	50	36	86
Christchurch	38	36	74
Darling Downs	22	25	47
Gilson College	145	134	279
Henderson College	11	7	18
Heritage College	4	4	8
Hills Adventist	46	44	90
Lilydale Adventist	80	82	162
Longburn	70	53	123
Mountain View	59	45	104
Noosa Christian	34	27	61
Northpine	110	90	200
Prescott College	6	10	16
Tweed Valley	51	43	94
Total	1066	894	1960

Key Points

- 90% of all Adventist respondents classified themselves in the categories of good to excellent health (Figures 5.1 and 5.2).
- Males tended to assess their health better than females.
- More than 25% of persons aged 30 years or more had only 6 hours or less of sleep per night (Figure 5.3).
- Two frequently used measures of health are Body Mass Index (using height and weight) and waist measurement. Figure 5.4 shows the proportion of participants who did not respond or did not know these measures when completing the questionnaire.
- Females of all age groups appear to experience more stress than males (Table 5.1) although there is an almost equal proportion of happy females and males (Table 5.2).

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

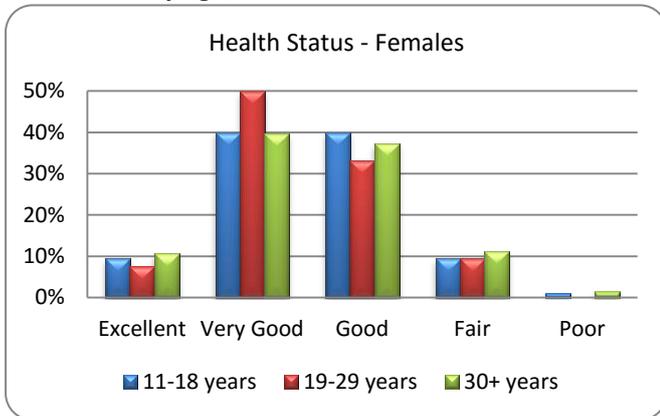


Figure 5.2: Self-assessed Health Status % Males by Age, 2012

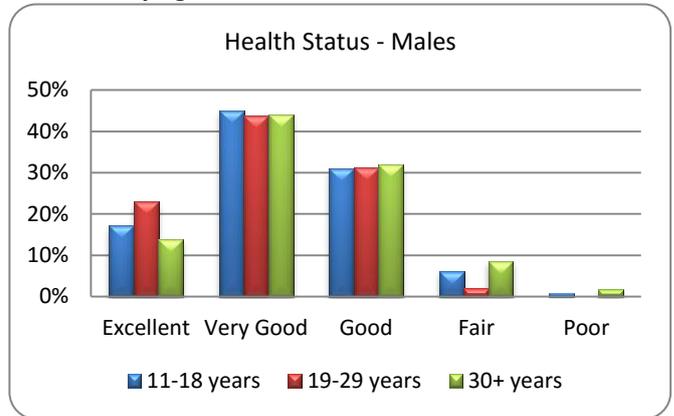


Figure 5.3: Hours of Sleep per Night % Persons by Age, 2012

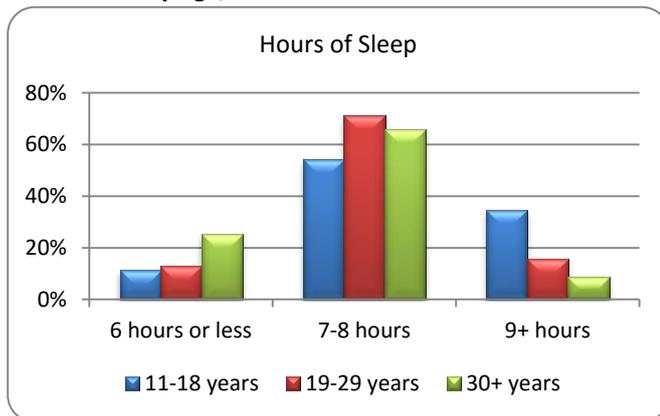


Figure 5.4: Don't Know Body Measurements % Persons by Age, 2012

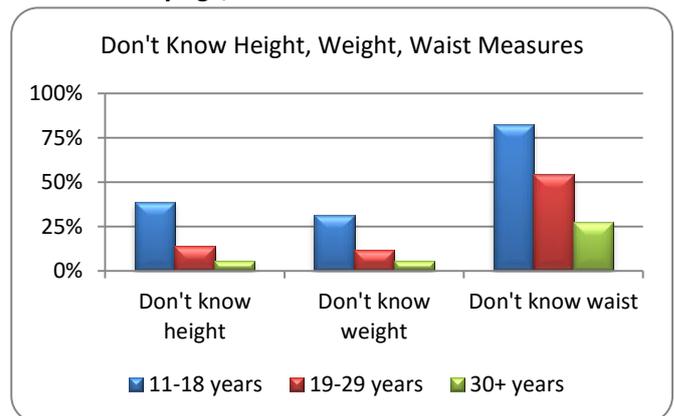


Table 5.1: Have you felt stressed? Frequency % by Age, 2012

Gender	Age Group	All of the time	Most of the time	Some of the time	None of the time
Female	11-18 years	11.8%	37.2%	42.6%	8.5%
	19-29 years	2.9%	28.6%	64.8%	3.8%
	30+ years	1.0%	19.6%	65.6%	13.8%
Male	11-18 years	4.9%	29.7%	47.9%	17.5%
	19-29 years	2.1%	19.1%	72.4%	6.4%
	30+ years	1.0%	12.6%	62.4%	23.9%

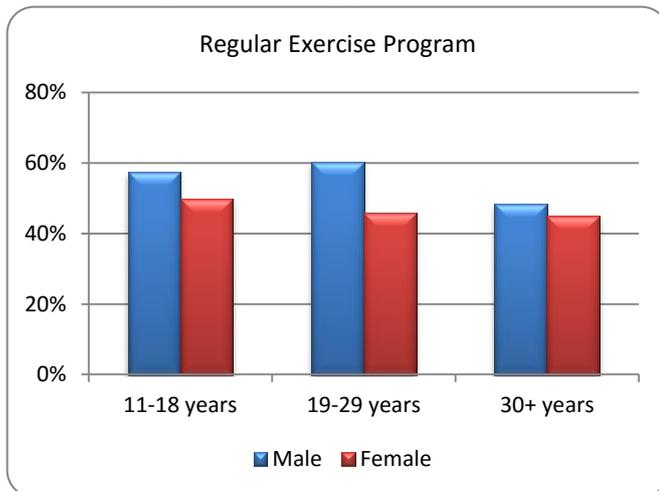
Table 5.2: Are you a happy person? Frequency % by Age, 2012

Gender	Age Group	All of the time	Most of the time	Some of the time	None of the time
Female	11-18 years	20.4%	61.4%	16.1%	2.1%
	19-29 years	11.3%	71.7%	17.0%	0.0%
	30+ years	12.5%	73.8%	13.3%	0.3%
Male	11-18 years	19.3%	66.8%	12.8%	1.0%
	19-29 years	12.5%	75.0%	10.4%	2.1%
	30+ years	14.4%	71.1%	14.3%	0.3%

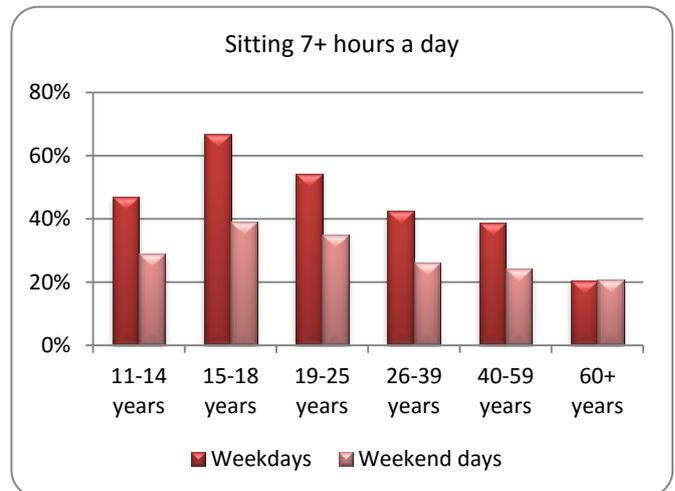
Key Points

- Only 50% of participants have a regular exercise program (Figure 6.1).
- Males of all ages are more active than females.
- More high school students (15-18 years) than other groups sit seven or more hours a day on both week days and weekend days (Figure 6.2).

**Figure 6.1: Regular Exercise Program
% Persons by Gender and Age, 2012**



**Figure 6.2: Hours Spent Sitting
% Persons by Age, 2012**



**Table 6.1: Times of Moderate or Vigorous Exercise in a Week
% Persons by Gender and Age, 2012**

Gender and Age	None	Once	Twice	3 times	4+ times
Female					
11-18 years	7.8%	13.1%	21.1%	21.3%	36.7%
19-29 years	6.7%	10.5%	14.3%	21.0%	47.6%
30+ years	16.7%	11.9%	13.5%	16.4%	41.5%
Male					
11-18 years	4.6%	8.5%	11.7%	21.0%	54.2%
19-29 years	4.3%	19.1%	4.3%	19.1%	53.2%
30+ years	19.7%	11.0%	15.1%	13.6%	40.6%

**Table 6.1: Average Exercise Minutes per Session
% Persons by Gender and Age, 2012**

Gender and Age	None	≤ 10 minutes	11-30 minutes	31-60 minutes	1 hour +
Female					
11-18 years	2.9%	4.5%	38.3%	43.4%	11.0%
19-29 years	2.9%	3.8%	33.3%	54.2%	5.7%
30+ years	13.7%	6.2%	38.9%	33.0%	8.3%
Male					
11-18 years	1.3%	4.9%	28.9%	43.0%	21.9%
19-29 years	4.3%	2.1%	23.4%	51.0%	19.1%
30+ years	15.1%	6.4%	31.9%	32.7%	13.8%

**Table 6.2: Times Active in Team Sports
% Persons by Gender and Age, 2012**

Gender and Age	Never	1+ times/month
Female		
11-18 years	18.3%	54.4%
19-29 years	26.7%	40.0%
30+ years	84.1%	6.1%
Male		
11-18 years	18.3%	61.5%
19-29 years	21.3%	46.8%
30+ years	70.9%	11.6%

Weight and Body Mass Index

Key Points

- Body Mass Index (BMI) is calculated by (Weight in kg/Height in m²). Normal range is 18.5-24.9, overweight range 25-29.9 and obese range 30+.
- Of the adults 30+ years, who reported self-assessed height and weight, 25.6 % of females and 41.4% of males were overweight and 28.6% females and 20.9% males were obese (Figures 7.1 and 7.2).
- The proportion of overweight and obese females and males has increased significantly from 2001 to 2012 (Figures 7.3 and 7.4). Data was not available from the 1989 survey.
- Waist measures show that more of the older females are at high risk compared to males (Tables 7.1 and 7.2).

Figure 7.1: Body Mass Index, % Females by Age, 2012

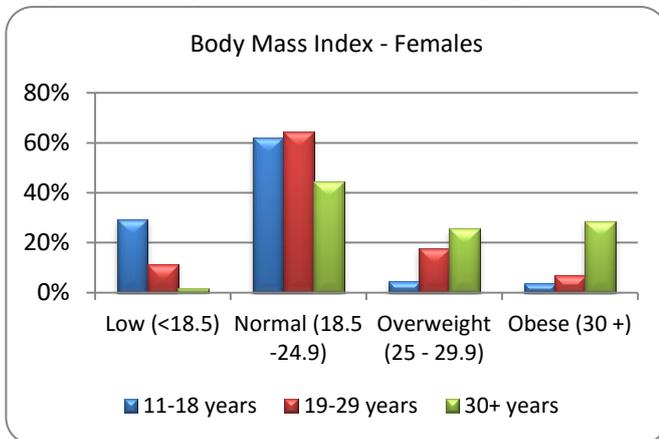


Figure 7.2: Body Mass Index, % Males by Age, 2012

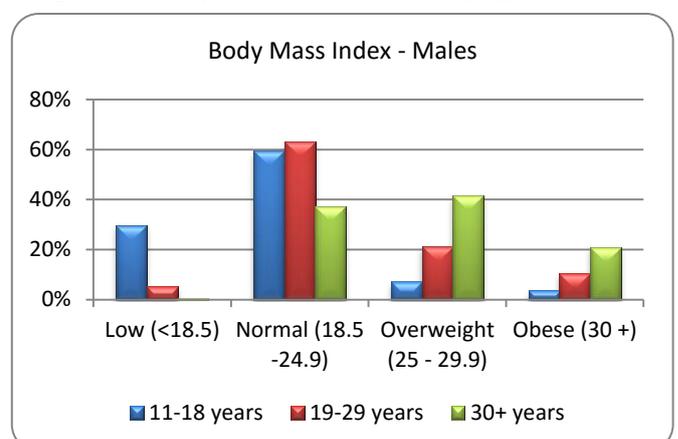


Figure 7.3: Trend of Overweight and Obesity % Females by Age and Survey Year

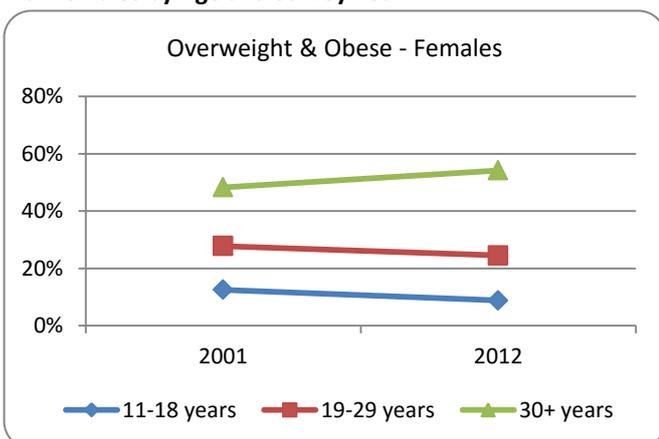


Figure 7.4: Trend of Overweight and Obesity % Males by Age and Survey Year

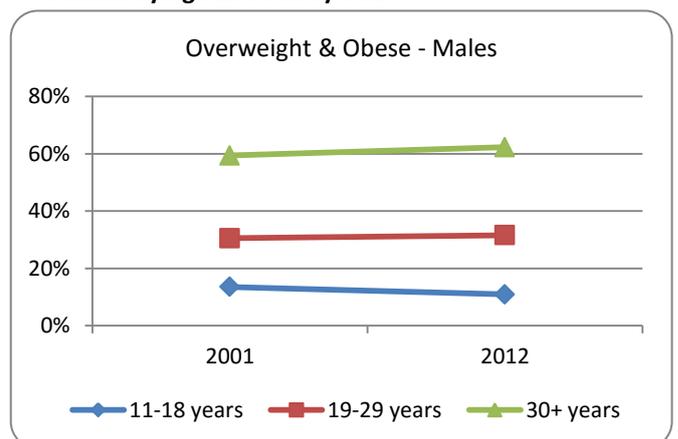


Table 7.1: Waist Measure Risk, % Females by Age, 2012

Age Group	Low (<80 cm)	Medium (80-88 cm)	High (>88 cm)
11-18 years	84.3%	11.8%	3.9%
19-29 years	65.5%	20.7%	13.8%
30+ years	31.4%	30.4%	38.1%

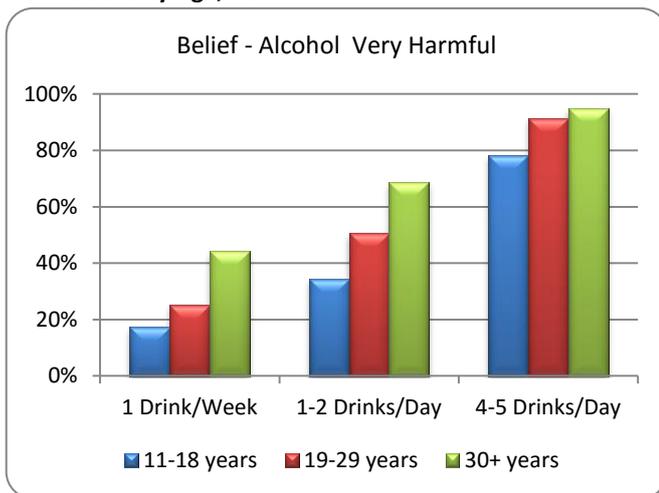
Table 7.1: Waist Measure Risk, % Males by Age, 2012

Age Group	Low (<94 cm)	Medium (94-102 cm)	High (>102 cm)
11-18 years	92.3%	7.7%	0.0%
19-29 years	87.5%	9.4%	3.1%
30+ years	50.0%	28.9%	21.1%

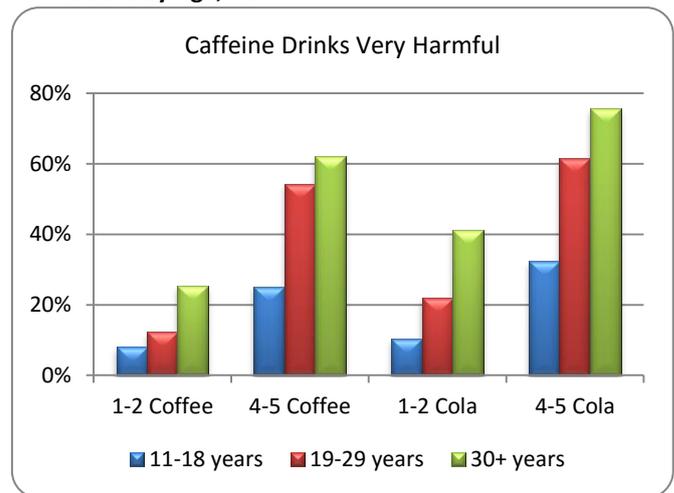
Key Points

- In the three surveys conducted in 1989, 2001 and 2012 participants were asked to rate their belief of the harm of various substances in one of four categories (Very harmful, Somewhat harmful, Not very harmful and Not harmful).
- A higher percentage of all age groups rated increasing levels of alcohol as very harmful, but the younger age groups were lower than the 30+ years group (Figure 8.1).
- A similar pattern was observed for caffeine drinks. But significantly more of each age group rated 4-5 cola drinks/day more harmful than 4-5 coffee drinks/day (Figure 8.2).
- The belief that marijuana is very harmful is higher among females and older age groups (Figure 8.3).
- The trend of belief of harm over the years has increased for tobacco, alcohol and marijuana, although note the dip for marijuana in 2001 (Figure 8.4).

**Figure 8.1: Belief - Alcohol Drinks are Very Harmful
% Persons by Age, 2012**



**Figure 8.2: Belief - Caffeine Drinks are Very Harmful
% Persons by Age, 2012**



**Figure 8.3: Belief - Marijuana is Very Harmful
% Gender by Age, 2012**

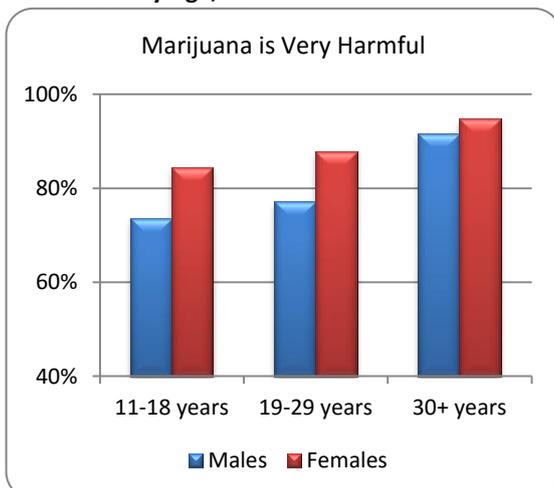
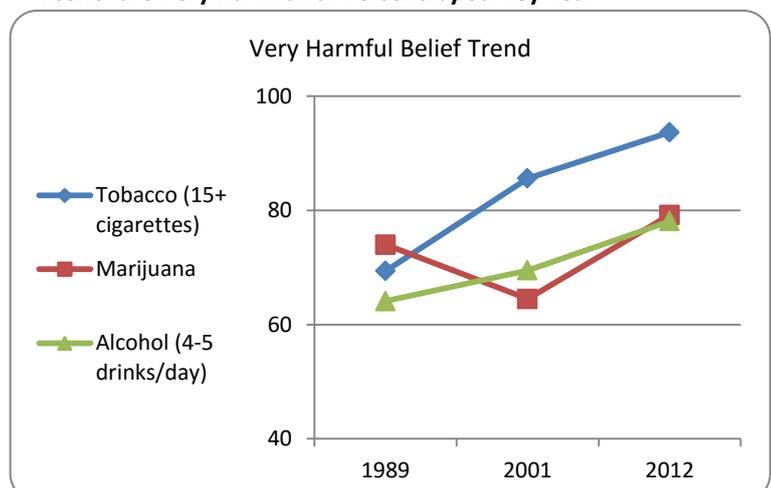


Figure 8.4: Trend of Belief - Tobacco, Marijuana and Alcohol are Very Harmful. % Persons by Survey Year



Key Points

- Analgesic and sleeping tablet use in past month, past year and lifetime was asked in each survey.
- Lifetime and past month use of sleeping tablets and anti-depressants is low (Figures 9.1 and 9.2).
- Lifetime analgesic use is similar to the general population use but the past month use is lower (e.g.11-18 year-old Adventists 51.6% compared to Australian secondary school students 69.1% (see page 21)).
- Among the other reasons given for analgesic use (Table 9.1) is menstrual pain by females.
- Males have a much lower use of analgesics than females (Figures 9.3 and 9.4) but there is a decreasing trend of use for the younger age groups.

Figure 9.1: Medications Ever Used in Lifetime % Persons by Age, 2012

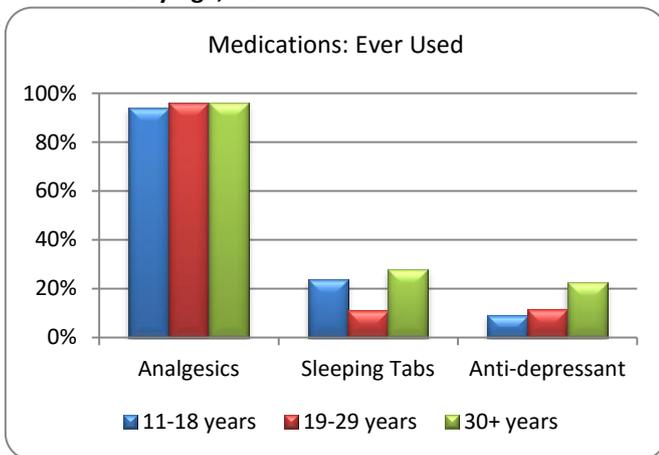


Figure 9.1: Medications Used in Past Month % Persons by Age, 2012

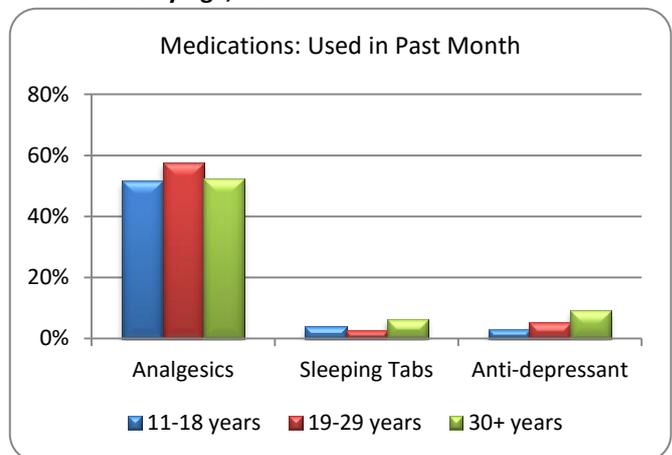


Table 9.1: Reason for Use of Analgesics, % Persons by Gender and Age, 2012

Gender	Age	Headache	Cold or Flu	Dental	Injury	Other	No reason
Female	11-18 years	44.9%	20.5%	7.1%	4.3%	21.5%	1.8%
	19-29 years	51.5%	13.9%	1.0%	3.0%	30.7%	0.0%
	30+ years	39.2%	11.3%	5.3%	4.9%	38.8%	0.6%
Male	11-18 years	48.6%	24.3%	4.5%	13.2%	8.6%	0.7%
	19-29 years	46.5%	20.9%	7.0%	2.3%	20.9%	2.3%
	30+ years	31.8%	17.9%	8.3%	8.3%	32.7%	0.9%

Figure 9.3: Trend of Analgesic Use in Past Month % Females by Age and Survey Year

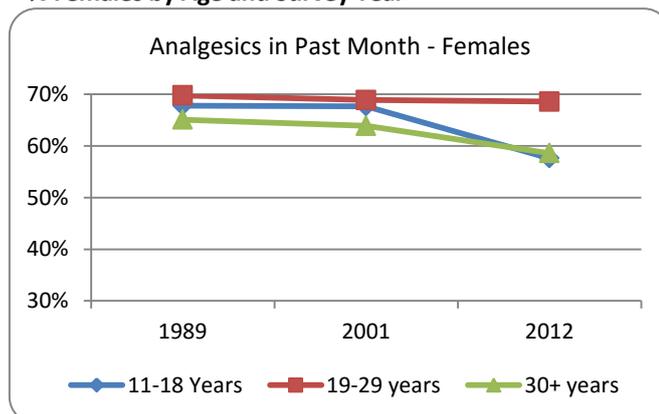
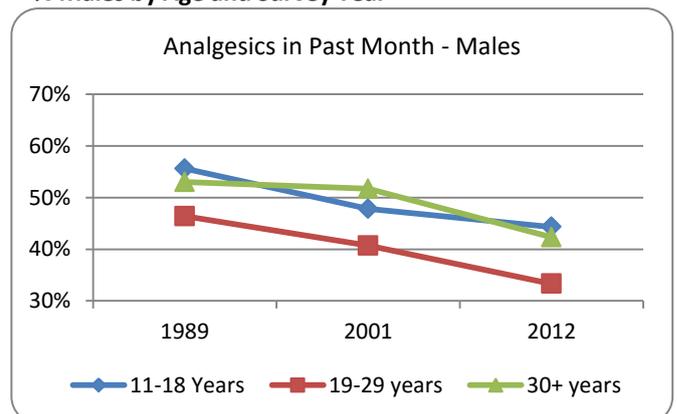


Figure 9.4: Trend of Analgesic Use in Past Month % Males by Age and Survey Year



10 Tobacco

Key Points

- Smoking rates are very low among Adventists. Table 10.1 shows the numbers and percentages for each category of self-assessed smoking status.
- The Figures 10.1 shows that among the younger age groups **non-smoking** has increased significantly since 2001. Those “ever trying” a cigarette have correspondingly decreased (Figure 10.2).
- Likewise Figure 10.3 shows a marked decrease in those smoking three or more cigarettes in the past month.
- The 30+ year old group shows a different trend and is likely influenced in part by the fact that many of this group lived in a more permissive smoking society and became church members as adults.

Table 10.1: Smoking Status - Self-assessed, % Persons by Age, 2012

Age	Heavy smoker	Light smoker	Occasion smoker	Ex-smoker	Non-smoker
11-18 years	2	7	23	22	985
	0.2%	0.7%	2.2%	2.1%	94.8%
19-29 years	0	2	1	7	144
	0.0%	1.3%	0.6%	4.5%	93.5%
30+ years	2	3	5	84	904
	0.2%	0.3%	0.5%	8.4%	90.6%

Figure 10.1: Trend of Never Smoked Cigarettes % Persons by Age and Survey Year

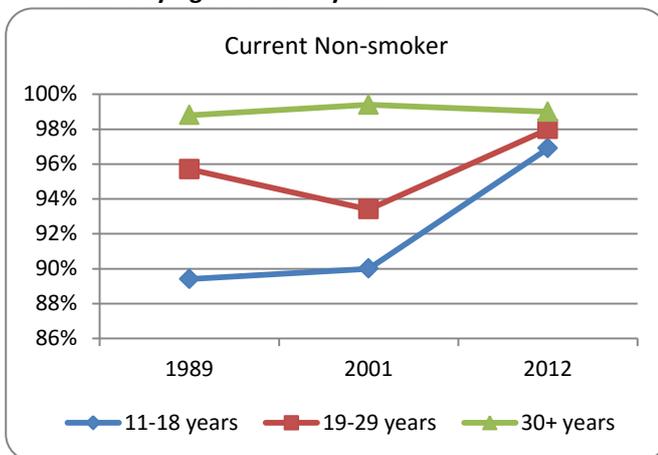


Figure 10.2: Trend of Ever Smoked Cigarettes % Persons by Age and Survey Year

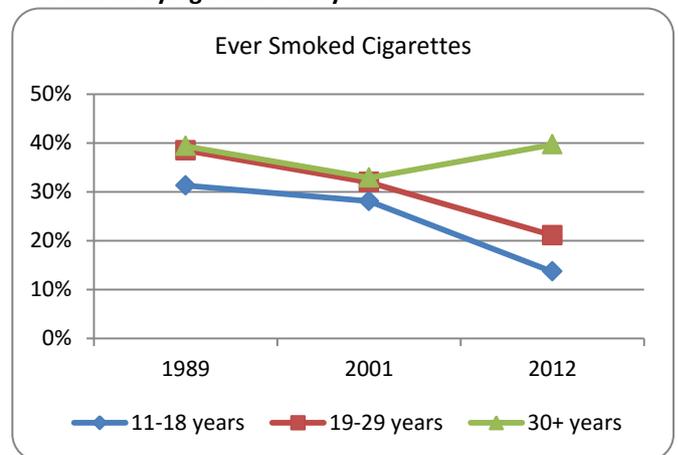


Figure 10.3: Trend of Smoked 3+ Cigarettes in Past Month % Persons by Age and Survey Year

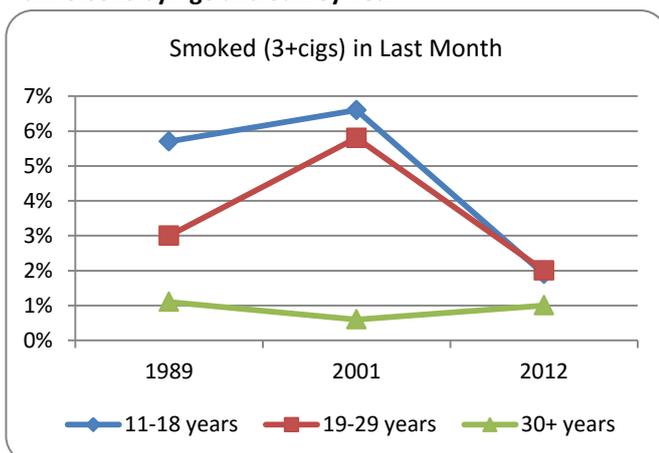


Table 10.2: Reason for Starting Smoking % of Persons Who First Encouraged Use

First Suggested	%
Friend	26%
Myself	25%
Peer group	22%
Brother/sister	8%
Other family member	7%
Non-family adult	5%
Parent	4%
Spouse	2%
Advertising	2%

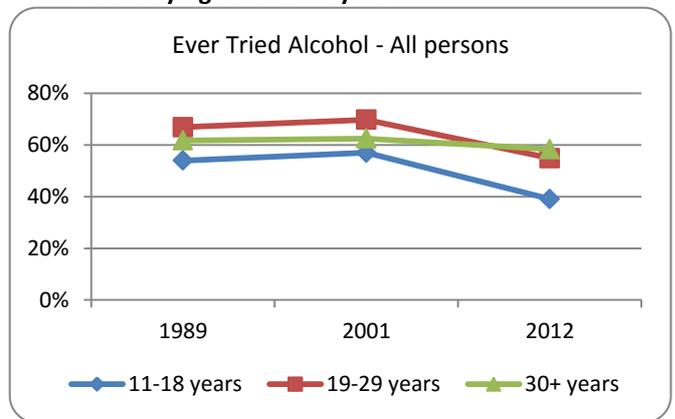
Key Points

- Particularly for the younger age groups the trends of never trying and ever trying alcohol are positive (Figures 11.1 and 11.2).
- The trend for using alcohol in the past year has moved higher for females 19-29 and 30+ years compared to males (Figures 11.3 and 11.4).
- Friends and peer groups as well as personal choice most influence the uptake of drinking (Table 11.1).
- The most popular choice of beverage appears to be spirits, followed by wine and beer (Table 11.2).

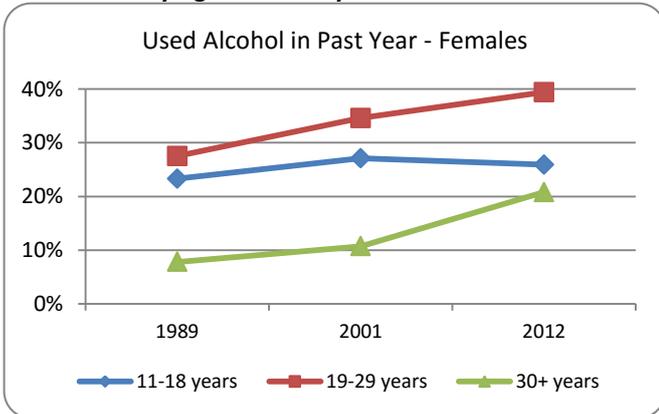
**Figure 11.1: Trend of Never Used Alcohol
% Persons by Age and Survey Year**



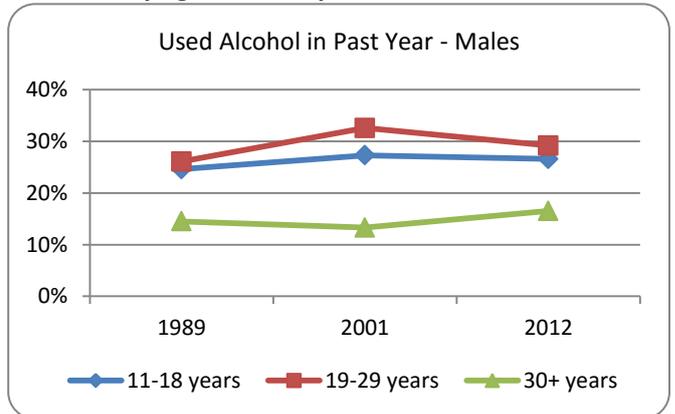
**Figure 11.2: Trend of Ever Used Alcohol
% Persons by Age and Survey Year**



**Figure 11.3: Trend of Used Alcohol in the Past Year
% Females by Age and Survey Year**



**Figure 11.4: Trend of Used Alcohol in the Past Year
% Males by Age and Survey Year**



**Table 11.1: Reason for Starting Alcohol
% of Persons Who First Encouraged Use**

First Suggested	%
Friend	22%
Myself	21%
Peer group	17%
Parent	10%
Other family member	10%
Brother/sister	8%
Non-family adult	6%
Spouse	3%
Advertising	2%

**Table 11.2: Usual Alcohol Drink
(2 responses allowed)**

Type of Alcohol	%
Spirits	26%
Wine	21%
Beer	15%
Champagne	8%
Low beer	6%
Liquors	6%
Alcohol sodas	6%
Other	5%
Apple cider	5%
Port	2%

**Table 11.3: Places Alcohol Drank
In Past Month, % of Drinkers**

Place	%
Home	24%
Friend's home	19%
Party	16%
Restaurant	10%
Hotel	6%
Park	6%
Night club	5%
Beach	5%
Alone	5%
Car	4%

Key Points

- Rates of current and recent marijuana use are very low (Tables 12.1 and 12.2 and Figure 12.1). The number of persons using marijuana 10 or more times is also shown in Table 12.2.
- A higher % of males of all age groups tend to use marijuana compared to females.
- The trend of marijuana use has significantly decreased for the younger age groups since 2001 following a rise after 1989 for both females and males (Figures 12.2 and 12.3).

Table 12.1: Marijuana Use in Time Periods, % Persons by Age, 2012

Age	Past Week	Past Month	Past Year	Lifetime
11-18 years	0.5%	1.6%	4.9%	7.8%
19-29 years	0.6%	1.3%	3.9%	14.3%
30+ years	0.6%	0.6%	1.0%	11.7%

Figure 12.1: Marijuana Use in Time Periods % Persons by Age, 2012

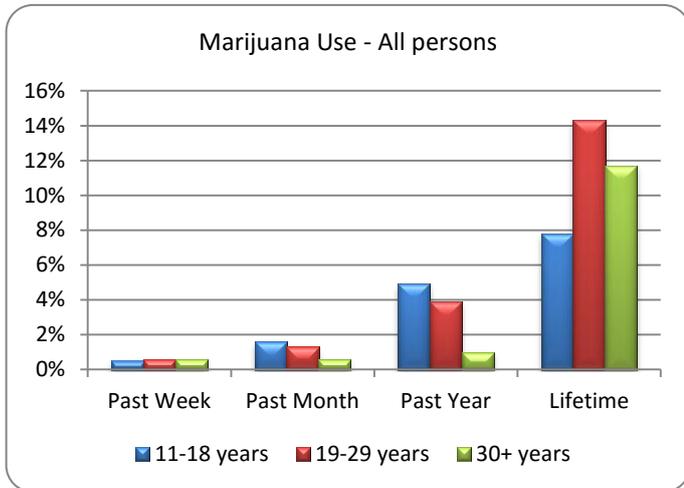


Table 12.2: Marijuana Used 10+ Times in Past Year, % Persons by Age, 2012

Age	Persons	%
11-18 years	10	1.0
19-29 years	3	1.9
30-49 years	2	0.8
50-69 years	2	0.5
70+ years	0	0.0

Figure 12.2: Trend of Ever Used Marijuana % Females by Age and Survey Year

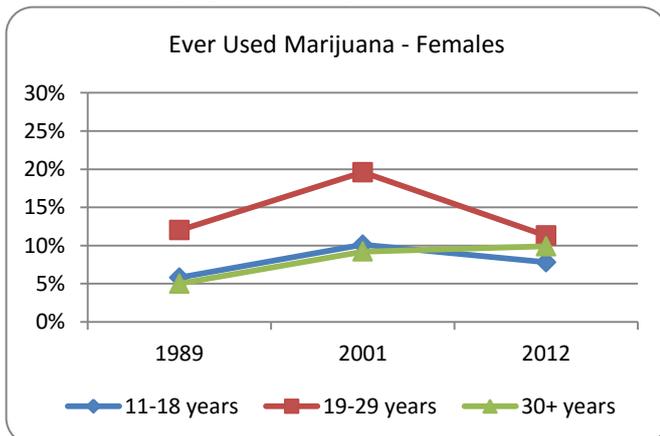
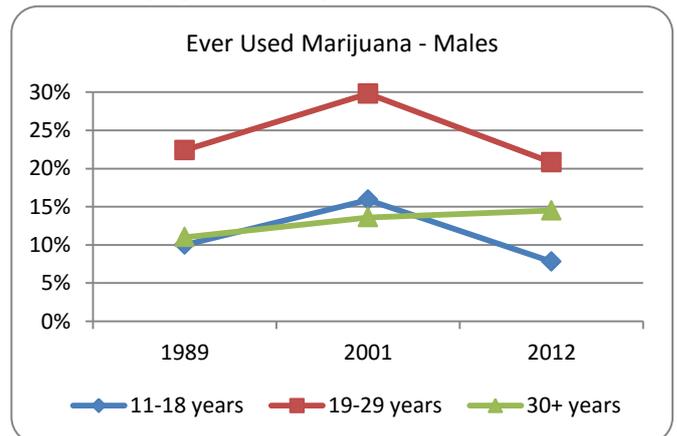


Figure 12.3: Trend of Ever Used Marijuana % Males by Age and Survey Year



Key Points

- Use of most substances is very low but in comparison inhalant use is much higher for 11-18 year olds (Table 13.1 and Figure 13.1). This is possibly an artefact but needs to be investigated further.
- The inhalant question in the 1989 and 2001 surveys was more general but the 2012 question was: “How many times, if ever, have you deliberately sniffed (inhaled) from spray cans or deliberately sniffed things like glue, paint, petrol or thinners in order to get high or for the way it makes you feel?”
- The Secondary Schools Survey 2011 (see page 21) had the same question but with a qualifier: “This does not include sniffing white-out, liquid paper, textas, markers or pens.” They added this in their 1999 survey, prior to which the rates for sniffing were higher.
- Among 11-18 year olds inhalant use appears to be experimental or incidental (Table 13.2) but the trend for this group has significantly increased over time (Figure 13.2).

Table 13.1: Substances Ever Used in Past Month, % Persons Using by Age, 2012

Age	Inhalants	Steroids	Amphetamines	Marijuana	Cocaine	Heroin	Hallucinogens
11-18 years	12.0%	0.6%	0.7%	1.60%	0.0%	0.1%	0.1%
19-29 years	0.7%	0.0%	0.1%	1.30%	0.0%	0.0%	0.0%
30+ years	0.2%	0.3%	0.3%	0.60%	0.1%	0.1%	0.1%

Figure 13.1: Substances Ever Used in Lifetime % Persons Using by Age, 2012

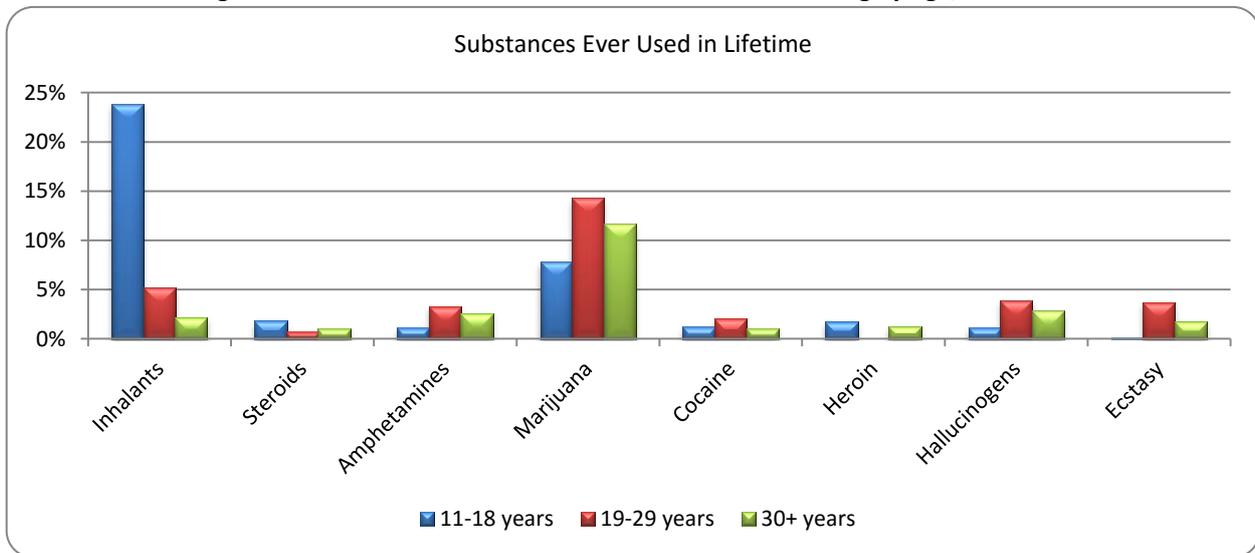


Figure 13.2: Trend of Inhalant Use in Lifetime % Persons Using by Age and Survey Year

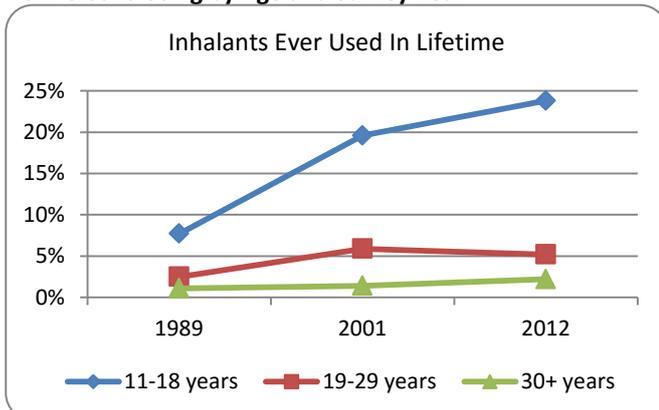


Table 13.2: Inhalant Use by 11-18 Year Olds % 11-18 Year Age Group by Time Period, 2012

Time Period	Never	1-2 times	3-5 times	6+ times
Past Week	91.9%	5.5%	1.6%	1.0%
Past Month	88.0%	7.4%	2.5%	2.1%
Past Year	80.9%	6.7%	5.3%	7.0%
Lifetime	76.2%	6.9%	3.5%	13.3%

Key Points

- Several key questions explored dietary practises and food frequency. One question asked "How would you describe your USUAL diet? (i.e. what you eat at least weekly or more often)." In 2012 participants marked one of four responses (Total vegetarian (Vegan), Lacto-ovo vegetarian, Pesco-vegetarian (includes fish but no red meat) and Non-vegetarian). (Figure 14.1 shows that almost 70% of 11-18 year olds classified themselves as non-vegetarian.
- In 1989 and 2001 this diet question had just 3 categories (pesco-vegetarian was not included). Hence, two diet models present vegetarian dietary trends over 23 years. Model 1 (Figure 14.3) combines all three vegetarian groups (vegan, lacto-ovo and pesco-veg). Since 2001 this model shows an increase in vegetarian eating to 57% for both older age groups whereas the younger age group drops to 31%.
- Figure 14.4 (Model 2) excludes the pesco-vegetarians from the vegetarian group and adds them to the non-vegetarian group, thus the trend is downward for all age groups.
- In Tables 14.1 and 14.2 the trend for vegan diet only is shown. Over the years there is an increasing trend toward a vegan diet for the older age groups and particularly for males.

Figure 14.1: Usual Diet, % Persons by Age, 2012

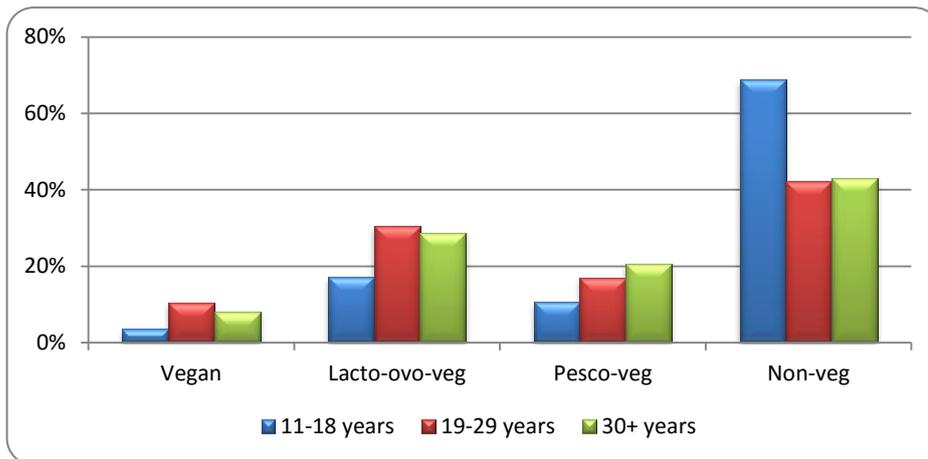


Figure 14.3: Trend of Vegetarian Diet(Model 1) % Persons by Age, 2012

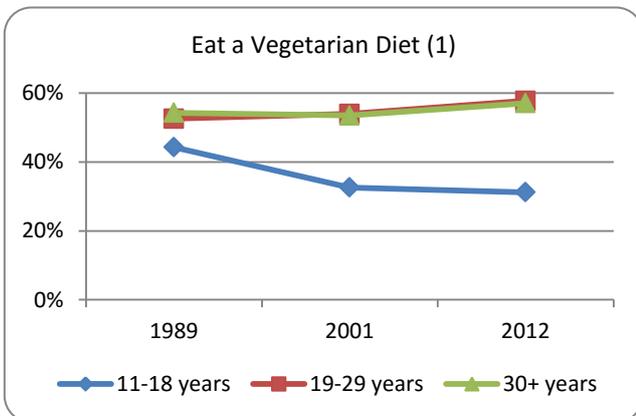


Figure 14.4: Trend of Vegetarian Diet(Model 2) % Persons by Age, 2012

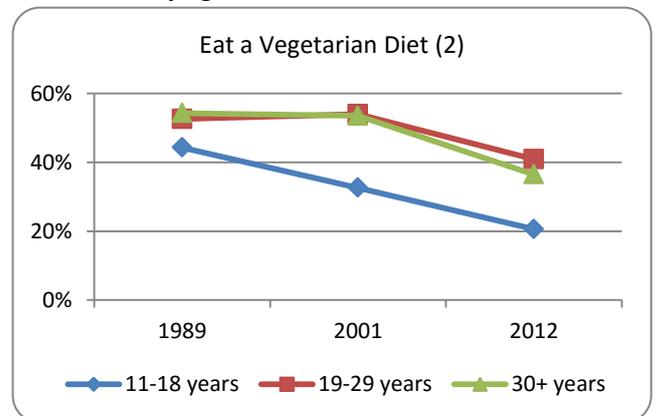


Table 14.1: Trend of Vegan Diet - Males % by Age and Survey Year

Age	1989	2001	2012
11-18 years	2.6%	3.0%	3.4%
19-29 years	5.1%	6.9%	12.5%
30+ years	4.3%	6.7%	7.6%

Table 14.2: Trend of Vegan Diet - Females % by Age and Survey Year

Age	1989	2001	2012
11-18 years	1.8%	3.9%	3.6%
19-29 years	5.6%	5.2%	9.4%
30+ years	3.0%	4.8%	8.1%

Key Points

- Trend for proportion of persons eating fast food is increasing among younger age groups (Figure 15.1).
- Trend for consumption of fruit has increased, vegetables dropped slightly for the youth and breads/cereals decreased by 20% for all groups (Figure 15.2).
- Trend for the eating of beef, chicken and fish is increasing among all age groups (Figure 15.3).

**Figure 15.1: Trend of Eating Fast Food
% Persons by Age and Survey Year**

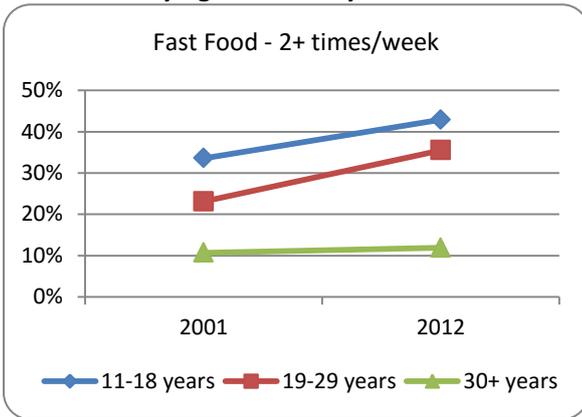


Table 15.1: Eating of Various Foods - % Persons by Age, 2012

Food (Frequency)	11-18 years	19-29 years	30+ years
Vegetables (<1 serve/day)	18%	15%	11%
Fruit (<1 serve/day)	20%	33%	21%
Cereals (<1 serve/day)	17%	16%	17%
Nuts (Never or rarely)	20%	6%	5%
Beans (Never or rarely)	21%	9%	6%
Red meat (≥1 time/week)	50%	26%	30%
Fish (≥1 time/week)	39%	24%	37%
Chicken (≥1 time/week)	56%	33%	36%
Pork (≥1 time/week)	19%	2%	3%
Salt (1+ times/day)	14%	12%	20%

Figure 15.2: Trend of Eating Fruit, Vegetables and Breads/Cereals, % Persons by Age and Survey Year

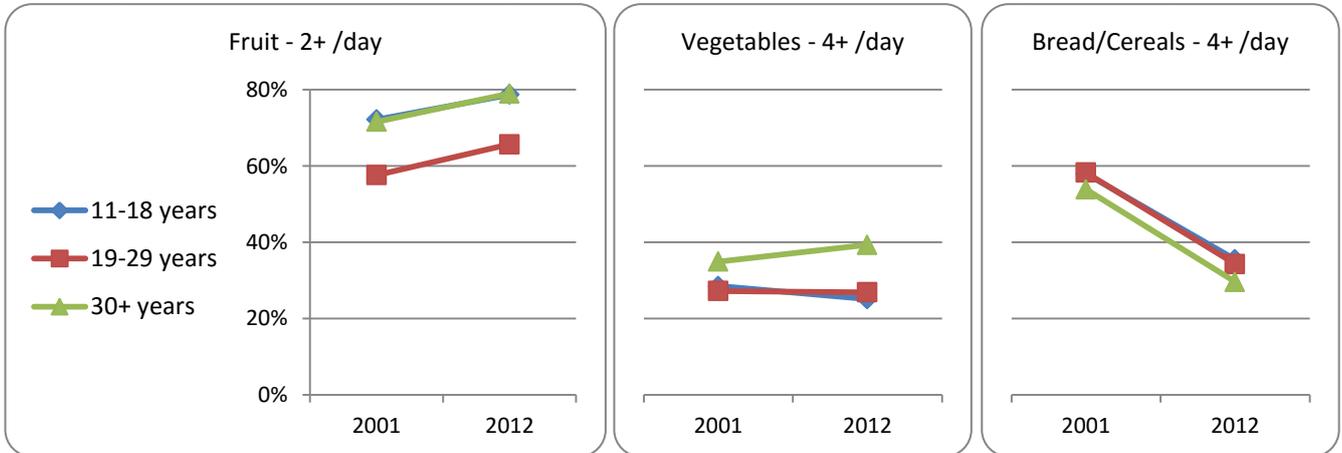
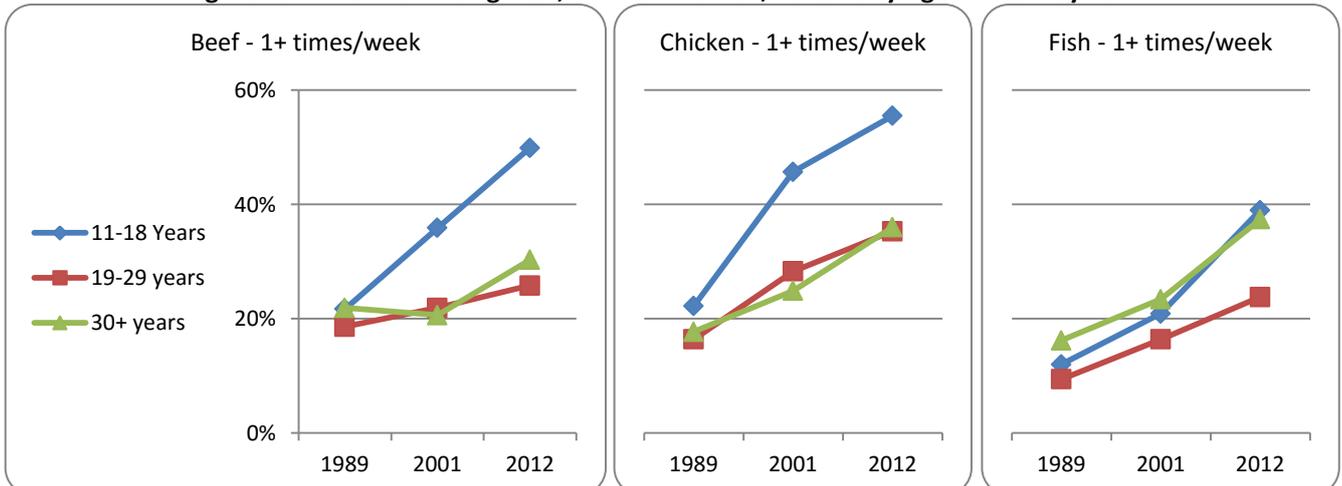


Figure 15.3: Trend of Eating Beef, Chicken and Fish, Persons by Age and Survey Year



Key Points

- Almost 60% of respondents report drinking less than six glasses of water per day, 21.5% of 11-18 year olds report drinking one or less per day (Table 16.1).
- 27.5% of teenagers drink one or more glasses of fruit juice per day (Table 16.2).
- Consumption of soy milks is from 24% to 44% across the age groups.
- The trend of caffeine beverages (one or more drinks per day of tea, coffee and cola) appears to be downward across all beverages and age groups; cola drinks significantly so for teenagers (Figure 16.2).

Table 16.1: Drinks of Water per Day
% Persons by Age, 2012

Frequency	11-18 years	19-29 years	30+ years
≤1 time/day	21.5%	8.7%	6.9%
2-3 times/day	20.9%	18.8%	18.2%
4-5 times/day	25.0%	28.9%	33.4%
6+ times/day	32.6%	43.6%	41.4%

Table 16.2: Beverages Consumed 1+ times/day
% Persons by Age, 2012

Beverage (1+ times/day)	11-18 years	19-29 years	30+ years
Milk - All types	44.5%	43.9%	46.9%
Tea	5.7%	8.1%	20.3%
Coffee	2.8%	14.1%	19.4%
Fruit juice	27.5%	14.8%	19.7%
Cola drinks	10.4%	2.7%	2.3%
High energy drinks	2.8%	0.7%	0.3%
Other soft drinks	9.9%	2.0%	1.7%

Figure 16.1: Total Caffeine Drinks Consumed
% Persons by Age, 2012

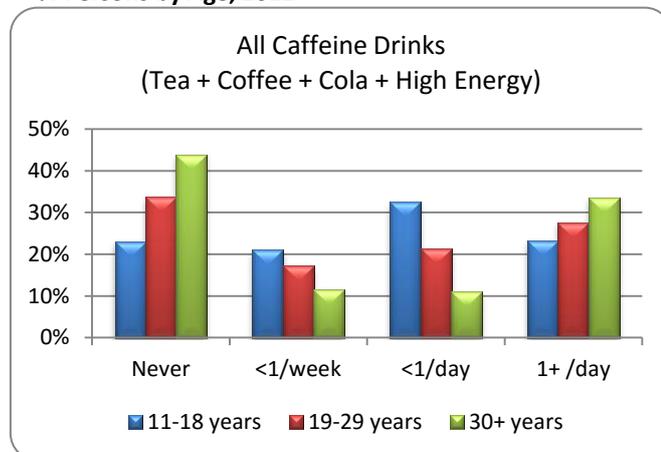
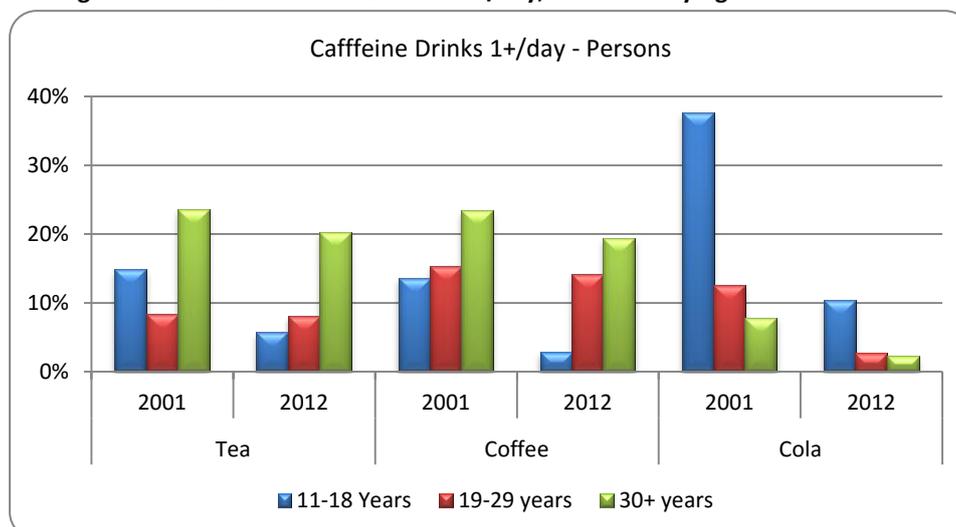


Table 16.2: Type of Milk Usually Consumed
% Persons by Age, 2012

Milk Type	11-18 years	19-29 years	30+ years
Whole full cream	41.4%	33.3%	20.2%
Reduced fat	15.2%	9.2%	15.3%
Skim	10.0%	7.2%	9.7%
Soy regular	19.1%	27.5%	34.7%
Soy lite	3.8%	9.8%	9.3%
Evaporated	0.3%	0.7%	0.0%
Other (rice, oat)	3.5%	6.5%	6.2%
Do not drink milk	6.8%	5.9%	4.6%

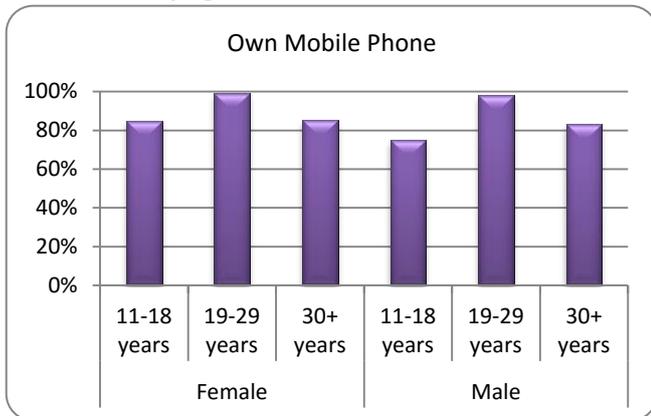
Figure 16.2: Trend of Caffeine Drinks 1+/day, % Persons by Age 2001 and 2012



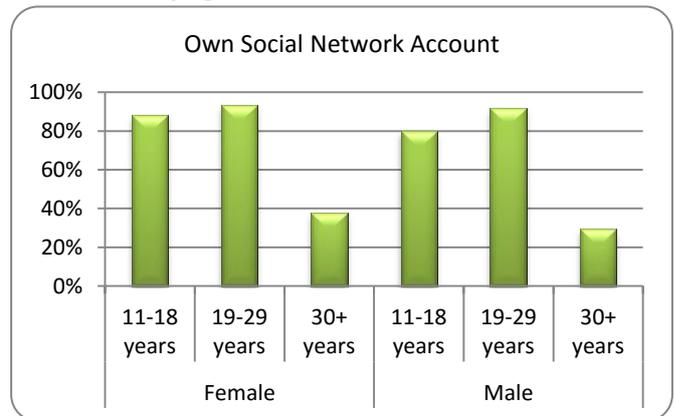
Key Points

- Most members have their own mobile phones and very high proportions of the younger age groups have their own social network account such as Facebook or Twitter (Figures 17.1 and 17.2).
- More of the 30+ year olds watch TV for more hours than the younger age groups (Figure 17.3).
- About 30% of the 11-18 year olds attend movies 1+ times/month but this is less than 2001 (Figure 17.5).

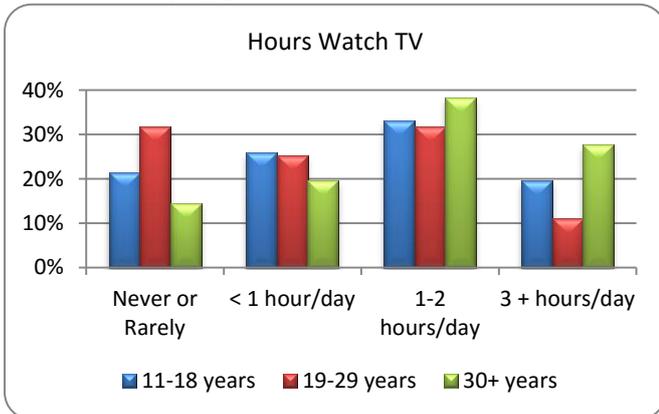
**Figure 17.1: Have Own Mobile Phone
% Persons by Age, 2012**



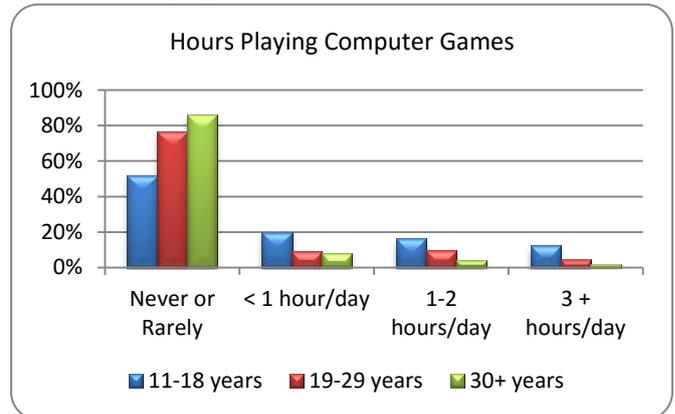
**Figure 17.2: Have Own Social Network Account
% Persons by Age, 2012**



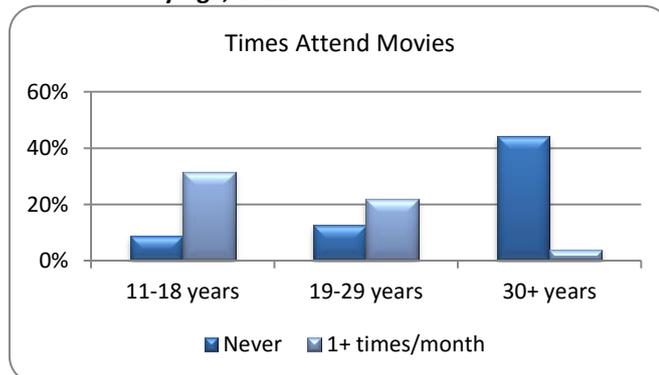
**Figure 17.3: Hours Watch TV
% Persons by Age, 2012**



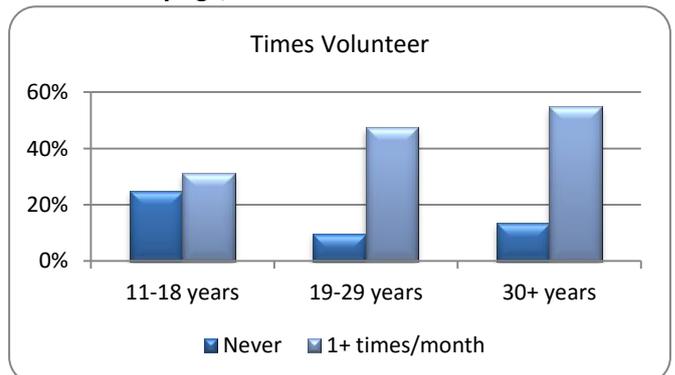
**Figure 17.4: Hours Play Computer Games
% Persons by Age, 2012**



**Figure 17.5: Times Attend Movies
% Persons by Age, 2012**



**Figure 17.6: Times Volunteer in Community/Church
% Persons by Age, 2012**



18 Faith and Religion

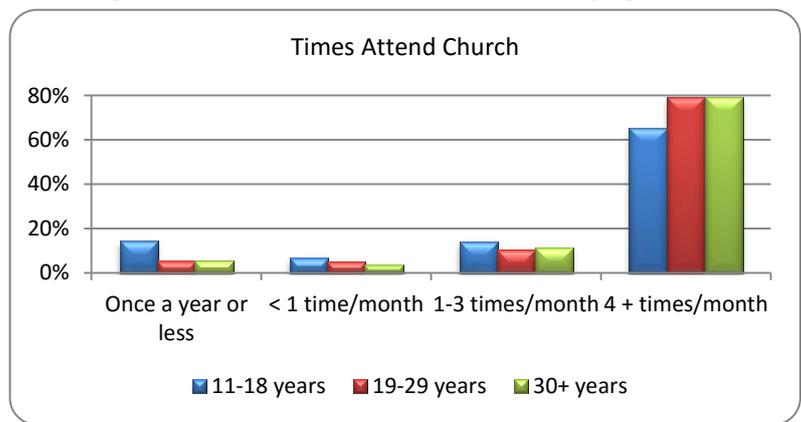
Key Points

- Respondents were classified as Seventh-day Adventist if they had been baptised and for an unbaptised young person who was living with a Seventh-day Adventist parent.
- The majority of baptised respondents were baptised before the age of 15 years although 15% of respondents were baptised after 29 years of age (Table 18.1).
- Frequency of church attendance has decreased over time except for the 19-29 year olds (Figure 18.2).
- Trends for faith experiences are positive (Figures 18.4 and 18.5).

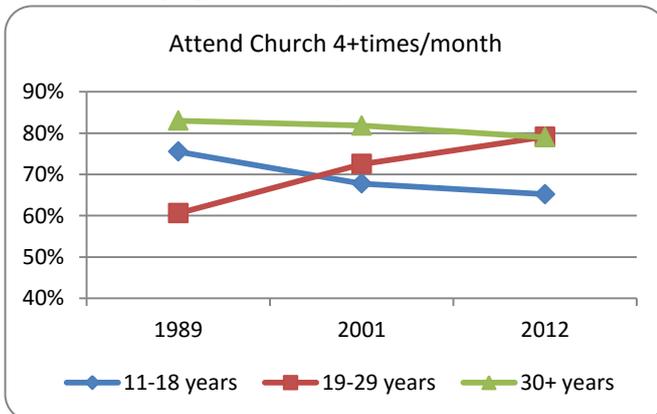
**Table 18.1: Age when Baptised
% Persons, 2012 Survey**

Age of Baptism	%
<= 14 years	43.8
15-18 years	25.4
19-29 years	15.8
30+ years	15.0

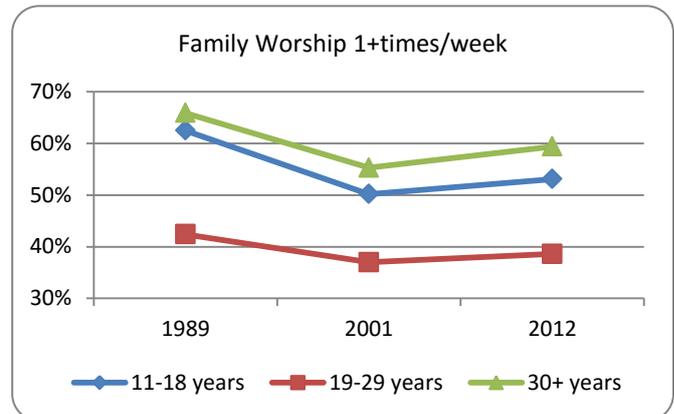
Figure 18.1: Times Attend Church % Persons by Age, 2012



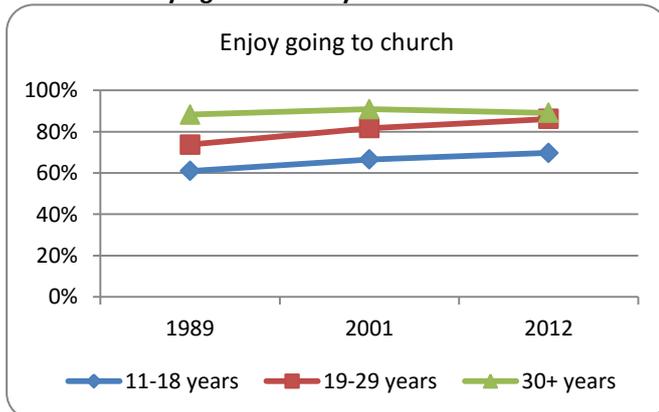
**Figure 18.2: Trend of Church Attendance
% Persons by Age and Survey Year**



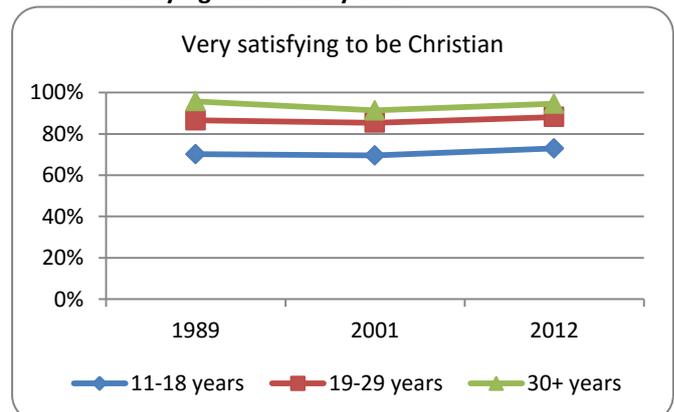
**Figure 18.3: Trend of Weekly Family Worship
% Persons by Age and Survey Year**



**Figure 18.4: Trend of Enjoy Going to Church
% Persons by Age and Survey Year**



**Figure 18.5: Trend of Satisfying to be Christian
% Persons by Age and Survey Year**



Key Points

- High proportions of Adventists grew up, and now live, in a rural environment (Figures 19.1 and 19.2).
- Nearly 40% of older members grew up in a non-Adventist home (Figure 19.1).
- 27% of older members compared to 10% of younger members describe their own childhood family as strict and very rigid (Figure 19.4)
- A number of childhood conditions experienced are of concern (parents drinking, parents separating/divorce, violence and abuse) (Table 19.1)

Figure 19.1: Place Where Lived as a Child
% Persons by Age, 2012

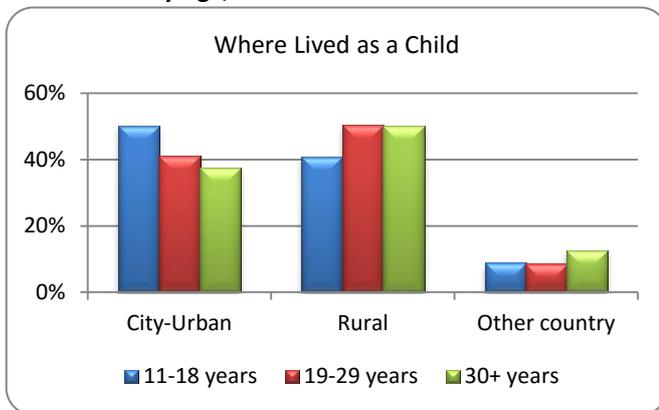


Figure 19.2: Place Where Now Live
% Persons by Age, 2012

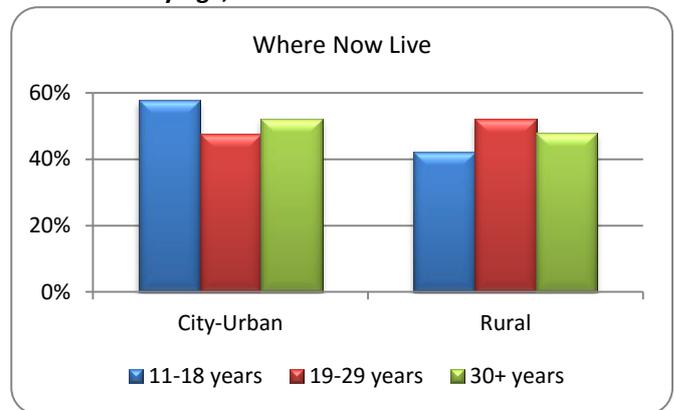


Figure 19.3: Parent SDA in Your Childhood
% Persons by Age, 2012

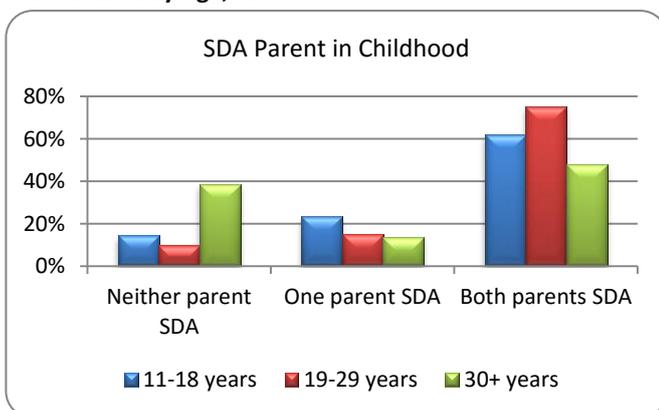


Figure 19.4: Family Description in Childhood
% Persons by Age, 2012

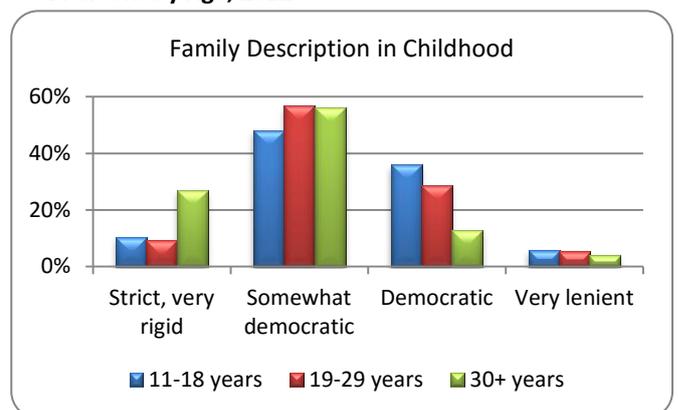


Table 19.1: Childhood Conditions Experienced, % Persons by Age, 2012

Condition	11-18 years	19-29 years	30+ years
Parents smoked tobacco	16.7%	11.2%	32.2%
Parents drank alcohol	24.5%	16.4%	26.2%
Parents in trouble with law	9.8%	5.9%	1.8%
Parents separated/divorced	22.7%	18.4%	11.8%
Parent died	4.1%	4.6%	16.3%
Parent absent from home	19.4%	17.8%	16.3%
Family violence occurred	18.7%	12.5%	18.7%
I was physically abused	13.2%	5.9%	14.1%
I was sexually abused	3.0%	5.3%	7.5%
I felt like misfit	16.0%	23.2%	21.0%
Compulsive behaviour	9.0%	15.1%	6.0%

Key Points

- In each survey (1989, 2001, 2012) there were belief statements to which participants indicated their level of agreement (Strongly disagree, Disagree, Undecided, Agree, Strongly agree).
- For statements of faith and religious practice a higher proportion of older Adventists compared to younger Adventists were in agreement (Table 20.1).
- All groups had high expectations for the church to help members with drug problems.
- There is a decreasing trend in all groups that "the Bible forbids clearly forbids all use of alcoholic beverages" (Figure 20.1).
- Less young Adventists believe they will remain a church member for the rest of their lives (Figure 20.2).

Table 20.1: Agree or Strongly Agree with Statement, % Persons by Age Group, 2012

Statement	11-18 years	19-29 years	30+ years
Very satisfying to be a Christian	73.0%	88.2%	94.5%
Likely to remain a church member for rest of my life	66.1%	86.8%	92.6%
My religion/spirituality is very important in my life	74.2%	89.4%	96.2%
My life is filled with meaning and purpose	66.4%	85.4%	88.1%
I enjoy going to church	69.6%	86.2%	89.0%
Parents showed me love	84.6%	92.1%	85.0%
Parents understood me	69.7%	74.8%	65.2%
Family had lots of fun	76.2%	86.8%	68.5%
Parents didn't trust me	16.4%	14.5%	8.7%
Parents didn't like what I did	4.9%	4.6%	5.4%
Enjoyed being at home with family	72.9%	83.6%	82.1%
Father was very strict with me	33.6%	45.0%	54.1%
Bible forbids all alcohol	45.0%	35.9%	64.6%
Bible forbids excess alcohol (drunkenness)	70.4%	86.9%	92.6%
Preferable to eat a vegetarian diet	42.0%	66.7%	83.4%
Church should help members with drug problems	77.6%	96.1%	94.0%
I am concerned youth are drinking	22.0%	55.9%	46.2%
Alcohol in moderation prevents heart disease	19.3%	9.2%	9.8%
Church is doing enough to combat drugs	19.4%	10.5%	18.3%
Church is doing enough to combat alcohol problems	21.2%	11.3%	20.7%
Church should actively promote care of the environment	57.6%	73.2%	77.3%

Figure 20.1: Trend of Belief - Bible Forbids all Alcohol
% Persons by Age and Survey Year

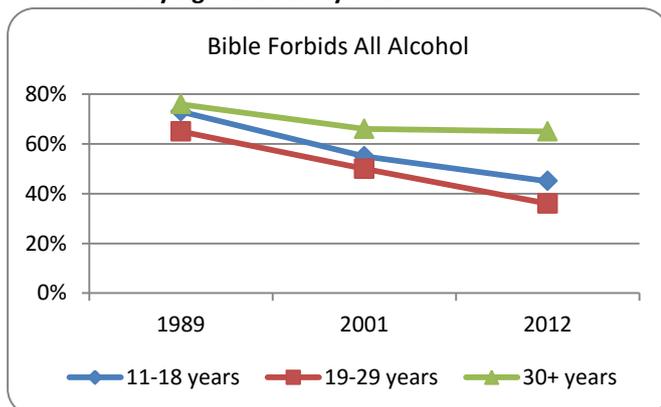
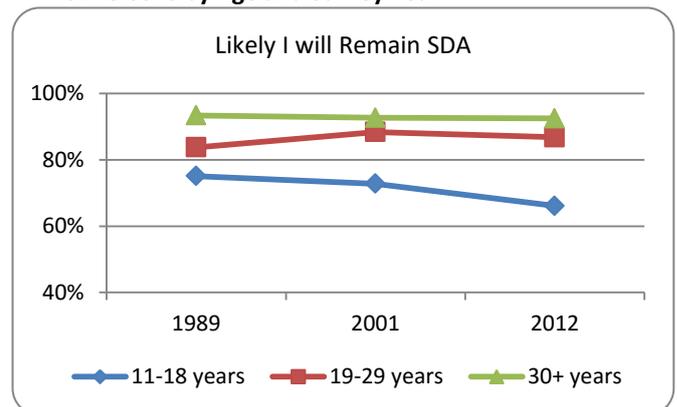


Figure 20.2: Trend of Belief - Likely I will remain SDA
% Persons by Age and Survey Year



Key Points

- Table 21.1 shows the number of SDA and non-SDA participants in each school taking part in the survey.
- A large survey of Australian secondary school students was conducted by the Cancer Council Victoria in 2011 (Australian secondary school students' use of tobacco, alcohol, and over-the-counter and illicit substances in 2011).
- Tables 21.2, 21.3 and 21.4 compare the Australian student rates to Adventist schools for smoking, alcohol use and other substance use. Tables 21.2 and 21.5 show rates separately for SDA students only and all students at Adventist schools.
- Except for inhalants, all substance use is much lower in Adventist schools compared to Australian schools.

**Table 21.1: SDA Status of Students by High School
% Students, 2012**

School	Unknown	SDA	Non-SDA	Total #
Auckland	11.0%	65.8%	23.3%	73
Avondale	2.2%	61.8%	36.0%	186
Blue Hills	8.2%	60.0%	31.8%	85
Brisbane	2.6%	75.8%	21.6%	190
Carlisle	0.0%	100.0%	0.0%	1
Carmel	5.2%	67.2%	27.6%	58
Central Coast	8.1%	31.4%	60.5%	86
Christchurch	2.7%	73.0%	24.3%	74
Darling Downs	2.1%	66.0%	31.9%	47
Gilson	6.1%	28.7%	65.2%	279
Henderson	11.1%	38.9%	50.0%	18
Heritage	0.0%	62.5%	37.5%	8
Hills	5.6%	58.9%	35.6%	90
Lilydale	2.5%	41.4%	56.2%	162
Longburn	3.3%	48.8%	48.0%	123
Mountain View	9.6%	70.2%	20.2%	104
Noosa	1.6%	45.9%	52.5%	61
Northpine	9.5%	39.5%	51.0%	200
Prescott	0.0%	62.5%	37.5%	16
Tweed Valley	1.1%	68.1%	30.9%	94
Total students	100	1036	819	1955
	5.1%	53.0%	41.9%	100.0%

**Table 21.2: Smoking Status of Students 12-18 Years
% by Gender, Adventist 2012 and Australia 2011**

Smoking Status	Adventist SDA only (%)	Adventist ALL Students (%)	Australian 2011 (%)
Occasional Smoker			
Males	2.0%	2.7%	4.3%
Females	2.6%	2.6%	4.9%
Total	2.3%	2.7%	4.6%
Ex-smoker			
Males	2.6%	2.2%	2.8%
Females	1.1%	1.5%	2.2%
Total	1.8%	1.8%	2.5%
Non-smoker			
Males	94.4%	93.5%	89.4%
Females	95.7%	94.2%	89.5%
Total	95.1%	93.9%	89.5%

**Table 21.3: Past Month Use of Substances
Students 12-18 Years, Adventist 2012 and Australia 2011**

Substance	Adventist ALL female	Adventists ALL male	Aust. 2011 ALL female	Aust. 2011 ALL male
	(%)	(%)	(%)	(%)
Marijuana	2.5%	3.6%	5.7%	7.9%
Steroids	0.3%	0.9%	0.5%	1.1%
Inhalants	11.0%	11.1%	7.8%	6.3%
Amphetamines	0.7%	0.5%	0.8%	1.4%
Cocaine	0.0%	0.6%	0.4%	0.8%
Heroin	0.2%	0.1%	0.4%	0.7%
Hallucinogens	0.0%	0.8%	0.7%	1.3%
Ecstasy	0.0%	0.2%	0.6%	1.2%
Analgesics	62.9%	47.2%	76.5%	61.7%
Sleeping tabs	4.8%	3.2%	4.3%	4.1%

**Table 21.4: Alcohol Status of Students
Adventist 2012 and Australia 2011**

Use	Adventist SDA only (%)	Adventist ALL Students (%)	Australia 2011 (%)
Never used			
Males	59.3%	53.8%	24.8%
Females	61.2%	53.7%	27.2%
Total	60.3%	53.8%	26.0%
Past month			
Males	7.5%	10.3%	29.6%
Females	8.3%	11.8%	28.7%
Total	7.9%	11.1%	29.1%
Past year			
Males	19.7%	25.2%	51.3%
Females	22.6%	29.4%	50.1%
Total	21.2%	27.5%	50.7%

Key Points

- Questions on health care and medical conditions were answered only by adults aged 19 years and older.
- 54% of adults 65+ years had a flu injection in the past year and they also had the lowest flu rate - 15% (Table 22.1).
- Those 50 years and older had significantly higher rates of hypertension, high cholesterol, arthritis, back problems and cancer compared to younger adults (Table 22.2).
- The highest diagnosed medical condition among the 19-39 year olds was depression - 15% (Table 22.2).
- More than 80% of respondents had made at least one visit to a general practitioner in the past year and visits to a chiropractor were slightly more than visits to a physiotherapist (Table 22.3).
- More than 30% of respondents used a multi-vitamin supplement at least once a month and older adults had higher usage of fish oil supplement and herbal remedies than the younger adults (Table 22.4).

Table 22.1: Medical Conditions Experienced Last Year
% Persons by Age, 2012

Condition	19-34	35-49	50-64	65+
	years	years	years	years
	n ≈ 194	n ≈ 220	n ≈ 316	n ≈ 420
	%	%	%	%
Flu	35.9	33.6	19.5	15.2
Flu Shot	18.5	21.5	33.5	53.7
Cold	11.7	25.6	40.6	48.7

Table 22.2: Medical Conditions Ever Diagnosed
% Persons by Age, 2012

Diagnosed Condition	19-34	35-49	50-64	65+
	years	years	years	years
	n ≈ 194	n ≈ 220	n ≈ 316	n ≈ 420
	%	%	%	%
Heart attack	0.0	0.9	1.6	12.1
Stroke	0.5	0.5	0.3	3.9
Hypertension	4.6	8.3	20.7	41.7
High cholesterol	1.6	6.4	26.1	33.7
Depression	14.9	19.2	20.9	12.2
Diabetes Type II	0.5	3.2	7.9	14.0
Asthma	11.4	14.5	10.1	12.6
Sleep Apnea	1.5	4.5	7.0	6.7
Arthritis	0.5	5.0	17.7	33.0
Back problem	12.4	18.8	27.2	35.4
Vit B12 deficiency	7.7	12.8	10.4	15.7
Food allergies	8.8	9.2	8.0	7.5
Cancer	1.8	4.2	12.7	26.1

Table 22.3: Health Providers Visited Past Year
% Persons by Age, 2012

Health Service	19-34	35-49	50-64	65+
	years	years	years	years
	n ≈ 194	n ≈ 220	n ≈ 316	n ≈ 420
	%	%	%	%
General practitioner	81.4	85.5	84.5	95.7
Specialist	27.5	25.7	37.6	55.3
Psychiatrist	5.1	3.7	1.6	2.9
Psychologist	8.8	6.9	5.4	2.1
Physiotherapist	11.3	13.8	18.8	18.3
Chiropractor	14	19.6	21.2	16.8
Massage therapist	24.6	30.1	20.8	16.1
Osteopath	7.2	9.7	9.8	9.4
Optician	26.2	35.5	50.3	69.9
Dentist	55.9	53.2	67.2	62.5

Table 22.4: Supplements Use ≥ Once a Month
% Persons by Age, 2012

Supplement	19-34	35-49	50-64	65+
	years	years	years	years
	n ≈ 194	n ≈ 220	n ≈ 316	n ≈ 420
	%	%	%	%
Multivitamin	34.2	36.9	30.4	30.1
B-Complex	15.7	22.7	24.7	14.6
Vitamin C	30.1	24.4	28.7	25.3
Vitamin D	6.8	15.3	23.4	28.8
Vitamin B12	14.7	13.7	19.9	22.3
Calcium	6.3	6.6	21.2	28.7
Magnesium	6.3	11.8	24.2	22.6
Fish Oil (Omega-3)	14.7	18.7	32.9	38.9
Herbal Remedies	16.2	17.5	25.0	25.5

Key Points

- In this research significant associations were found between various factors (conditions, beliefs and behaviours) and risky health behaviours and conversely healthy behaviours.
- However, since this is a cross-sectional study, these relationships cannot be determined as cause and effect and need to be interpreted cautiously.
- The tables below illustrate the magnitude of some of these associations and correlations with other risk behaviours. The associations are not adjusted for age or other factors.

Factors associated with Smoking

- Smokers compared to non-smokers are more likely to have negative factors from childhood; believe cigarettes are not very harmful; drink alcohol and have used marijuana.
- Smokers tend to believe their religion is less important and attend church less often.

Table 23.1: Factors Associated with Smoking, % by Smokers Status, 2012

Smoke Status	Parent Smoked	Parent Drank Alcohol	Cigarettes Not Harmful	Drink Alcohol	Use Marijuana 3+ times/year	My Religion Important
Non-smoker	23%	28%	1%	13%	1%	75%
Ex-smoker	69%	52%	1%	36%	10%	82%
Smoker	54%	62%	9%	88%	47%	38%

Factors associated with Alcohol Use

- Alcohol drinking is significantly associated with other lifestyle behaviours such as drinking caffeine beverages, smoking, marijuana use and a non-vegetarian diet.
- Drinkers have less agreement with "the Bible forbids all alcohol" and that "alcohol is harmful".

Table 23.1: Factors Associated with Drinking Alcohol, % by Alcohol Status, 2012

Alcohol Status	Drink Caffeine 1+ /week	Vegetarian Diet	Family worship	Bible forbids all alcohol	I'll Drink in future	Alcohol is Harmful
Non-drinker	51%	25%	32%	49%	12%	52%
Drinker	87%	7%	12%	18%	69%	12%

Factors associated with Diet

- Respondents eating vegan and vegetarian diets compared to a non-vegetarian diet show a lower prevalence of the diagnosed conditions of diabetes, obesity, high BP and high cholesterol.
- But Vitamin B¹² deficiency is higher among the vegetarian groups.

Table 23.3: Health Conditions Associated with Diet, % Prevalence of Condition by Type of Diet, 2012

Type of Diet	Diabetes	Low Vitamin B ¹²	Overweight & Obese	High BP	High Cholesterol
Vegan	3%	17%	31%	17%	10%
Lacto-ovo	6%	16%	49%	21%	20%
Non-Veg + Pesco	9%	10%	56%	25%	22%

Participants

- ✓ 2063 high school students
- ✓ 192 Avondale College students
- ✓ 1160 church members – Australia and New Zealand

Diet

- ✓ Increased trend for vegan diet particularly for older age groups
- ✗ More than 40% of younger ages eat fast food 2+ times/week
- ✗ More eating beef, chicken and fish

Alcohol

- ✓ Trend of “ever used” alcohol has decreased since 2001
- ✗ 40% of females and 30% males aged 19-29 years used alcohol in past year

Drugs

- ✓ Prevalence of illicit drugs is very low
- ✓ Use of marijuana has decreased since 2001
- ✗ Inhalant use among 11-18 year olds has increased since 2001

Faith

- 15% members baptised after 29 years of age
- ✓ Positive trend of members enjoying church and finding the Christian life satisfying
- ✓ 19-29 year-olds have a 20% increase trend of regular church attendance since 1989

Physical Activity

- ✗ Only 50% of respondents have a regular exercise program
- Males of all ages are more active than females
- ✗ Students sit more hours than adults

Body Mass Index

- ✓ BMI among younger ages has decreased slightly since 2001
- ✗ Among 30+ years, 54% females and 62% males are overweight or obese

Tobacco

- ✓ Smoking rates are very low
- ✓ Among young people **non-smoking** has increased significantly since 2001
- ✓ 95% of 11-18 year olds report as having never smoked

Lifestyle

- More than 80% have their own mobile phone and 80% of younger ages have their own social network account
- ✓ 50% of older members regularly volunteer for the Church or community

Beliefs

- 90% of older members expected church to help members with drug problems
- 66% of 11-18 year olds believe they would remain a church member for life
- Lower trend for “Bible forbids all alcohol”