

# Sun Exposure Survey 2013 Youth Report

September 2014



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Prepared for the Health Promotion Agency by:

Rebecca Gray

Rowan Peck

Danny Tu

Policy, Research and Advice

Sun Safety

HEALTH PROMOTION AGENCY

PO Box 2142

Wellington 6140

New Zealand

[www.hpa.org.nz](http://www.hpa.org.nz)

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# 1. EXECUTIVE SUMMARY

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## 1.1 BACKGROUND

The Health Promotion Agency (HPA) undertakes the Sun Exposure Survey (SES) every three years. The purpose of this ongoing research is to collect consistent information on attitudes and behaviours towards sun exposure, to facilitate comparison with historical survey data, and to inform future decision making in the sun safety and skin cancer prevention sector.

The SES was formerly known as the Triennial Sun Protection Survey (TSPS), which had been conducted in 1994, 1997, 2000, 2003 and 2006. Following a review of the TSPS in 2009 the SES was developed, with a focus on the same measures to allow the continued identification of trends over time and the inclusion of some new questions. The SES is conducted with adults between the ages of 18 and 54 years and teens between the ages of 13 and 17 years.

This report provides an overview of findings for the youth sample (13-24 years, combining the teen and younger adult samples) of the 2013 SES. Two types of result are presented in this report:

(1) results comparing questions asked in 2010 and 2013, and (2) results for questions that were asked for the first time in 2013. In this report these results are grouped into five key thematic sections: skin type, sun sensitivity and sunburn; outdoor activity; sun protection behaviour; sun protection knowledge; and tanning.

## 1.2 METHODOLOGY

The 2012/13 data collection comprised a total of 1,754 interviews with 1,250 adults and 504 teens. The sample frame was based on Random Digit Dialling (RDD). Quotas were set for broad geographic region, regional council boundary, age group, and gender. The use of RDD allows accurate representation of the geographic area surveyed since calls are scattered across the entire area and responses, therefore, reflect the underlying population characteristics.

The data collection method was Computer Assisted Telephone Interviewing (CATI). Interviewing was undertaken by Digipoll interviewers who were trained in the questionnaire prior to commencing the work. The interviews were carried out between 21 January and 12 March 2013 on Monday, Tuesday and Wednesday between the hours of 4:00pm and 8:30pm.

## 1.3 KEY FINDINGS

### 1.3.1 Skin type and sunburn history

The most common reported skin types were 'medium' and 'fair', followed by 'olive' and 'very fair'. Smaller proportions of respondents reported having dark, very dark or black skin. When describing

their untanned skin's reaction to strong sunshine, just under half of the respondents said they would "burn first and tan afterwards", one in three said they would "just tan", and the remainder said they would "just burn", or they didn't know what would happen. Eight out of 10 respondents reported that there was no history of skin cancer in their family.

One-third of respondents reported that they had experienced moderate to severe sunburn in the past. This figure is significantly lower than in 2010.

Two out of 10 respondents who had been outdoors the previous weekend reported that they had been sunburnt, a figure that has not changed since 2010.

Respondents most commonly attributed their sunburn to having not worn adequate clothing or sun protection, or having forgotten to protect. The main parts of the body sunburnt in 2013 were the shoulders, face and nose.

### **1.3.2 Outdoor activity**

In 2013 a significantly higher proportion of respondents reported having spent 15 minutes or more outdoors compared with 2010. The most popular activities were walking, running, tramping, playing sport and swimming.

When asked whether the time they had spent outdoors was the amount of time they intended, around half said they had not intended any particular time, one in four spent about the time they had intended, and two in ten spent more time than intended. These figures had not changed significantly since 2010.

### **1.3.3 Sun protection behaviour**

Half of the respondents who had been outdoors at the weekend reported that they had everything on hand to protect their skin from the sun, while another half had not. There was no significant change in this figure since 2010. A significantly higher proportion of respondents in 2013 said that the weather conditions at the weekend made them think they could get sunburnt, compared to 2010.

Around one in four respondents had worn a hat while outside and 4 in 10 had worn sunglasses. These figures are unchanged since 2010.

Just under half of those who had been outside reported wearing sunscreen – approximately the same proportion as in 2010. There was also no change in the body parts that people reported applying sunscreen to, with the most common being the face, nose and neck. Half of those who used sunscreen applied it once only, one in three applied it twice, and the rest re-applied sunscreen more frequently.

Over half of the respondents said that they had stayed in the shade at some point while they were outside. This was unchanged since 2010.

### **1.3.4 Advertising and information awareness**

In 2013 two thirds of respondents recalled seeing some advertising about sun safety, a significant decrease since 2010. In 2013, unlike 2010, there had not been any sun safety advertising broadcast on television.

Two thirds of respondents reported looking at the weather forecast ahead of outdoor activities. The same proportion reported that they had seen or heard a feature in the weather forecast about times when sun protection was needed.

### **1.3.5 Knowledge of skin cancer and risk factors**

The majority of respondents agreed with the statements “I feel confident I can protect myself from skin cancer” and “Even if treated, melanoma can lead to loss of life”. Responses were more evenly split between agreement, disagreement and uncertainty for the statement “Melanoma can be easily treated by a GP”.

In 2013 a higher proportion of respondents thought their likelihood of getting skin cancer in future was medium or high, compared with 2010. Around one half agreed “It is likely that I already have some permanent damage to my skin from sun exposure”. Around three in four respondents agreed “I often encourage others to protect their skin”.

### **1.3.6 Attitudes to getting a tan**

The majority of respondents reported that they had not tried to get a suntan the previous weekend, and were unlikely to use fake tan. Around one in four said they were likely to sunbathe to get a tan that summer and around one in three reported that they intended to avoid getting a suntan.

Around half of all respondents agreed with the statements “I feel more healthy with a suntan” and “A suntan makes me feel better about myself”, significantly more than in 2010. Agreement with “A tan shows I care about my appearance” also increased since 2010, with one third of respondents in 2013 agreeing. The strength of agreement with “Tanning is part of the Kiwi summer” increased since 2010, with two thirds of 2013 respondents agreeing, including one in four who strongly agreed.

Nearly three in four agreed “Most of my friends think a suntan is a good thing” and 6 in 10 agreed “Seeing tanned people on TV, films and magazines make me want to have a tan”.

The majority of respondents agreed “Over time tanning can make my skin age faster than it naturally would”.

## 2. BACKGROUND

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### 2.1 PURPOSE

HPA undertakes the Sun Exposure Survey (SES) every three years. The purpose of this ongoing research is to collect consistent information on attitudes and behaviours towards sun exposure, facilitate comparison with historical survey data, and inform future decision making in the sun safety and protection sector.

Topics focused on in the SES include:

- skin type, skin sensitivity and personal sunburn history
- outdoor activity and sun safety
- sun protection behaviours in the previous weekend
- sun safety knowledge, including awareness of sources of sun protection advice and advertising
- perceptions of risk in relation to skin cancer
- attitudes towards tanning.

The SES was formerly known as the Triennial Sun Protection Survey (TSPS), which had been conducted in 1994, 1997, 2000, 2003 and 2006. Following a review of the TSPS in 2009 the SES was developed, with a focus on the same measures to allow the continued identification of trends over time and the inclusion of some new questions. The SES is conducted with adults between the ages of 18 and 54 years and teens between the ages of 13 and 17 years.

## 2.2 HISTORY

### 2.2.1 Triennial Sun Protection Survey

The TSPS commenced in 1994 and was managed by the Cancer Society of New Zealand (CSNZ), in collaboration with the Department of Preventative and Social Medicine at the University of Otago. The survey was based on a seminal study from Victoria, Australia. The aims of the survey were to describe patterns and associations in outdoor behaviour including activities, sun protection, attitudes, knowledge, tanning preferences, and sunburn.

The TSPS survey population was largely driven by a need for cost-effectiveness and included adults (15 to 69 years, approximately n=1,250 per wave) and some children (12 to 14 years, inclusion varied across years). New Zealand's five largest metropolitan centres (Auckland, Hamilton, Wellington, Christchurch, and Dunedin) were included in the survey. The exclusion of rural and other urban populations meant that the findings could not be generalised.

A number of issues were identified following the 2005/06 wave of the TSPS. These issues included a drop in response rates (down to 21% in the 2006 survey), along with associated response bias issues and problems with the representativeness of the sample, in addition to inconsistent data collection and analysis across surveys. Further to the identification of these issues, a review of the TSPS was initiated with the aim of improving the survey.

An Expert Reference Group was established in 2009, comprising experts in skin cancer prevention and sun safety research to provide advice on methodology and questionnaire content. In addition to this a review of 'global' practice and options for a sun exposure survey was conducted by an independent research company (see Review of Practice 9 and Options for the New Zealand Sun Exposure Survey, Watts, Heinemann, Marsh and Graham 2009).

The review process was initiated to inform the development of a revised quantitative survey, to improve evidence available on prevalence and trends in sun safety behaviour to aid future sector decision making. The substantial review undertaken in 2009 laid the foundation for the 2010 SES, which was funded jointly by the Health Sponsorship Council (HSC) and CSNZ. The 2013 survey has been designed to be consistent with the structure and methodology of the 2010 survey.

### 2.2.2 Oversight of the survey from 2013 onwards

The SES was initially co-funded by HSC and CSNZ and managed by HSC. From 2013, the survey is solely funded and managed by HPA. HPA is a Crown Entity established 1 July 2012 under the New Zealand Public Health and Disability Amendment Act 2012.

### 3. METHODOLOGY

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This chapter summarises the methodology used for the SES in 2013. For a full account of the methodology used please refer to the methodology report (Methodology Report: Sun Exposure Survey, 2013) prepared by TNS.

#### 3.1 SAMPLING

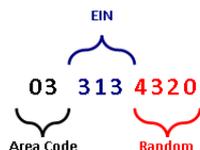
The 2013 SES comprised two samples, an adult sample and a teen sample. The target population for the adult sample was 18-54 years and the target population for the teen sample was 13-17 years. The youth sample, which is the focus of this report, consisted of the teen sample and also those in the adult sample aged 18 to 24 years. For the purpose of this report, youth refers to all those aged 13 to 24 years.

A total of 618 interviews were carried out with youth, comprising 498 aged 13 to 17 years and 120 aged 18 to 24 years. An objective of the study was to achieve a nationally representative sample of those aged 13 to 54 years and the approach to sampling reflected this aim. The sample frame was based on Random Digit Dialling (RDD).

A quota of interviews was set for broad geographic region, regional council boundary, age group and gender. Quota targets were established based on known population distributions from the 2006 census data for both adult and teen samples.

Basing the 2013 survey on RDD represented a different approach from the 2010 survey, which involved designing a sampling frame from the White Pages directories. The use of RDD in 2013 was initiated to overcome potential selection bias. Specifically, this method was introduced to avoid the exclusion of a significant proportion of the population due to inaccurate and incomplete White Pages information as a result of unlisted numbers, disconnected numbers, and people having changed residence.

The core principle of the RDD method for sampling is targeting Exchange Information Numbers (EIN). Each EIN is attached to a geographic area, per the example below. The last four numbers are randomised, see Figure 3-1:



**Figure 3-1: Example of Exchange Information Numbers.**

This allows accurate representation of the geographic area surveyed since calls are scattered across the entire area and, thus, responses reflect the underlying population characteristics.

Respondents were selected from each household using the 'next birthday' rule, which was consistent with the 2010 survey.

Quota targets were established based on known population distributions from the 2006 census data for both the adult and teen samples. Quota targets were established as 'hard' targets that had to be achieved and 'soft' targets that permitted a variation of +/-10%. Targets were set for broad geographic region, regional council boundary, age group and gender.

### 3.1.1 Fine weather criteria

During the fieldwork period meteorological data was accessed by the survey provider, TNS Ltd.

The data included temperature, sky condition and Ultraviolet Index (UVI) reading. Scores were applied for each hour between 11am and 4pm and summed for the day. The scoring system is detailed in Table 3.1 below:

**Table 3-1: Fine weather criteria.**

<b>Temperature</b>	<b>Score</b>
Greater than or equal to 20 degrees	1.0 pt
Greater than or equal to 15 degrees and less than 20 degrees	0.5 pt
Less than 15 degrees	0.0 pt
<b>Sky Conditions</b>	<b>Score</b>
Fine	1.0 pt
Cloudy	0.5 pt
Any form of precipitation	0.0 pt
<b>UVI<sup>(1)</sup></b>	<b>Score</b>
Greater than, or equal to 10	1.0 pt
Greater than or equal to 6 and less than 10	0.5 pt
Less than 6	0.0 pt

Note: (1) The UVI was rounded to the nearest whole number for the calculations

Interviews were only conducted in areas where at least one weekend day received a score greater than 10. The interviews were then conducted the following week in relation to the eligible day when a respondent reported being outdoors for 15 minutes or more between 10am and 4pm.

## 3.2 DATA WEIGHTING

Data from this survey were weighted so that no specific population was over or under-represented in the survey sample. Since the most recent census data available is 2006, HPA provided counts that included estimated growth to 2013.

### 3.2.1 Selection weights

The data were weighted to ensure that they reflect the underlying population. Selection weights adjust for the probability of a person being selected for participation in the survey from within a household with more than one occupant. In the case of respondents included in the adult sample (aged 18 to 54 years), a single respondent was randomly chosen and all eligible adults had an equal chance of selection. In the small number of cases where the number of people in the household was not answered, the selection weight used was the average selection weight for those in the same gender, ethnicity and age group.

### 3.2.2 Benchmarking

Benchmarking refers to the adjustment of the data to ensure they are representative of the New Zealand population after selection weights have been applied. For this survey benchmarks were gender by age groups (13 to 17 years and 18 to 24 years) and by prioritised ethnic groups (Māori, Pacific, Asian, and European/Other).

Prioritising ethnic groups involves including each respondent in one ethnic group only, rather than every ethnicity they identify with. For example, if a respondent identified as Pacific and French then they will have been grouped into the Pacific ethnic group as part of the benchmark weighting process.

### 3.2.3 Age standardisation

The age structure of the population is not static and this can impact the extent that health related data can be compared over time. To mitigate the possibility of any impact, age standardisation has been applied using the World Health Organization (WHO) standard population (Ahmed et al 2000). The population adjustments made using the WHO standard were made to each gender by ethnic group used in the benchmarking.

### 3.3 DATA COLLECTION

The data collection method was Computer Assisted Telephone Interviewing (CATI). Interviewing was undertaken by Digipoll, a specialist data collection provider based in Hamilton, by trained interviewers who were fully briefed on the questionnaire prior to commencing the work.

#### 3.3.1 Interviewing

The interviews were carried out between 21 January and 12 March 2013 on Monday, Tuesday and Wednesday between the hours of 4:00pm and 8:30pm.

All calls, including arranged call-backs were made to areas that met the 'fine weather' criteria the previous weekend. Call backs could be made in subsequent weeks providing fine weather criteria had been met the previous weekend. Each respondent received an initial call and up to six call-backs at different times or days if they could not be contacted. Appointments were made with respondents who were willing to participate but not at the time the call was made.

The average interview duration was 17.45 minutes. The adult survey had an average duration of 18 minutes and the teen survey an average duration of 16.12 minutes.

#### 3.3.2 Response rate

A total of 36,350 telephone calls were made using random-digit dialling. Of these, 24,779 were not to valid residential numbers or were not answered after multiple attempts. This resulted in a valid sample of 11,571.

**Table 3-2: Details of the call outcomes for the survey.**

<b>Description</b>	<b>Calls</b>
Total calls	36,350
Un-contactable/disconnected /fax etc.	24,779
Total available sample	11,571
<b>Call Outcomes</b>	
Not eligible	3,161
Quota target full	1,822
Total not eligible	4,983
Total available & eligible sample	6,588

<b>Outcomes from Eligible Respondents</b>		<b>% of Available/Eligible</b>
Refused	2,440	37%
Not available during survey	2,225	34%
Language or health barriers	169	3%
Survey complete	1,754	27%
Total outcomes	6,588	

A total of 6,588 respondents were classified as being eligible, having removed those who were screened out for reasons such as being outside of the target age group or because the quota target for the age, gender or location had already been filled. Of these, 37% refused to participate in the survey and a further 34% were unavailable for interview on the days that the survey was conducted. Because interviews were undertaken only on a Monday to Wednesday and related to the prior weekend, this further limited availability. Stated unavailability during the survey period is also frequently a soft refusal and, therefore, cannot necessarily be considered distinct from 'refusals'.

The completed interviews represent 27% of the available and eligible sample.

### 3.4 QUESTIONNAIRE DEVELOPMENT

As with the 2010 SES, the 2013 survey used two separate questionnaires for the adult (aged 18 to 54 years) and the youth samples (aged 13 to 17 years). Although separate questionnaires were used for the youth and adult groups, many of the same questions were asked of both groups.

As a preliminary phase of the project, the survey provider (TNS) undertook cognitive testing with eight respondents to ensure the questions asked of respondents were appropriate, effective and easily understood. Following this process a number of relatively minor wording changes were made to the questionnaire.

Prior to the main phase of the data collection, a pilot was conducted with 100 respondents. The pilot confirmed that the questionnaire was working well and it was recommended that reference be made to the Ministry of Health in the introduction, to help maximise the response rate.

### **3.4.1 Key differences between the 2013 survey and previous surveys**

The final questionnaire was based on the 2010 questionnaire and, therefore, includes questions that allow comparisons over time. Due to shifting areas of interest in 2013 a small number of questions that appeared in the 2010 survey were not included in the 2013 survey. New questions were added that reflect specific areas of interest in 2013 and include:

- Respondents' perceptions of why they got sunburnt
- availability of shade while doing main outdoor activity for those participants who reported no shade available, likelihood of using shade, had it been available
- attitudes relating to the following: encouragement of others to protect their skin, individual perception of ability to protect oneself from skin cancer, ease of treating melanoma by a GP and melanoma leading to loss of life
- attitudes about tanning causing skin to age faster and likelihood of already having some permanent damage to skin from sun exposure (only asked of respondents aged 13 to 24 years)
- unprompted recall of promotions about the 'Don't Let the Sun Get Under Your Skin' campaign
- unprompted and prompted recall and understanding of the Sun Protection Alert and any behaviour as a result of having seen/heard it, and
- family history of skin cancer.

The 2013 SES includes two types of question – those that were asked of a youth sample for the first time in 2010 and repeated in 2013, and those that were asked for the first time in 2013.

## **3.5 GENERAL POINTS TO NOTE**

### **3.5.1 Interpreting comparisons between years**

In this report results from the 2013 SES are compared with the 2010 SES survey results for youth aged 13 to 24, for questions that have been repeated.

### **3.5.2 “The day in question” as referred to in the text**

In the 2013 SES respondents were asked about their activities on either Saturday or Sunday of the previous weekend. Remaining consistent with the 2010 SES, respondents were first asked whether they had spent 15 minutes or more outdoors on either day at the weekend and then

whether they were sunburnt on either day. Interviews were conducted in relation to the day that met the fine weather criteria. If both days met the criteria then the interview was conducted in relation to the day that the respondent was outdoors for at least 15 minutes between 10am and 4pm. If the respondent was outdoors during that time on both days then one day was randomly selected. If the respondent got sunburnt then priority was given to the day on which they got burnt (assuming it met the fine weather criteria).

### **3.5.3 Significance testing**

Only differences that are statistically significant (that is, for which the p-value is less than 0.05) have been commented on in the text of this report. Statistical significance was measured either by looking at 95% confidence intervals or using t-tests.

### **3.5.4 Presentation of results**

Questions that were asked in 2010 and were repeated in 2013 have been compared to show any differences in response rates. All questions are presented across sub-groups when differences are found and where appropriate.

Below the graphs and tables, the 'base' is defined – this relates to the group of respondents for which the responses are being presented (for example, "outside during the previous weekend" or "sunburnt the previous weekend"). Please note that the 'base' number applies to unweighted counts unless otherwise specified.

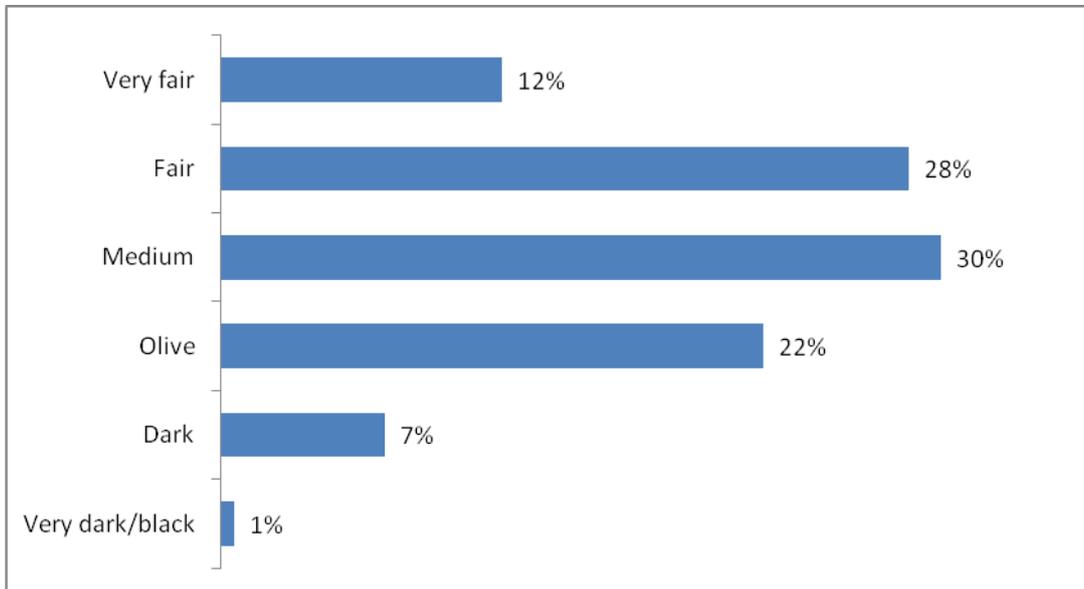
## 4. SKIN TYPE, SUN SENSITIVITY AND SUNBURN

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### 4.1 SKIN TYPE

All respondents were asked about how they would describe their natural, untanned skin at the end of winter, in order to ascertain how likely people were to burn.

Around 3 out of 10 (28%) respondents reported that they were fair skinned, while just over 1 in 10 (12%) reported that their skin was very fair. Around one-third (30%) reported that their skin type was 'medium', with around two out of 10 (22%) identifying their skin type as 'olive' and smaller proportions reporting dark (7%) or very dark/black (1%) skin (see Figure 4-1).



**Figure 4-1: Self-described skin type, 2013.**

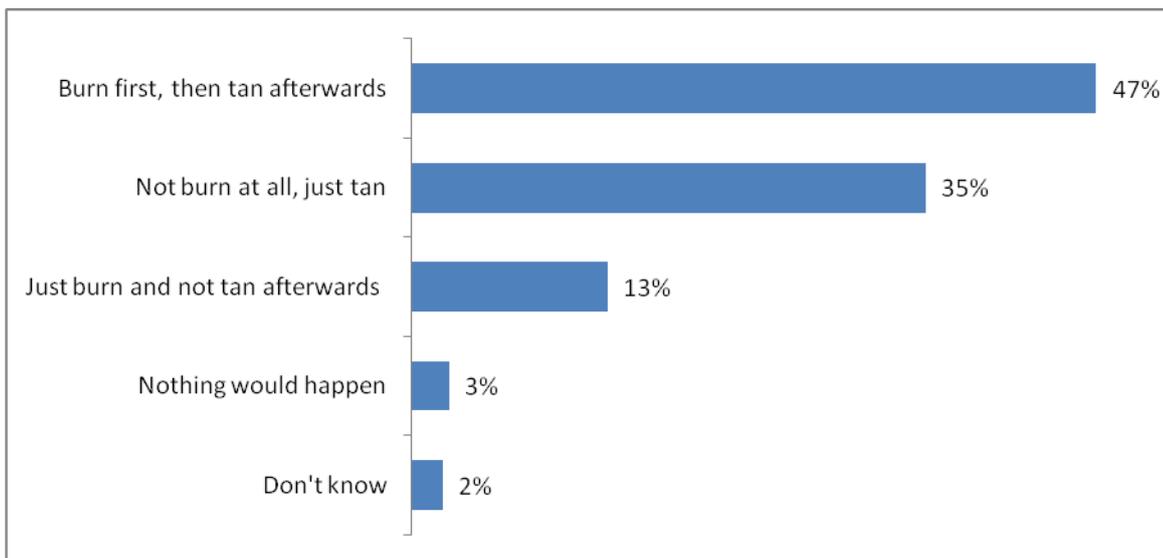
Base: all youth (n=698)

To improve power in sub-group analyses based on perceived skin colour, response groups have been combined for the rest of the analyses in this report. Fair and very fair are combined into 'light', medium and olive into 'medium', and dark, very dark and black into 'dark'.

## 4.2 PERCEPTION OF SENSITIVITY TO THE SUN

All respondents were asked what would happen if their untanned skin was exposed to strong sunshine for 30 minutes at the beginning of summer, using no sun protection at all.

Just under one-half (47%) of respondents said they would “burn first and tan afterwards”, while around one-third (35%) of respondents said they would “just tan” and just over 1 in 10 (13%) said they would “just burn”. A small number (3%) said that “nothing would happen” or they “don’t know” (2%) (see Figure 4-2).

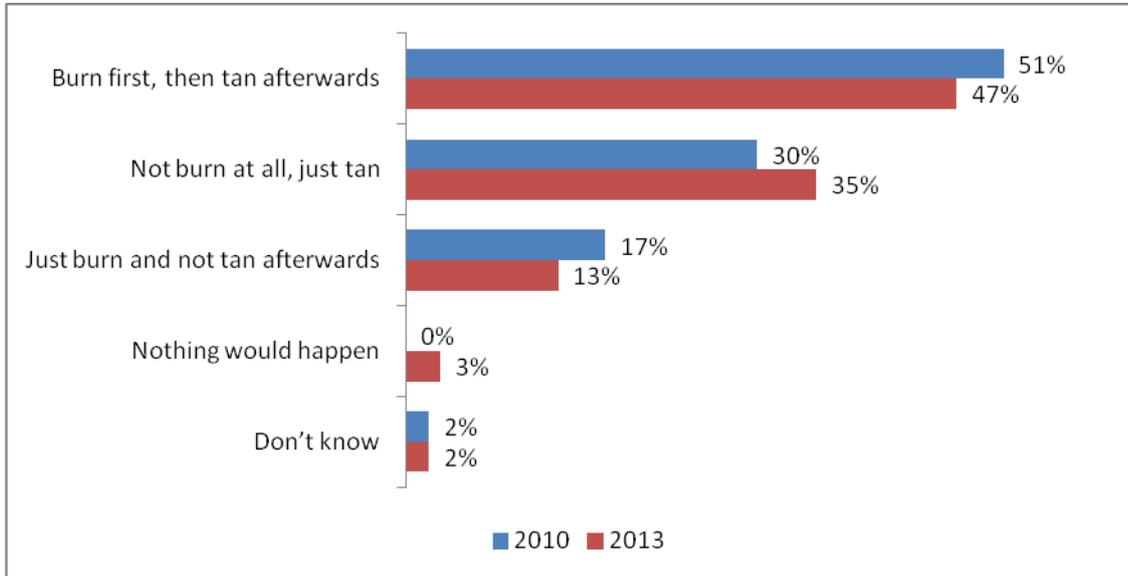


**Figure 4-2: Untanned skin’s reaction to 30 minutes of strong sunshine, 2013.**

Base: all youth (n=698)

## 2010 and 2013 comparison

No significant differences were found between 2010 and 2013 in the responses to their untanned skin's reaction to 30 minutes of strong sunshine, see Figure 4-3.

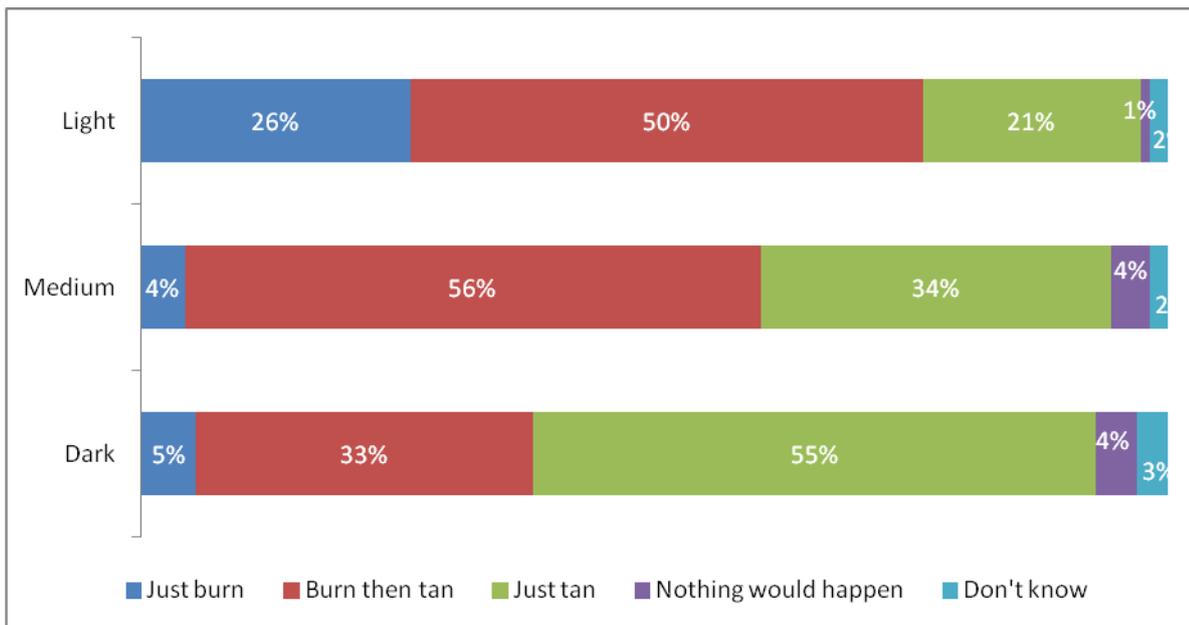


**Figure 4-3: Untanned skin's reaction to 30 minutes of strong sunshine, by year.**

Base: all youth (2010, n=618; 2013, n=698)

## Demographics

There were significant differences found between untanned skin's reaction to 30 minutes of strong sunshine and perceived skin type. As would be expected, a significantly larger proportion of respondents with light skin type (26%) reported that they would just burn, compared with those with medium (4%) and dark skin (5%). Those with dark skin type were more likely to report that they would just tan (55%) compared to those with light (21%) and medium (34%) skin types (as shown in Figure 4-4).

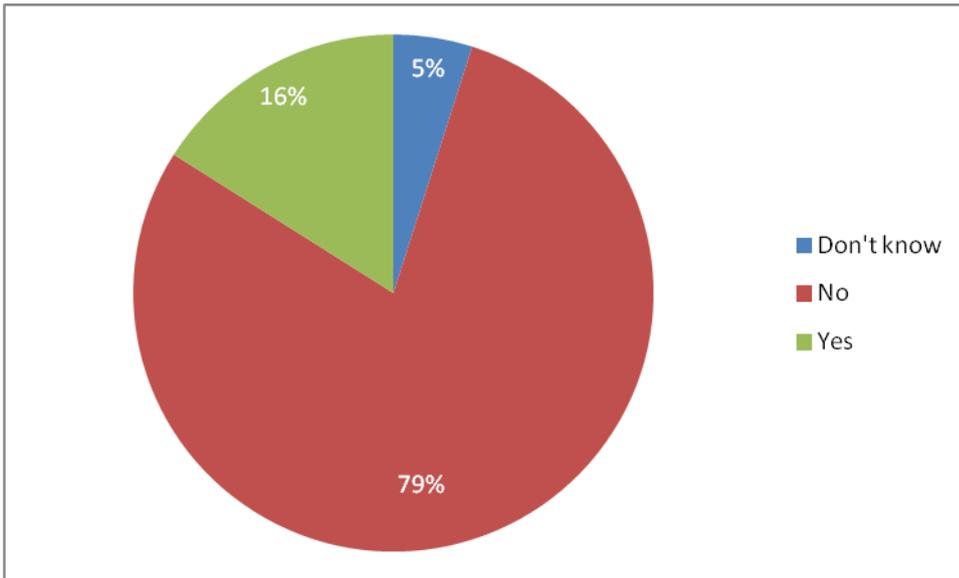


**Figure 4-4: Untanned skin's reaction to 30 minutes of strong sunshine, by perceived skin type, 2013.**

Base: all youth (n=698)

### 4.3 FAMILY HISTORY OF SKIN CANCER

In 2013 a new question was added to the SES, which asked respondents about the historical incidence of skin cancer in their family. Approximately 2 out of 10 respondents (16%) reported that they did have a history of skin cancer in their family, while 8 out of 10 (79%) did not, and 5% did not know (see Figure 4-5).

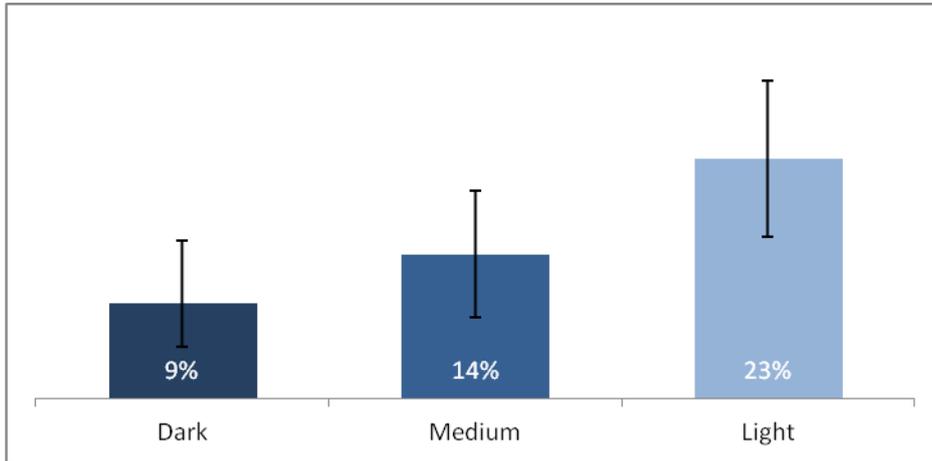


**Figure 4-5: Family history of skin cancer, 2013.**

Base: all youth (n=698)

## Demographics

The reported incidence of family history of skin cancer differed between skin types, with light skin type respondents reporting higher incidences (23%) than those with dark skin type (9%) (shown in Figure 4-6).



**Figure 4-6: Family history of skin cancer, by skin type, 2013.**

Base: all youth (n=698)

## 4.4 SUNBURN HISTORY

All respondents were asked whether they had ever experienced moderate to severe sunburn, defined as sunburn that results in blisters or pain for at least two days (excluding the previous weekend).

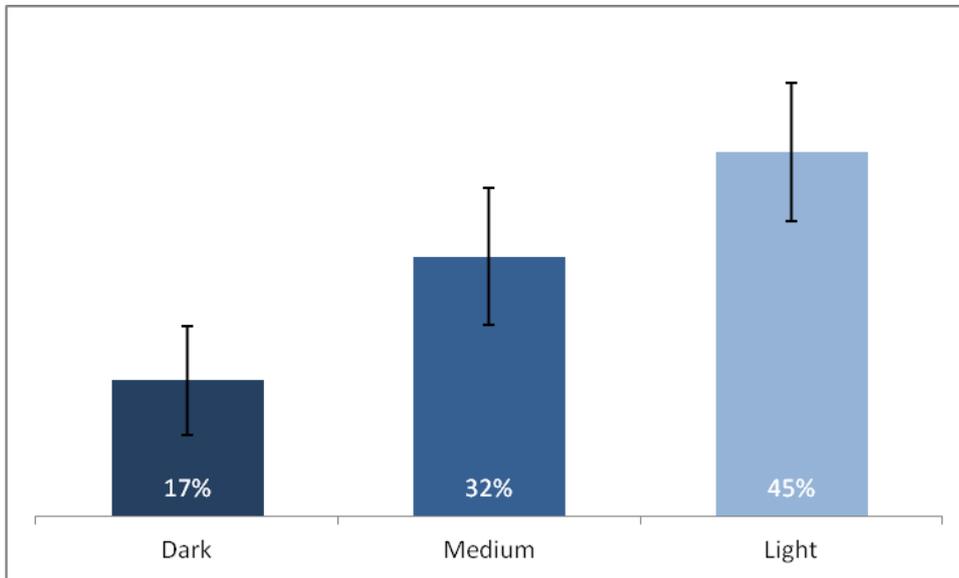
One-third (33%) of respondents reported that they had experienced moderate to severe sunburn in the past and two-thirds (67%) had not.

### **2010 and 2013 comparison**

In 2013 a significantly lower proportion of respondents reported that they had experienced moderate to severe sunburn in the past (33%), compared with 2010 (42%).

## Demographics

Those with dark skin were significantly less likely to report having been sunburnt in the past (17%), compared to those with light skin (45%) (see Figure 4-7).



**Figure 4-7: History of moderate to severe sunburn in the past, by skin type, 2013.**

Base: all youth (n=698)

### 4.4.1 Recent sunburn

All respondents who had spent at least 15 minutes outside during the previous weekend were asked whether they had been sunburnt (defined as experienced reddening of the skin after being in the sun) on Saturday or Sunday of the weekend just passed.

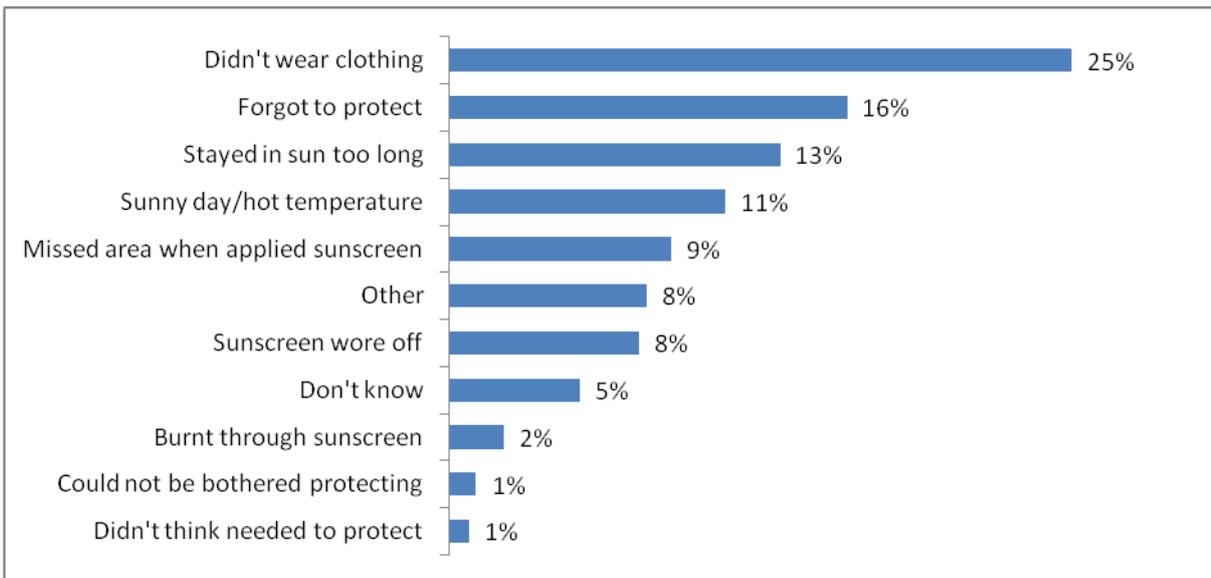
Two out of 10 respondents (21%) reported that they had been sunburnt on either Saturday or Sunday of the previous weekend, while 8 out of 10 (79%) respondents had not.

### 2010 and 2013 comparison

The proportion of respondents reporting that they had experienced sunburn during the previous weekend has not changed since 2010.

#### 4.4.2 Reason for sunburn

All respondents who reported getting sunburnt during the previous weekend were asked to identify the main reason they got burnt. This question was asked for the first time in 2013. One-quarter of respondents (25%) reported that they got sunburnt because they did not wear clothing, sunscreen or other sun protection, and around one in six (16%) reported that they “forgot to protect”. Respondents also reported that they stayed in the sun too long (13%), because of a sunny day/hot temperature (11%), missed areas when applying sunscreen (9%), the sunscreen wore off (8%), and ‘other’ reasons (8%).



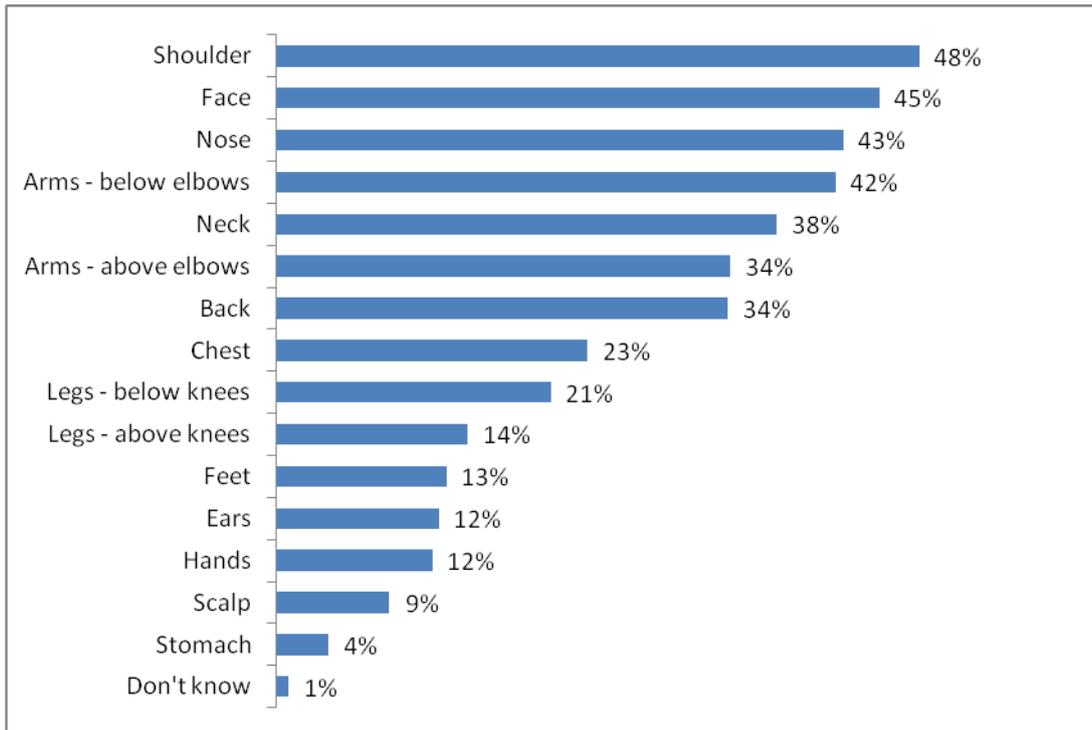
**Figure 4-8: Perception of main reason for getting sunburnt, 2013.**

Base: sunburnt during the previous weekend (n=130)

### 4.4.3 Parts of the body sunburnt

Respondents who had been sunburnt on either or both days during the previous weekend were asked to identify which parts of their body were sunburnt.

The body part most likely to have been sunburnt, as shown in Figure 4-9, were shoulders (48%), face (45%), nose (43%), and arms below the elbows (38%). More than one-third of respondents reported having been sunburnt on their neck (38%), arms above elbows (34%), and back (34%).



**Figure 4-9: Areas of the body sunburnt, 2013.**

Base: sunburnt during the previous weekend (n=130)

## 2010 and 2013 comparison

Significant differences were found in the responses to areas of the body sunburnt between 2010 and 2013. In 2013 respondents were more likely to report having been burnt on their shoulders, neck and back compared with 2010, see Table 4-1.

**Table 4-1: Areas of the body sunburnt, by year.**

	<b>2010</b>	<b>2013</b>
	<b>%</b>	<b>%</b>
<b>Shoulder</b>	32	48
<b>Face</b>	51	45
<b>Nose</b>	32	43
<b>Arms - below elbows</b>	35	42
<b>Neck</b>	23	38
<b>Arms - above elbows</b>	22	34
<b>Back</b>	16	34
<b>Chest</b>	18	23
<b>Legs - below knees</b>	18	21
<b>Legs - above knees</b>	11	14
<b>Feet</b>	13	13
<b>Ears</b>	5	12
<b>Hands</b>	10	12
<b>Scalp</b>	3	9
<b>Stomach</b>	6	4
<b>Don't know</b>	0	1
Base: sunburnt during the previous weekend	(n=121)	(n=130)

## Demographics

Significant differences in the areas most likely to be sunburnt were found across both age and gender. Those aged 13 to 17 years were more likely to have been burnt on their arms both above elbows and below elbows, compared to those aged 18 to 24 years (see Table 4.2).

**Table 4-2: Areas of the body sunburnt, by age, 2013.**

	13-17 years	18-24 years
	%	%
<b>Arms - below elbows*</b>	54	24
<b>Shoulder</b>	52	43
<b>Arms - above elbows*</b>	47	15
<b>Nose</b>	46	38
<b>Face</b>	42	50
<b>Back</b>	38	28
<b>Neck</b>	37	39
<b>Legs - below knees</b>	26	13
<b>Chest</b>	25	20
<b>Feet</b>	17	7
<b>Legs - above knees</b>	16	11
<b>Hands</b>	14	9
<b>Ears</b>	13	11
<b>Stomach</b>	6	1
<b>Scalp</b>	5	14
<b>Don't know</b>	0	2
Base: sunburnt during the previous weekend	(n=97)	(n=33)

\* $p < .05$

Females were significantly more likely to have been burnt on their shoulders and legs above knees, compared with males (see Table 4-3). Males were significantly more likely than females to have been burnt on their neck. The neck was the most common place that males reported being sunburnt, while females most commonly reported being burnt on the shoulders and face.

**Table 4-3: Areas of the body sunburnt, by gender, 2013.**

	<b>Female</b>	<b>Male</b>
	<b>%</b>	<b>%</b>
<b>Shoulder*</b>	59	32
<b>Face</b>	51	37
<b>Nose</b>	48	35
<b>Arms - below elbows</b>	48	34
<b>Arms - above elbows</b>	43	21
<b>Back</b>	34	35
<b>Chest</b>	28	17
<b>Neck*</b>	27	53
<b>Legs - below knees</b>	25	14
<b>Legs - above knees*</b>	22	4
<b>Feet</b>	17	6
<b>Hands</b>	15	7
<b>Ears</b>	13	12
<b>Scalp</b>	10	6
<b>Stomach</b>	3	6
<b>Don't know</b>	1	0
Base: sunburnt during the previous weekend	(n=67)	(n=63)

\* $p < .05$

## 5. OUTDOOR ACTIVITY

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### 5.1 TIME OUTDOORS DURING THE PREVIOUS WEEKEND

All respondents were asked whether they had spent 15 minutes or more outdoors between 10am and 4pm on the previous Saturday and/or Sunday. One of these days was then chosen to ask about in more detail (see Section 3.6).

Nine out of 10 respondents (92%) reported that they had spent 15 minutes or more outdoors between 10am and 4pm on Saturday or Sunday during the previous weekend.

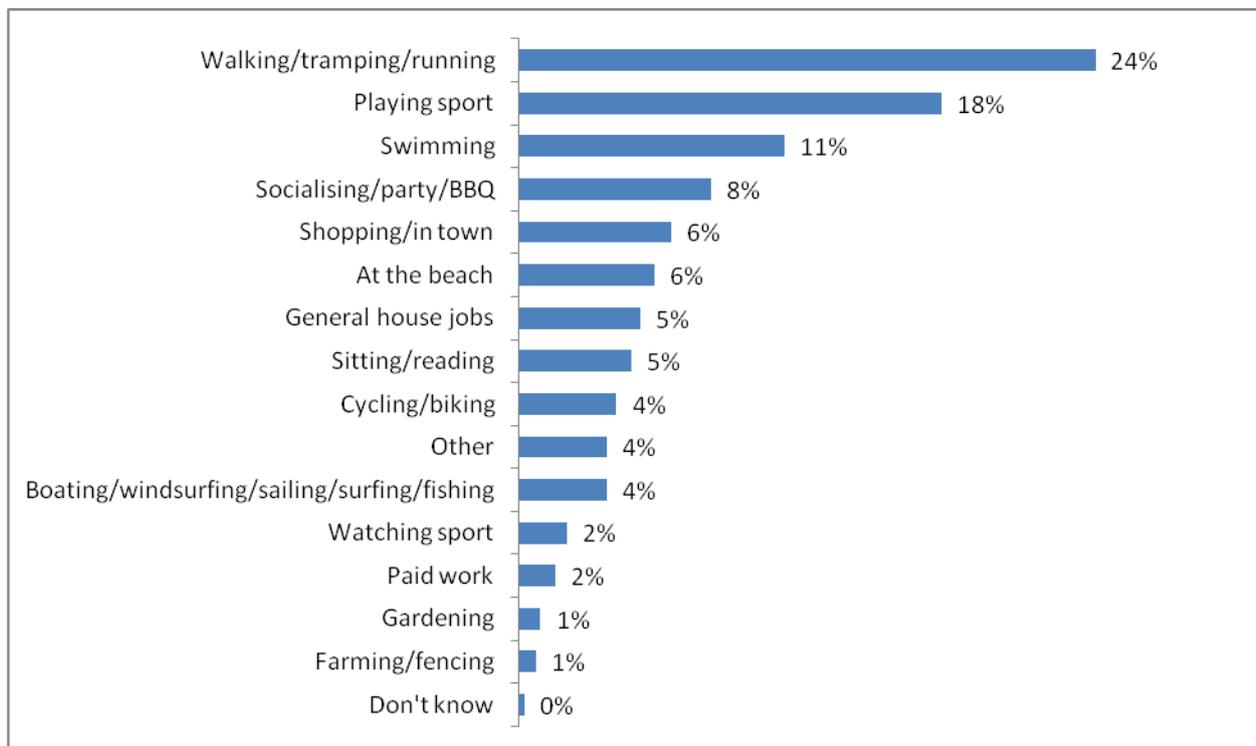
#### **2010 and 2013 comparison**

In 2013 a significantly higher proportion of respondents reported having spent 15 minutes or more outdoors compared with 2010 (91% compared with 83%).

## 5.2 OUTDOOR ACTIVITIES

Respondents who had spent at least 15 minutes outdoors during the previous weekend were asked to describe what activity they had spent the most time doing.

The most popular activities were walking, running and tramping, playing sport, and swimming. Approximately one-quarter of respondents reported participating in walking, running or tramping (24%), and the next most common activity was playing sport (18%). One out of 10 reported their main activity was swimming (11%) (see Figure 5-1).



**Figure 5-1: Main outdoor activity participated in during previous weekend, 2013.**

Base: outdoors during the previous weekend: (n=644)

### 2010 and 2013 comparison

In 2013 a significantly higher proportion of respondents reported that they participated in walking, running or tramping (24% compared with 13% in 2010). This was also the case for swimming, with 11% reporting that they participated in this activity in 2013, compared with 5% in 2010 (see Table 5-1). The number of respondents that reported shopping or being in town as their main activity was significantly smaller in 2013 compared to 2010 (6% in 2013 compared with 14% in 2010). This was also the case with being at the beach, with 6% in 2013 compared with 12% in 2010. See Table 5-1.

Table 5-1: Main outdoor activity participated in during previous weekend, by year.

	2010	2013
	%	%
<b>Walking/tramping/running*</b>	13	24
<b>Playing sport</b>	18	18
<b>Swimming*</b>	5	11
<b>Socialising/party/BBQ</b>	6	8
<b>Shopping/in town*</b>	14	6
<b>At the beach*</b>	12	6
<b>General house jobs</b>	6	5
<b>Sitting/reading</b>	6	5
<b>Cycling/biking</b>	2	4
<b>Boating/windsurfing/sailing/surfing/fishing</b>	5	4
<b>Other</b>	2	4
<b>Watching sport</b>	1	2
<b>Paid work</b>	4	2
<b>Gardening</b>	5	1
<b>Farming/fencing</b>	1	1
<b>Don't know</b>	0	0
Base: outdoors during the previous weekend	(n=618)	(n=644)

## Demographics

There were significant gender differences in the main outdoor activities participated in during the previous weekend. Males were significantly more likely to have reported playing sports and paid work, compared with females. Females were significantly more likely to have reported being at the beach, socialising/party/barbeque and sitting/reading compared with males (see Table 5-2).

**Table 5-2: Main outdoor activities participated in during previous weekend, by gender.**

	Male	Female
	%	%
<b>Walking/tramping/running</b>	24	24
<b>Playing sport*</b>	24	12
<b>Swimming</b>	8	14
<b>Shopping/in town</b>	8	5
<b>Cycling/biking</b>	6	2
<b>General house jobs</b>	6	5
<b>Other*</b>	6	2
<b>Boating/windsurfing/sailing/surfing/fishing</b>	4	4
<b>At the beach*</b>	3	9
<b>Socialising/party/BBQ*</b>	3	14
<b>Paid work*</b>	3	0
<b>Watching sport</b>	2	2
<b>Sitting/reading*</b>	2	7
<b>Gardening</b>	1	1
<b>Don't know</b>	0	0
<b>Farming/fencing</b>	0	1
Base: outdoors during the previous weekend	(n=358)	(n=286)

\* $p < .05$

Significant differences were found by ethnicity in the main outdoor activities participated in during the previous weekend, as shown in Table 5-3. Pacific people were the most likely to say they had been playing sport and the least likely to say they had been walking, tramping or running. Only those of Māori and European/Other ethnicities reported that they had been cycling, sitting/reading or participating in boating, fishing or some other water-based activity.

**Table 5-3: Main outdoor activities participated in during previous weekend, by ethnicity, 2013.**

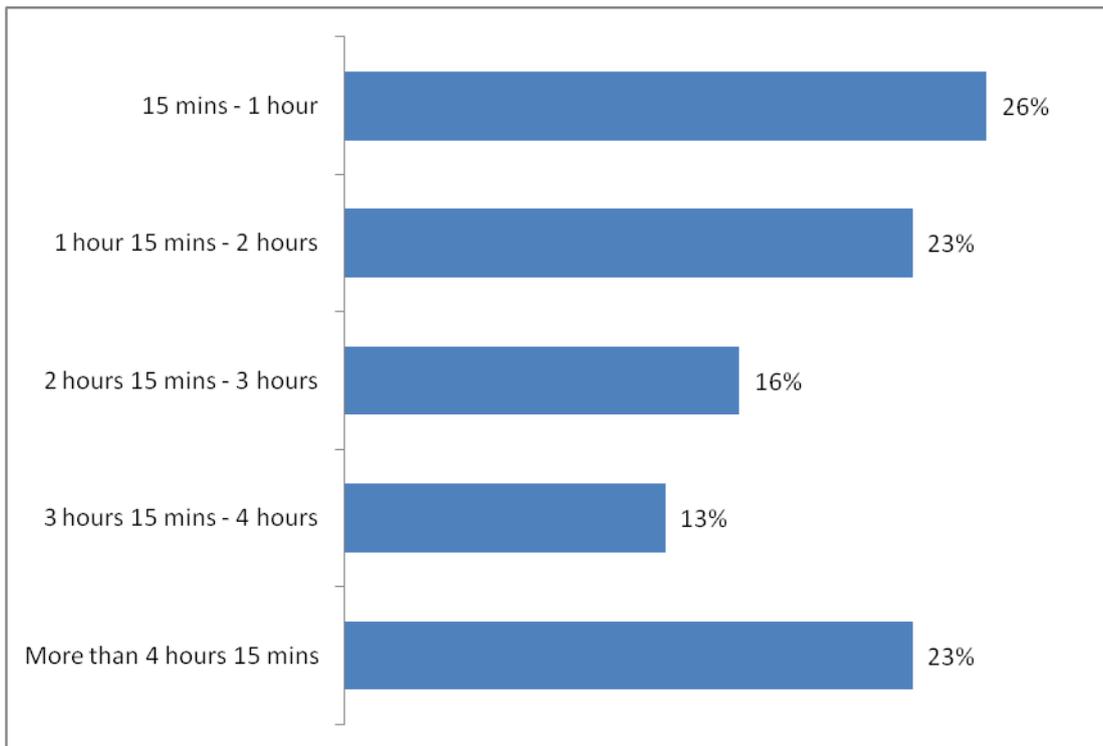
	<b>Māori</b>	<b>Pacific</b>	<b>Asian</b>	<b>European /Other</b>
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
<b>Walking/tramping/running*</b>	23	14	25	26
<b>Swimming</b>	13	9	10	11
<b>Playing sport*</b>	13	43	27	15
<b>Socialising/party/BBQ</b>	10	12	4	8
<b>General house jobs</b>	9	7	7	4
<b>Other</b>	7	2	2	3
<b>Shopping/in town</b>	6	7	9	6
<b>Cycling/biking*</b>	5	0	0	5
<b>Boating/windsurfing/sailing/surfing/fishing*</b>	5	0	0	4
<b>Sitting/reading*</b>	4	0	0	6
<b>At the beach</b>	2	5	16	5
<b>Watching sport*</b>	2	1	0	2
<b>Paid work</b>	2	0	0	2
<b>Don't know</b>	0	0	0	0
<b>Farming/fencing</b>	0	0	0	1
<b>Gardening*</b>	0	0	0	1
Base: outdoors during the previous weekend	(n=89)	(n=43)	(n=87)	(n=425)

\* $p < .05$

### 5.3 TIME SPENT DOING OUTDOOR ACTIVITY

Respondents who had spent 15 minutes or more outdoors during the previous weekend were asked how long they had spent outside doing the main activity they mentioned.

In 2013 one-half (49%) of respondents, who had been outdoors, spent two hours or less doing their main activity. Nearly one-quarter (23%) reported spending more than four hours and 15 minutes doing their main activity the previous weekend (see Figure 5-2).



**Figure 5-2: Amount of time spent doing outdoor activity during previous weekend, 2013.**

Base: outdoors during the previous weekend (n=644)

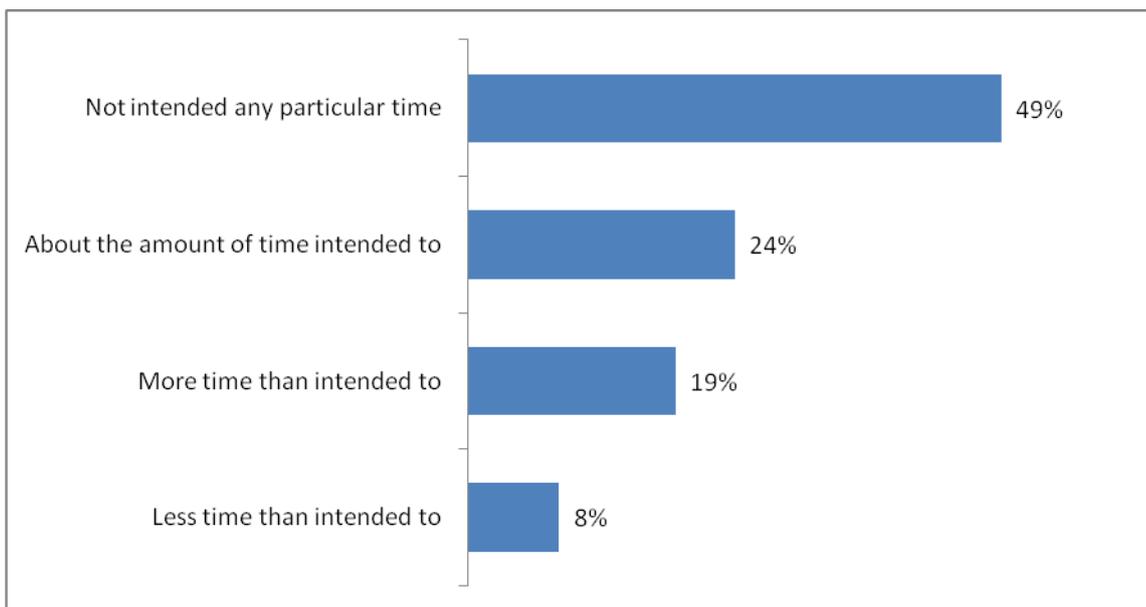
#### 2010 and 2013 comparison

The proportion of respondents reporting the various times spent doing outdoor activity has not changed significantly since 2010.

### Planned duration of outdoor activity

Respondents who had spent 15 minutes or more outdoors the previous weekend were asked to consider how much time they had spent outdoors on the day in question, compared to the amount of time they had anticipated being outdoors for.

One-quarter (24%) of respondents spent about the amount of time outdoors as they intended. One-half (49%) of respondents said that they had not intended any particular time when they went outside. Approximately 2 out of 10 (19%) respondents spent more time outdoors than they intended and 1 out of 10 (8%) spent less time outdoors than intended (see Figure 5-3).

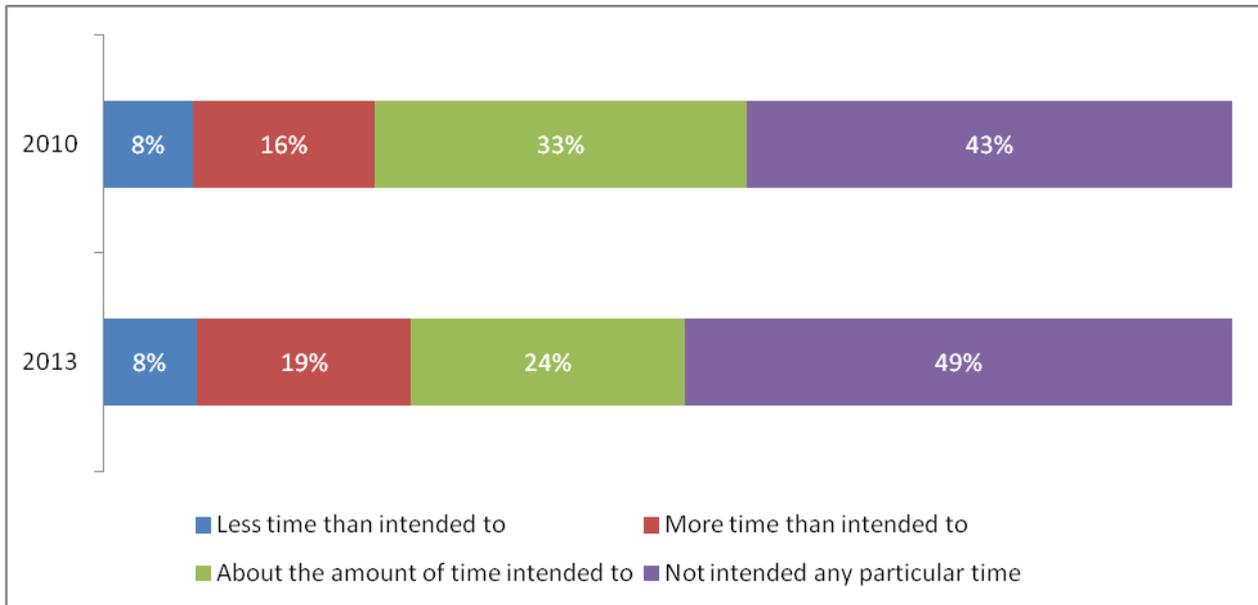


**Figure 5-3: Planned duration of outdoor activity, 2013.**

Base: outdoors during the previous weekend (n=644)

## 2010 and 2013 comparison

In 2013 the reported planned duration of outdoor activity was not significantly different to 2010, see Figure 5-4.

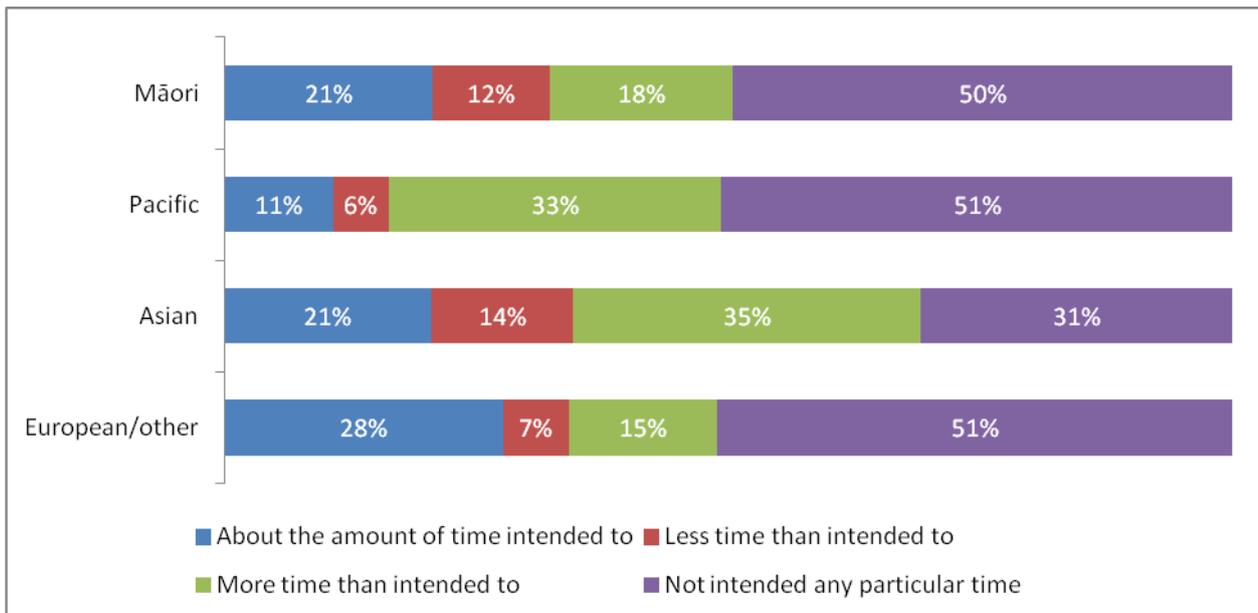


**Figure 5-4: Whether time spent outdoors was the amount intended, by year.**

Base: outdoors during the previous weekend (2010, n=538; 2013, n=644)

## Demographics

A significant difference in whether the time spent outdoors was the amount intended was found across ethnicity. In particular, Asian (35%) and Pacific (33%) respondents were significantly more likely to have reported spending more time outside than they had intended to, compared with European/Other (15%) and Māori (18%) (see Figure 5-5).



**Figure 5-5: Whether time spent outdoors was the amount intended, by ethnicity, 2013.**

Base: outdoors during the previous weekend (n=644)

## 6. SUN PROTECTION BEHAVIOURS

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### 6.1 PREPARATION TO PROTECT FROM THE SUN

Respondents who had spent 15 minutes or more outdoors during the previous weekend were asked whether they had things on hand to protect their skin from the sun if they needed to on the day in question.

Half (52%) of all respondents said that they had had things on hand, while another half (48%) had not.

#### **2010 and 2013 comparison**

In 2010, approximately the same number of people had the things on hand they needed to protect their skin (47%) as was reported in 2013 (52%).

#### **6.1.1 Perception that the weather could cause sunburn**

All respondents were asked whether the weather on Saturday or Sunday had made them think that they could expect to get sunburnt if they went outside without protecting their skin.

Of the respondents who had been outdoors at the weekend, around 8 out of 10 (79%) reported that the weather conditions made them think they could get sunburnt, while around 2 in 10 (17%) said that it did not.

#### **2010 and 2013 comparison**

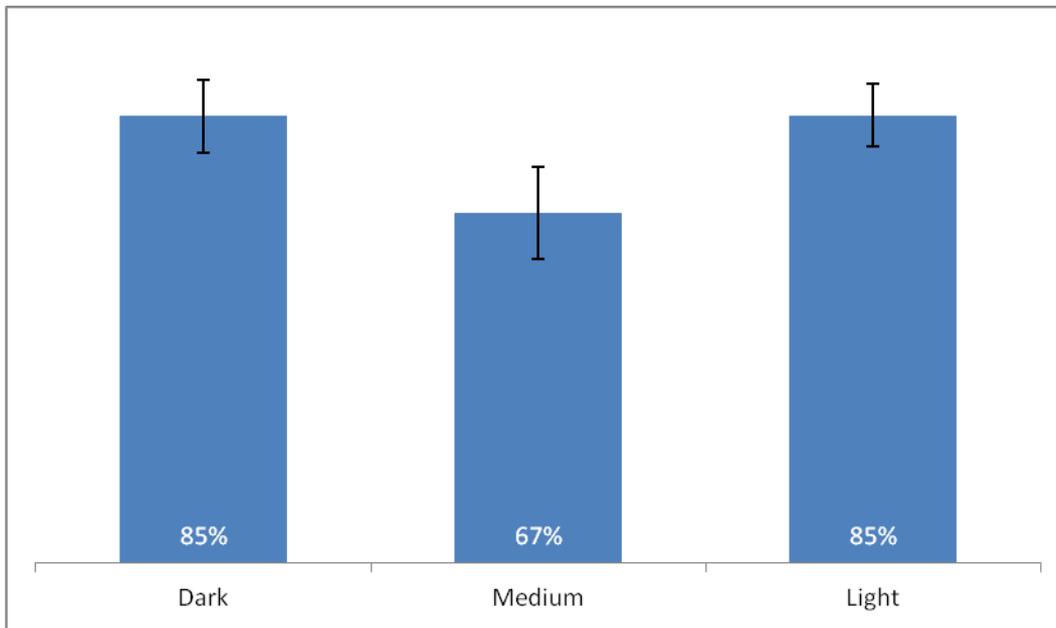
In 2013, a significantly higher proportion of respondents reported that the weather conditions made them think they could get sunburnt (79%), compared with 2010 (57%).<sup>1</sup>

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<sup>1</sup> January and February of 2013 were unusually dry and sunny, while in 2010 January was wetter than usual (see: <https://www.niwa.co.nz/climate/summaries/monthly>). Although participants were only called after weekends on which they could have been exposed to the sun, it is possible that their overall impressions of the summer's weather affected perceptions.

## Demographics

Respondents with both light and dark skin type were more likely to think that they could get sunburnt during the previous weekend compared with those who reported having a medium skin type (see Figure 6-1).



**Figure 6-1: Whether thought they could get sunburnt during the previous weekend due to the weather conditions, by skin colour, 2013.**

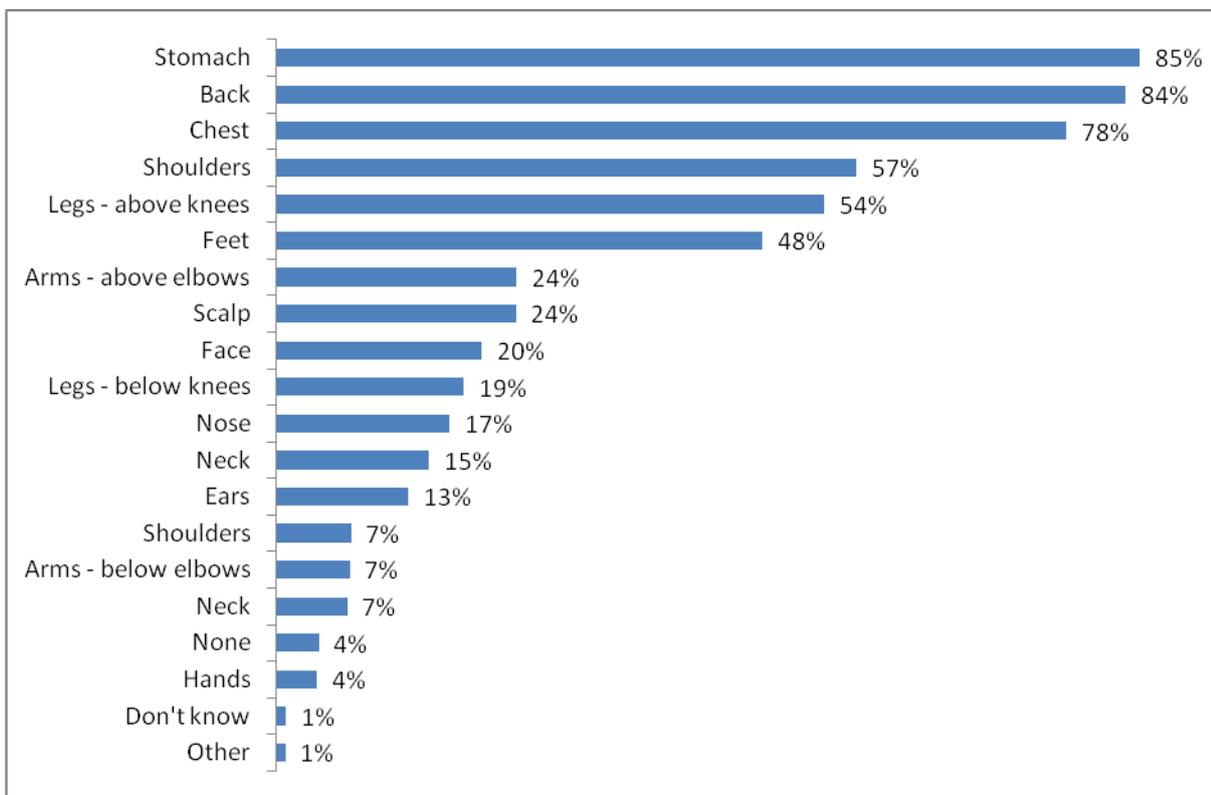
Base: all youth (n=644)

## 6.2 USE OF CLOTHING TO COVER UP

Respondents who had spent 15 minutes or more outdoors during the previous weekend were asked which parts of their body were covered or shaded by clothing.

The majority of respondents reported that their stomach (85%), back (84%), and chest (78%) had been covered by clothing. Approximately half of all respondents reported that their shoulders (57%), legs – above knees (54%), and feet (48%) had been covered by clothing.

Fewer respondents reported that their shoulders (7%), arms – below elbows (7%), neck (7%), and hands (4%) were covered by clothing.



**Figure 6-2: Body parts covered up by clothing while outdoors during previous weekend, 2013.**

Base: outdoors during the previous weekend (n=644)

## 2010 and 2013 comparison

In 2013 significantly fewer respondents reported having had their legs above knees and arms above elbows covered by clothing, compared with 2010 (see Table 6-1)

**Table 6-1: Body parts covered up by clothing while outdoors during previous weekend, by year.**

	<b>2010</b>	<b>2013</b>
	<b>%</b>	<b>%</b>
<b>Stomach</b>	89	85
<b>Back</b>	85	84
<b>Chest</b>	86	78
<b>Shoulders</b>	67	57
<b>Legs - above knees*</b>	88	54
<b>Feet</b>	48	48
<b>Arms - above elbows*</b>	56	24
<b>Legs - below knees</b>	24	19
<b>Neck</b>	12	15
<b>Arms - below elbows</b>	18	7
<b>Hands</b>	6	4
Base: outdoors during the previous weekend	(n=538)	(n=644)

\* $p < .05$

## Demographics

Respondents aged 13 to 17 years were significantly more likely to have had their arms above elbows and arms below elbows covered by clothing compared with those aged 18 to 24 years, see Table 6-2.

**Table 6-2: Body parts covered up by clothing while outdoors during previous weekend, by age, 2013.**

	13-17 years	18-24 years
	%	%
<b>Stomach</b>	85	85
<b>Back</b>	84	84
<b>Chest</b>	79	78
<b>Shoulders</b>	60	56
<b>Legs above knees</b>	59	51
<b>Feet</b>	48	49
<b>Arms above elbows*</b>	29	20
<b>Legs below knees</b>	22	16
<b>Neck</b>	16	15
<b>Arms below elbows*</b>	11	5
<b>None</b>	4	4
<b>Hands</b>	4	4
<b>Don't know</b>	3	0
<b>Other</b>	1	1
Base: outdoors during the previous weekend	(n=470)	(n=174)

\* $p < .05$

Males were significantly more likely than females to have had their legs above and below knees, shoulders, feet, and arms above elbows covered by clothing (see Table 6-3).

**Table 6-3: Body parts covered up by clothing while outdoors during previous weekend, by gender, 2013.**

	Male	Female
	%	%
<b>Back</b>	82	85
<b>Stomach</b>	82	88
<b>Chest</b>	80	76
<b>Legs above knees*</b>	69	41
<b>Shoulders*</b>	66	51
<b>Feet*</b>	60	38
<b>Arms above elbows*</b>	31	18
<b>Legs below knees*</b>	24	14
<b>Neck</b>	15	15
<b>Arms below elbows</b>	7	8
<b>Hands</b>	5	3
<b>None</b>	4	5
<b>Don't know</b>	2	0
<b>Other</b>	0	2
Base: outdoors during the previous weekend	(n=358)	(n=286)

\* $p < .05$

There were also significant differences in the body parts covered by clothing across both ethnicity and skin type, shown in Table 6-4 and 6-5. People of Asian ethnicity were the most likely to say that their back, chest and arms above elbows had been covered by clothing.

**Table 6-4: Body parts covered up by clothing while outdoors during previous weekend, by ethnicity, 2013.**

	<b>Māori</b>	<b>Pacific</b>	<b>Asian</b>	<b>European/ Other</b>
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
<b>Stomach</b>	82	86	93	85
<b>Back*</b>	79	78	94	85
<b>Chest*</b>	78	78	90	76
<b>Legs above knees</b>	59	59	62	51
<b>Shoulders</b>	52	59	75	56
<b>Feet</b>	42	51	55	49
<b>Arms above elbows*</b>	24	25	40	21
<b>Neck</b>	17	18	14	15
<b>Legs below knees</b>	12	17	23	20
<b>None*</b>	7	0	0	4
<b>Arms below elbows*</b>	2	22	4	8
<b>Don't know</b>	1	0	0	1
<b>Other</b>	1	0	0	1
<b>Hands*</b>	0	10	6	4
Base: outdoors during the previous weekend	(n=89)	(n=43)	(n=87)	(n=425)

\* $p < .05$

**Table 6-5: Body parts covered up by clothing while outdoors during previous weekend, by skin type, 2013.**

	<b>Dark</b>	<b>Medium</b>	<b>Light</b>
	<b>%</b>	<b>%</b>	<b>%</b>
<b>Stomach</b>	80	86	89
<b>Back</b>	76	86	88
<b>Chest</b>	75	81	79
<b>Shoulders*</b>	45	65	60
<b>Legs above knees*</b>	42	67	54
<b>Feet*</b>	40	59	47
<b>Arms above elbows*</b>	23	35	17
<b>Neck</b>	16	15	15
<b>Legs below knees</b>	13	24	19
<b>None</b>	8	4	2
<b>Arms below elbows</b>	7	10	6
<b>Hands</b>	5	4	3
<b>Don't know</b>	1	0	2
<b>Other</b>	0	0	2
Base: outdoors during the previous weekend	(n=185)	(n=199)	(n=259)

\* $p < .05$

## 6.3 HAT USE

All respondents who had spent 15 minutes or more outdoors during the previous weekend were asked whether they were wearing something on their head most of time, such as a hat, cap, visor or helmet.

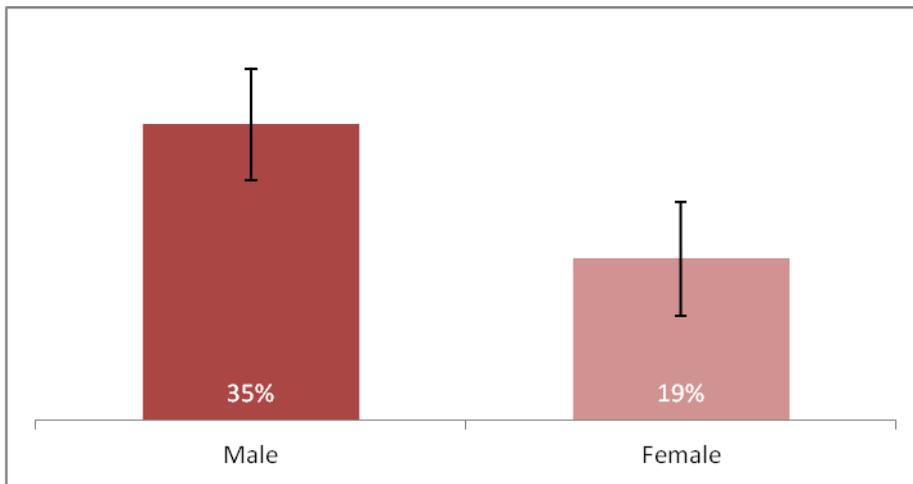
Around one-quarter (27%) of respondents who had been outdoors reported wearing something on their head, while the remaining three-quarters (73%) had not (see Figure 6.3).

### 2010 and 2013 comparison

The proportion of respondents reporting that they had worn something on their head has not changed significantly since 2010.

### Demographics

Almost 4 out of 10 males (35%) reported wearing something on their head, which was significantly greater than the number of females, with only 2 out of 10 (19%) reporting having worn something on their head.



**Figure 6-3: Wearing of hats when outside, by gender, 2013.**

Base: outdoors during the previous weekend (n=644)

## 6.4 SUNGLASS USE

Respondents who had spent 15 minutes or more outdoors during the weekend were asked whether they had worn sunglasses most of the time while doing their main activity.

Four out of 10 (41%) respondents who had been outdoors had worn sunglasses, while 6 out of 10 (59%) had not.

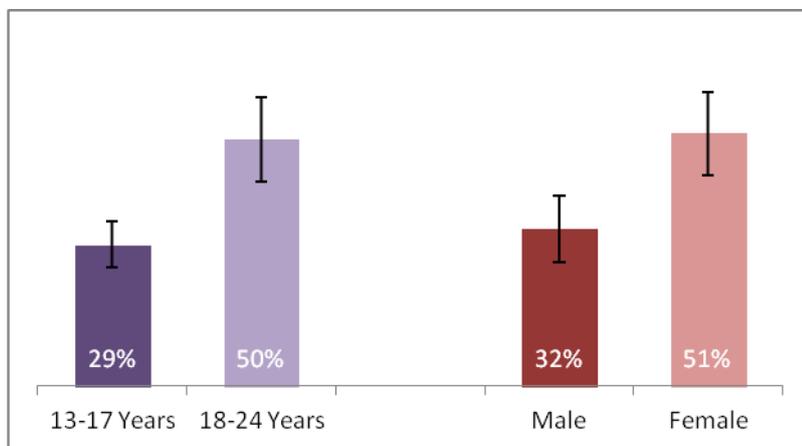
### 2010 and 2013 comparison

The proportion of respondents reporting that they had worn sunglasses has not changed significantly since 2010.

### Demographics

One-half of females (51%) reported wearing sunglasses, which was significantly greater than the number of males, of whom 3 out of 10 (32%) reported having worn sunglasses.

One-half of 18-24 year olds (50%) reported wearing sunglasses, which was significantly greater than the number of 13 to 17 year olds, of whom 3 out of 10 (29%) reported having worn sunglasses.



**Figure 6-4: Wearing of sunglasses, by age and gender, 2013.**

Base: outdoors during the previous weekend (n=644)

## 6.5 SUNSCREEN USE

All respondents who had spent at least 15 minutes outdoors during the previous weekend were asked whether they had applied sunscreen while they were doing the main activity they had mentioned.

Just less than one-half of respondents (45%) who had been outdoors for at least 15 minutes reported using sunscreen.

### **2010 and 2013 comparison**

In 2010 approximately the same number of people who had been outdoors for at least 15 minutes reported using sunscreen (49%) as in 2013 (45%).

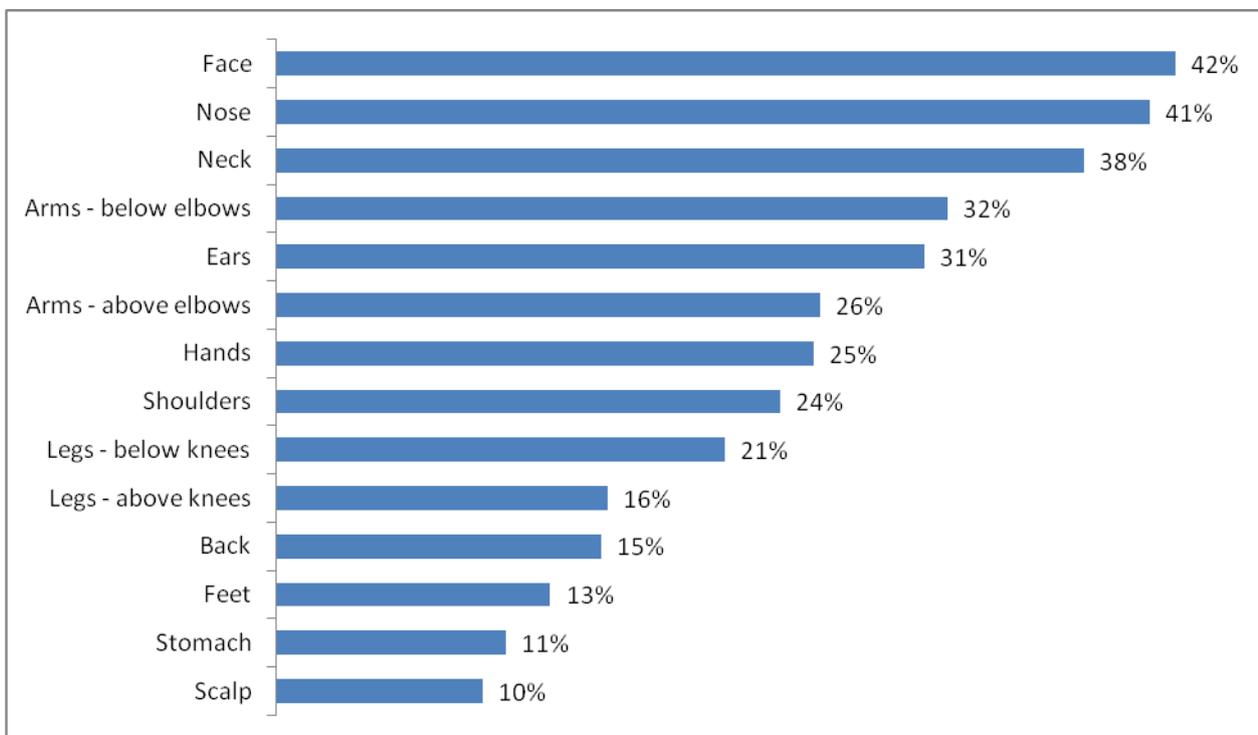
### **Demographics**

More than one-half of all females (54%) reported using sunscreen, which was significantly greater than the number of males, of whom less than 4 out of 10 (36%) reported using sunscreen.

### 6.5.1 Body parts covered by sunscreen

All respondents who reported having applied sunscreen during the previous weekend were asked what parts of their body were covered by sunscreen for most of the time while they were doing the main activity they had mentioned.

Approximately 4 out of 10 respondents reported that they applied sunscreen to their face (42%), nose (41%), and neck (38%). Three out of 10 respondents reported applying sunscreen to their arms – below elbows (32%) and ears (31%). Approximately one-quarter of respondents reported applying sunscreen to their arms – above elbows (26%), hands (25%), shoulders (24%), and legs – below knees (21%), see Figure 6-5.



**Figure 6-5: Body parts covered by sunscreen while outdoors during previous weekend, 2013.**

Base: applied sunscreen while outdoors (n=281)

## 2010 and 2013 comparison

In 2013 approximately the same number of people applied sunscreen to each body part compared with 2010 (see Table 6-6).

**Table 6-6: Body parts covered by sunscreen while outdoors during previous weekend, by year.**

	<b>2010</b>	<b>2013</b>
	<b>%</b>	<b>%</b>
<b>Face</b>	42	42
<b>Nose</b>	37	41
<b>Neck</b>	33	38
<b>Arms - below elbows</b>	30	32
<b>Ears</b>	27	31
<b>Arms - above elbows</b>	23	26
<b>Hands</b>	24	25
<b>Shoulders</b>	19	24
<b>Legs - below knees</b>	22	21
<b>Legs - above knees</b>	12	16
<b>Back</b>	15	15
<b>Feet</b>	14	13
<b>Stomach</b>	11	11
<b>Scalp</b>	3	10
Base: applied sunscreen while outdoors	(n=268)	(n=281)

## Demographics

Among those people who applied sunscreen, significant gender differences were found in the application of sunscreen to different body parts. Females were more likely than males to have applied sunscreen on all areas of the face, arms and legs.

**Table 6-7: Body parts covered by sunscreen while outdoors during previous weekend, by gender, age-standardised proportions.**

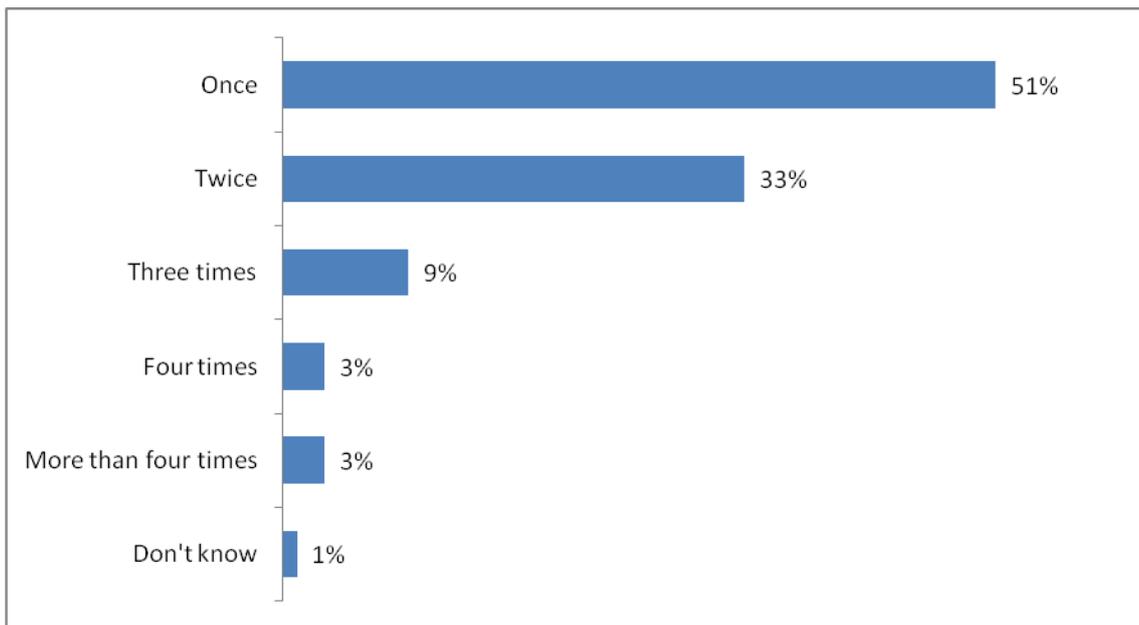
	Male	Female
	%	%
Face*	33	52
Neck*	31	45
Nose*	31	52
Ears*	25	36
Arms below elbows*	25	39
Hands*	20	31
Arms above elbows*	17	34
Shoulders*	16	32
Legs below knees*	15	28
Back	12	19
Scalp	10	10
Stomach	9	13
Legs above knees*	8	24
Feet	6	20
Base: applied sunscreen while outdoors	(n=138)	(n=143)

\* $p < .05$

## 6.5.2 Reapplication of sunscreen

Respondents who had spent 15 minutes or more outdoors during the previous weekend and had applied sunscreen (41% of all respondents), were asked how many times they applied sunscreen during the day in question.

Around one-half (51%) of respondents who applied sunscreen applied it only once, and around one in three (33%) applied it twice. Smaller proportions applied sunscreen three times (9%) four times (3%) or more than four times (3%) (see Figure 6-6).

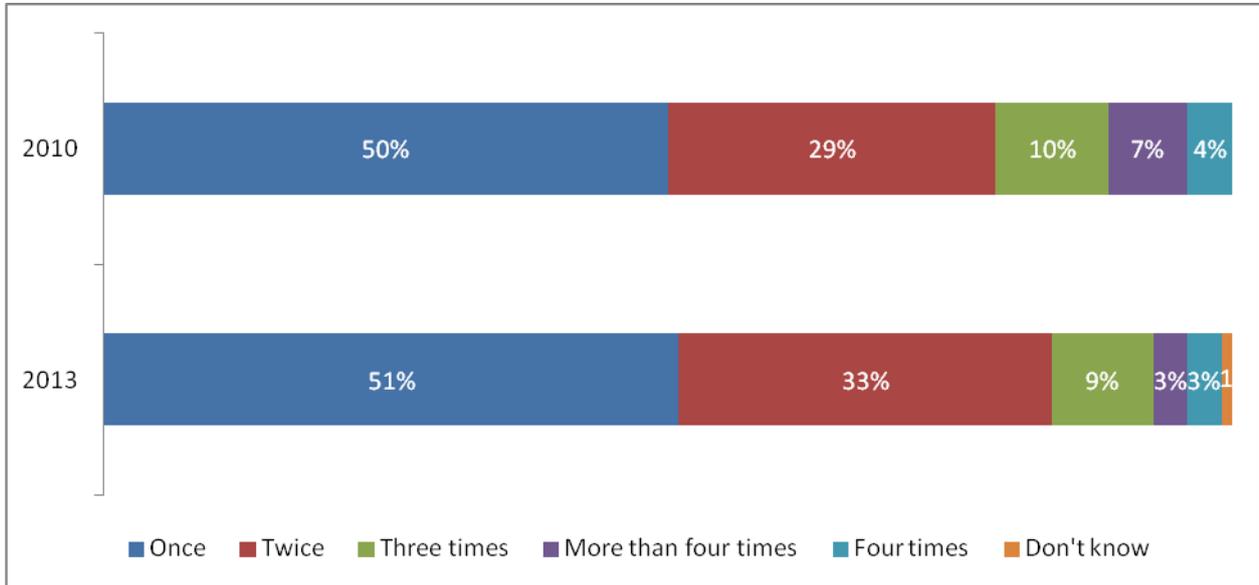


**Figure 6-6: Number of times sunscreen applied, 2013.**

Base: applied sunscreen while outdoors (n=281)

## 2010 and 2013 comparison

Respondents applied sunscreen a similar number of times in 2010 and 2013, as shown in Figure 6-7.

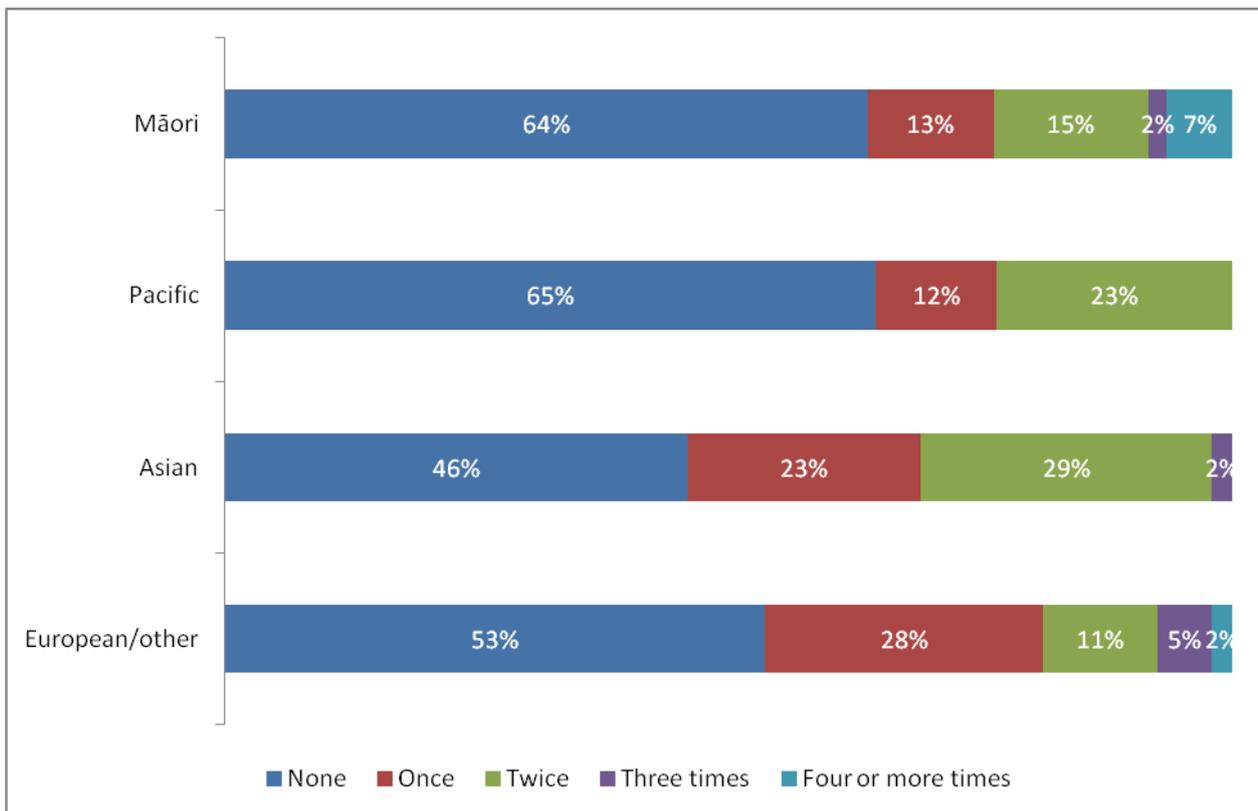


**Figure 6-7: Number of times sunscreen applied, by year.**

Base: applied sunscreen while outdoors (2010, n=268; 2013, n=281)

## Demographics

Significant differences were found in the number of times sunscreen was applied across ethnicity. Those of European/ Other ethnicities were significantly more likely to apply sunscreen once. Of those Māori who had applied sunscreen, they were more likely to report having applied it four or more times compared to people of other ethnicities (see Figure 6-8).



**Figure 6-8: Number of times sunscreen applied, by ethnicity, 2013.**

Base: outdoors during the previous weekend (n=644)

## 6.6 USE OF SHADE

Respondents who had spent 15 minutes or more outdoors were asked whether they had stayed out of the sun or stayed in the shade at any time while undertaking their main outdoor activity.

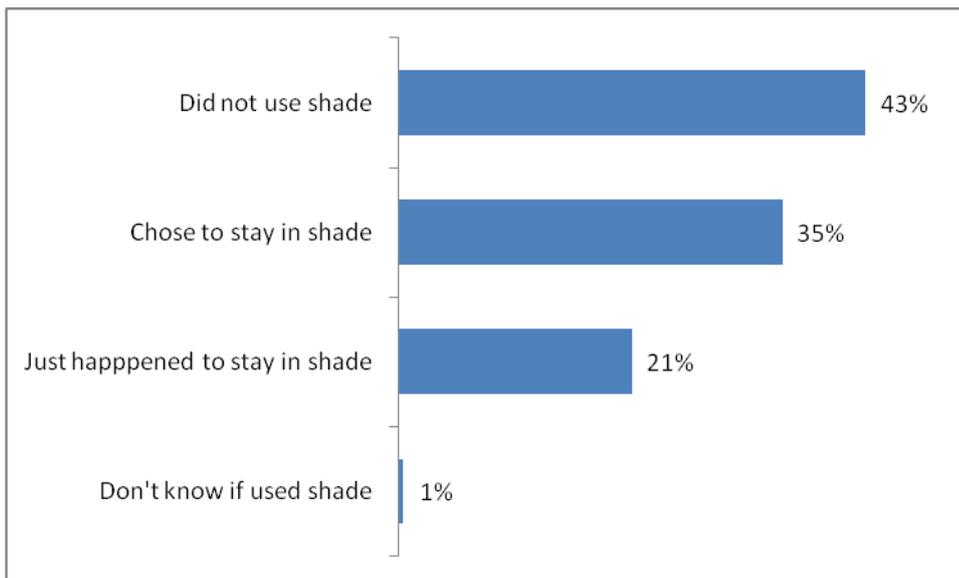
Six out of 10 respondents (57%) said that they had stayed out of the sun or in the shade at some time while they were outside. Around 4 out of 10 (43%) had not.

### 2010 and 2013 comparison

In 2010, 54% of respondents reported that they had stayed in shade, which was not significantly different to the number reporting shade use in 2013 (57%).

#### 6.6.1 Choice of shade use

Those who had stayed in the shade or out of the sun were asked whether they had made a choice to use shade, or whether it had just happened. More (35%) had chosen to stay in the shade, while 2 out of ten (21%) said they just happened to stay in the shade (see Figure 6-9).

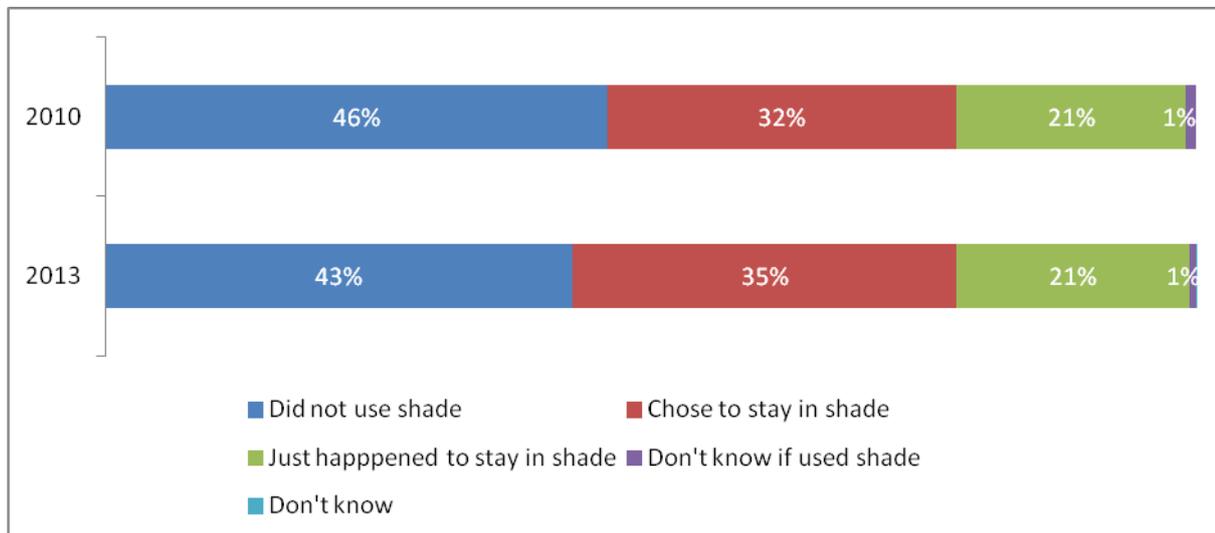


**Figure 6-9: Use of shade while outdoors during previous weekend, 2013.**

Base: outdoors during the previous weekend (n=644)

## 2010 and 2013 comparison

Similar proportions of respondents reported the different degrees of shade use between 2010 and 2013, as shown in Figure 6-10.



**Figure 6-10: Use of shade while outdoors during previous weekend, by year.**

Base: outdoors during the previous weekend (2010, n=538; 2013, n=644)

### 6.6.2 Availability of shade

Respondents were asked whether shade was available while they were doing their main activity. Half (51%) of all respondents reported that shade was available to them, while the remaining half (49%) reported that it was not.

Respondents were also asked how likely it is that they would have used shade, had it been available to them. Over one-half of respondents (59%) reported that they would have been likely to make use of shade had it been available, including around 4 out of 10 (38%) who reported that they were very likely. Around 3 out of 10 respondents (35%) reported that they were unlikely or very unlikely to use shade. The remainder (6%) did not know whether they would have made use of shade had it been available.

## 7. SUN PROTECTION KNOWLEDGE AND ATTITUDES

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### 7.1 RECALL OF ADVERTISING AND SUN PROTECTION INFORMATION

All youth were asked whether they had seen any advertising in recent summers about the dangers of too much exposure to the sun. Approximately two-thirds of respondents (65%) recalled some advertising about sun safety, while one-third (34%) could not.

#### **2010 and 2013 comparison**

In 2013, a significantly lower proportion of respondents reported having recalled some advertising about sun safety (65%), compared with 2010 (81%). To put these responses in context, there had been television advertising about sun safety broadcast in the summer of 2010, whereas in 2013 there were some other promotions but no television advertising.

#### **7.1.1 Recall of specific promotions – skin damage**

Respondents were also asked whether they had seen or heard any promotions specifically about the skin damage caused by sun exposure. This question related to HPA's recent youth-targeted campaign, *Don't let the Sun Get Under Your Skin*. Four out of 10 (37%) respondents reported having heard of specific promotions, while 6 out of 10 respondents (61%) had not.

## 7.2 USE OF WEATHER INFORMATION

All respondents were asked about their use of the weather forecast ahead of outdoor activities.

Two-thirds of respondents (66%) reported looking at the weather forecast ahead of outdoor activities, and around one-third (33%) did not.

### Demographics

Seven out of 10 females (72%) reported using the weather forecast ahead of outdoor activities, which was significantly greater than the number of males, of whom 6 out of 10 (61%) reported using the weather forecast.

Seven out of 10 18 to 24-year-olds (70%) reported using the weather forecast ahead of outdoor activities, which was significantly greater than the number of 13 to 17-year-olds, with 6 out of 10 (59%) reporting using the weather forecast ahead of outdoor activities.

## 7.3 SUN PROTECTION ALERT

All respondents were asked whether they had seen or heard a feature in the weather forecast about times when sun protection would be needed. Two-thirds of respondents (66%) reported that they had seen or heard a feature, one-third (32%) had not, and 3% did not know. The question referred to the Sun Protection Alert, shown below, which has been broadcast since the summer of 2011/12.

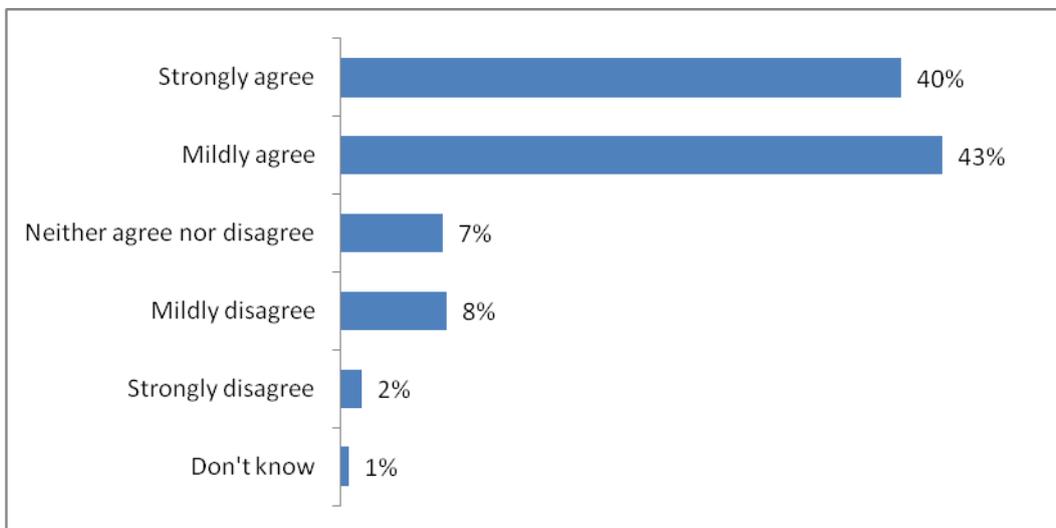


## 7.4 KNOWLEDGE OF SKIN CANCER AND RISK FACTORS

Respondents were asked about their perceptions of risk and knowledge of risk factors for skin cancer, based on their agreement or disagreement with a number of attitudinal statements. All respondents were asked to indicate their agreement with three statements about skin cancer, choosing one of six responses.

### 7.4.1 “I feel confident that I can protect myself from skin cancer”

More than 8 out of 10 (83%) respondents reported that they agreed with this statement, including 4 in 10 who strongly agreed (40%). One in 10 disagreed (10%) (see Figure 7-1).

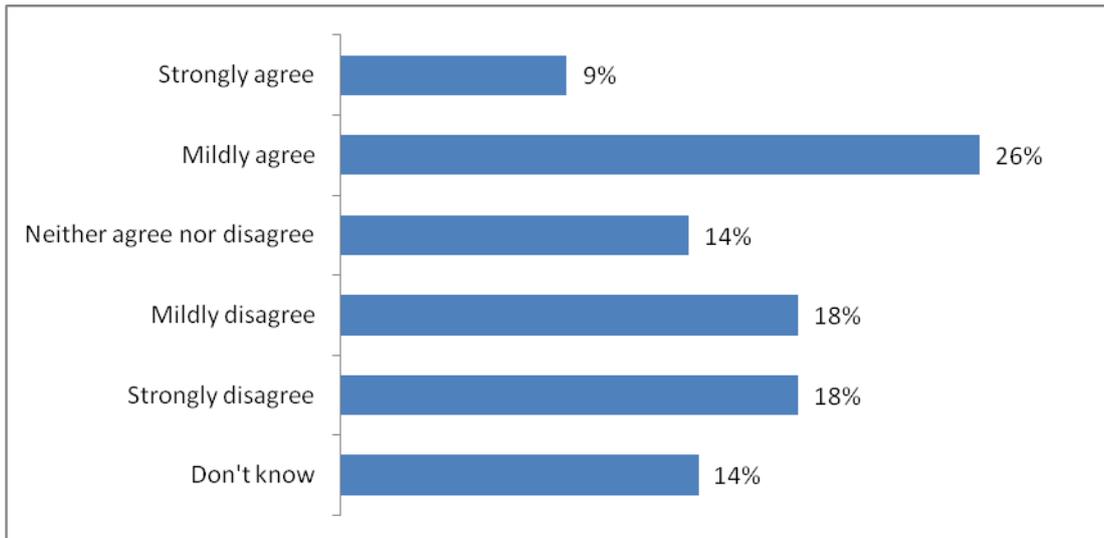


**Figure 7-1: Agreement with “I feel confident I can protect myself from skin cancer”, 2013.**

Base: all youth (n=698)

### 7.4.2 “Melanoma can be easily treated by a GP”

Around one-third of respondents (35%) indicated that they agreed with this statement, including around 1 in 10 (9%) who strongly agreed. Around one-third of all respondents (36%) disagreed, including around 2 in 10 (18%) who strongly disagreed. The rest of the responses were split between those who reported they did not know (14%) or neither agreed nor disagreed (14%) whether melanoma could be easily treated by a GP (see Figure 7-2).



**Figure 7-2: Agreement with “Melanoma can be easily treated by a GP”, 2013.**

Base: all youth (n=698)

### 7.4.3 “Even if treated, melanoma can lead to loss of life”

Approximately three-quarters (76%) of respondents agreed with this statement, including 4 out of 10 (40%) who strongly agreed. Only a small proportion of respondents disagreed with this statement (4%) (see Figure 7-3).

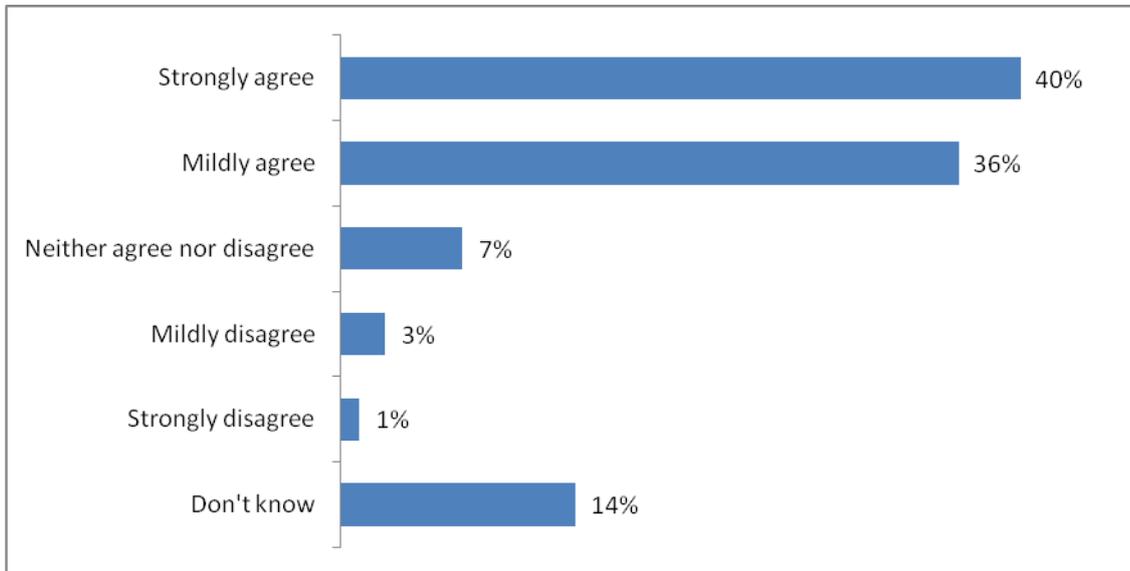


Figure 7-3: Agreement with “Even if treated, melanoma can lead to loss of life”, 2013.

Base: all youth (n=698)

#### 2010 and 2013 comparison

This was the only question of the three that was asked in both the 2010 and 2013 surveys. No significant differences were found in responses between 2010 and 2013, with 82% agreement and 12% disagreement in 2010, compared with 76% agreement and 4% disagreement in 2013.

#### 7.4.4 Risk factors for the development of skin cancer

All respondents were asked “What do you think increases the chances of a person getting skin cancer?”. Respondents could nominate as many factors as they wanted, with responses coded to a pre-determined list.

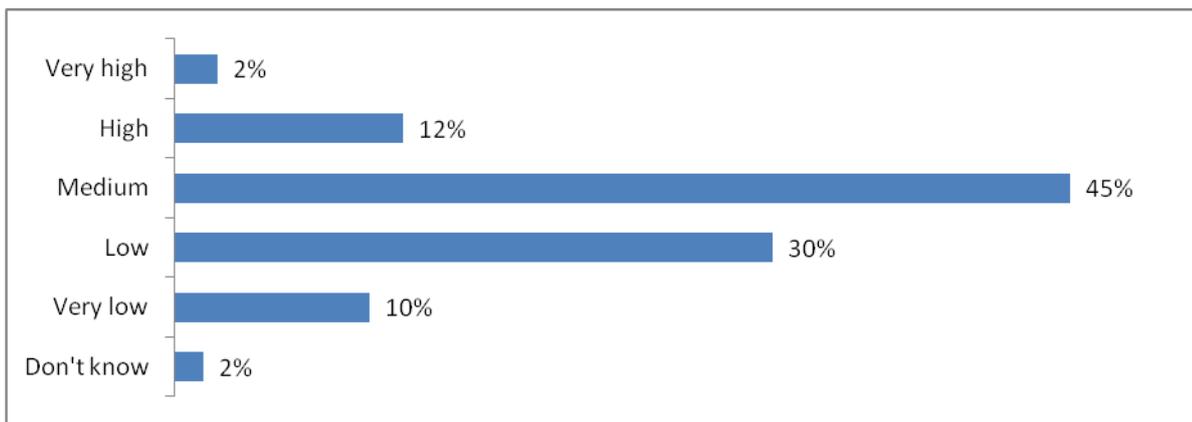
Nearly half of the respondents (45%) mentioned “not using sunscreen” and one in four mentioned “being in the sun/sun exposure”. Close to one in four (23%) “not covering up in the sun” and being in the sun too long/at peak times”. The next most common responses were to do with getting sunburnt. There were no significant differences in responses by gender, age or ethnicity.

**Table 7-1: “What do you think increases the chances of a person getting skin cancer?”, 2013.**

	%
Not using sunscreen	45
Being in the sun/sun exposure	39
Not covering up in the sun	23
Being in the sun too long/at peak times	23
Getting sunburnt	12
Getting sunburnt frequently	7
Don't know	5
Sunbathing	5
Having fair/light skin	5
Family history/genetics/ethnicity	4
Tanning generally	4
Using sun beds/solaria	3
Getting severe sunburn	3
Having (a large number of) moles/freckles	3
Base: all youth (n=698)	

## 7.5 SKIN CANCER – INDIVIDUAL RISK PERCEPTION

Respondents were asked what they thought their likelihood was of getting skin cancer in the future. Around 1 out of 10 (14%) respondents indicated that they thought they had a high likelihood of getting skin cancer in the future, including 2% who thought their risk was very high. Around half of all respondents (45%) thought they had a medium level risk of getting skin cancer in the future. The chance of getting skin cancer in the future was considered to be low for 4 in 10 (40%) respondents, including 10% who thought their risk was very low.

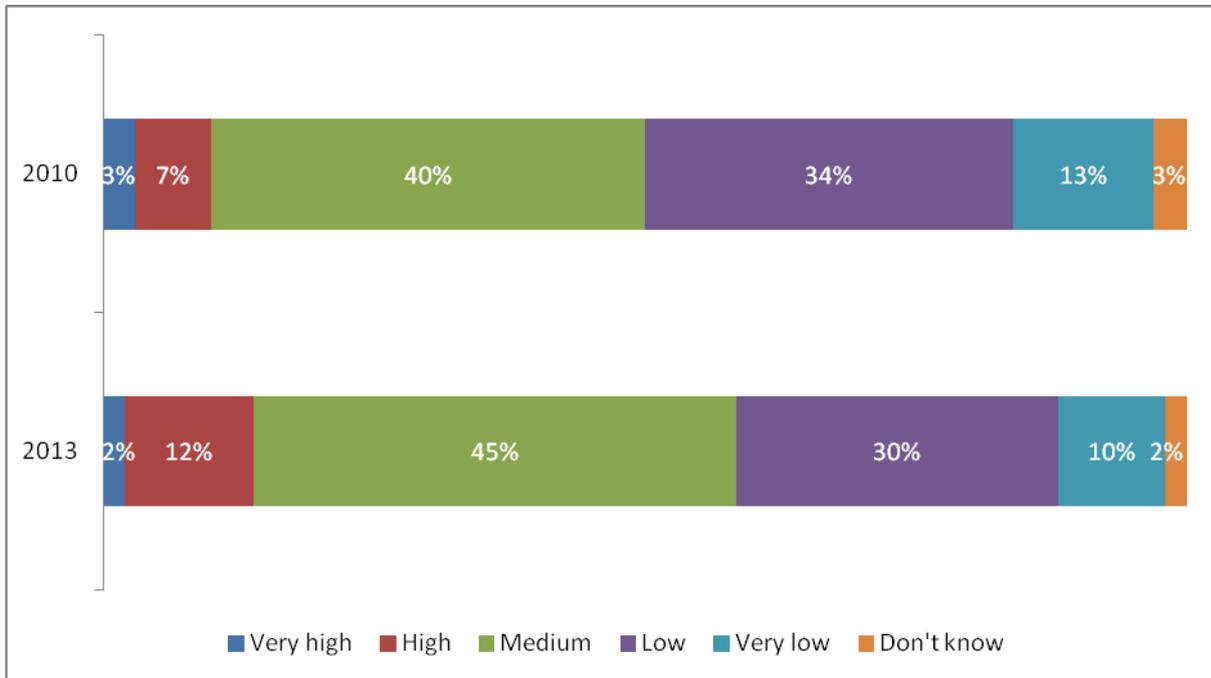


**Figure 7-4: Self-perceived risk of skin cancer, 2013.**

Base: all youth (n=698)

## 2010 and 2013 comparison

In 2013 a higher proportion of respondents thought their likelihood of getting skin cancer in the future was medium or high compared with 2010.

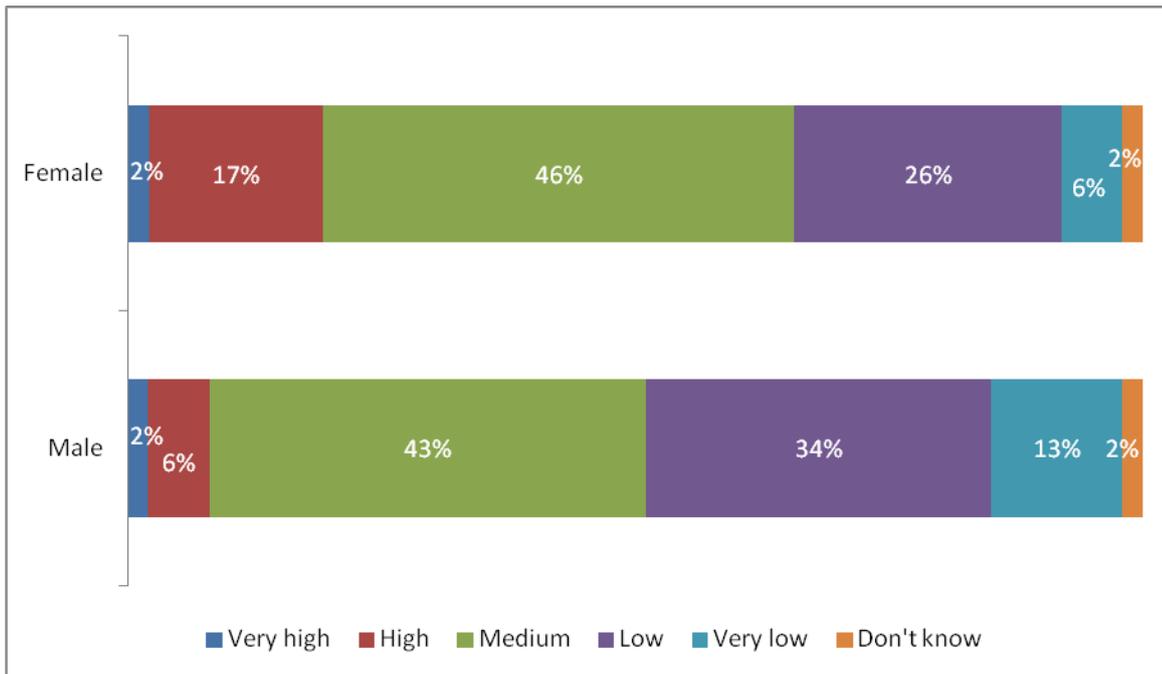


**Figure 7-5: Self-perceived risk of skin cancer, by year.**

Base: all youth (2010, n=618; 2013, n=698)

## Demographics

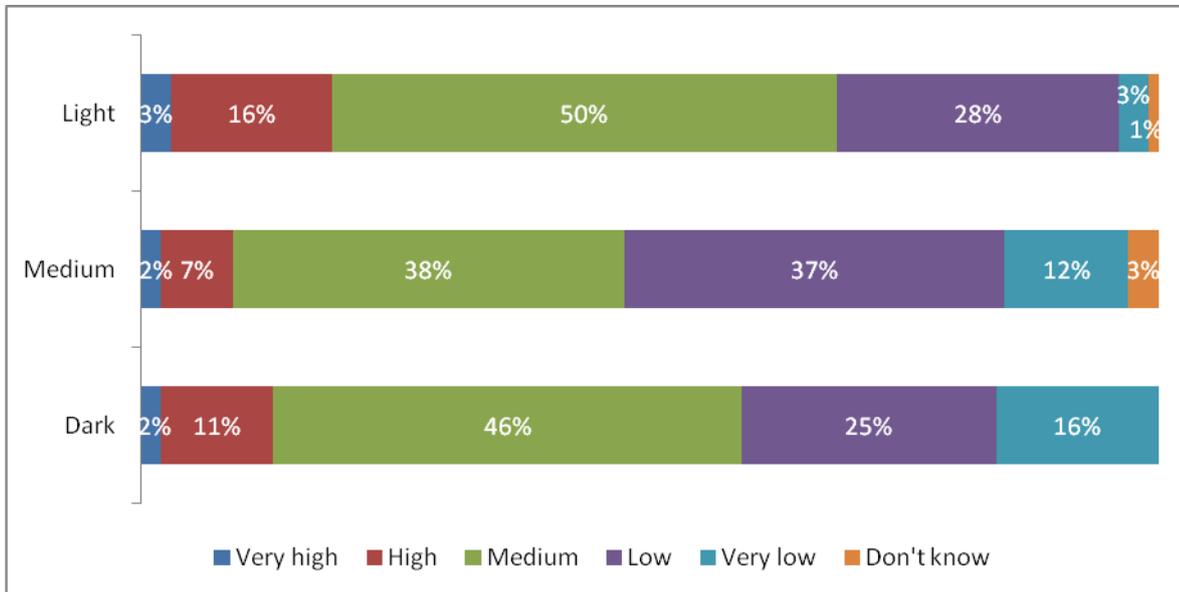
Females were significantly more likely to have responded that their likelihood of getting skin cancer in the future was high or very high (19%) compared with males (8%). Males were significantly more likely to have responded that their chance was low or very low (47%) compared with females (32%), see Figure 7-6.



**Figure 7-6: Self-perceived risk of skin cancer, by gender, 2013.**

Base: all youth (n=698)

Those with medium skin type were significantly more likely to report that their likelihood of getting skin cancer in the future was low or very low (49%) compared with those with light (31%) skin type (see Figure 7-7).



**Figure 7-7: Self-perceived risk of skin cancer, by skin type, 2013.**

Base: all youth (n=698)

## 8. TANNING

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All youth respondents were asked questions about their behaviours and attitudes regarding sun tanning.

### 8.1 TANNING BEHAVIOURS

Respondents were asked to indicate whether they had tried to get a suntan in the weekend just passed. Nearly 9 out of 10 (86%) respondents reported that they did not try to get a suntan in the weekend just passed, while just over 1 out of 10 reported that they had (14%).

#### **Demographics**

Females were significantly more likely to report that they tried to get a suntan (20%), compared with males (8%).

### 8.1.1 Intended tanning behaviours

In 2013, respondents were asked a series of three questions relating to tanning behaviours for the rest of the summer. Figure 8-1 provides an overview of responses.

#### “Are you likely to use a fake tan?”

Approximately 9 out of 10 respondents (89%) reported that they were unlikely to use a fake tan to get a sun tan for the rest of the summer. Around 1 in 10 (11%) reported that they did intend to use a fake tan. Females were significantly more likely to report that they intended to use a fake tan (19%), compared with males (4%).

#### “Do you plan to avoid getting a tan?”

Around one-third (35%) of respondents reported that they intended to avoid getting a suntan for the rest of the summer, while just under two-thirds (63%) of respondents reported that they did not intend to actively avoid this.

#### “Are you likely to sunbathe to get a tan?”

Around one-quarter (27%) of respondents reported that they were likely to sunbathe to get a suntan, while three-quarters (73%) of respondents were not. Females were significantly more likely to report that they would sunbathe to get a tan (32%), compared with males (21%).

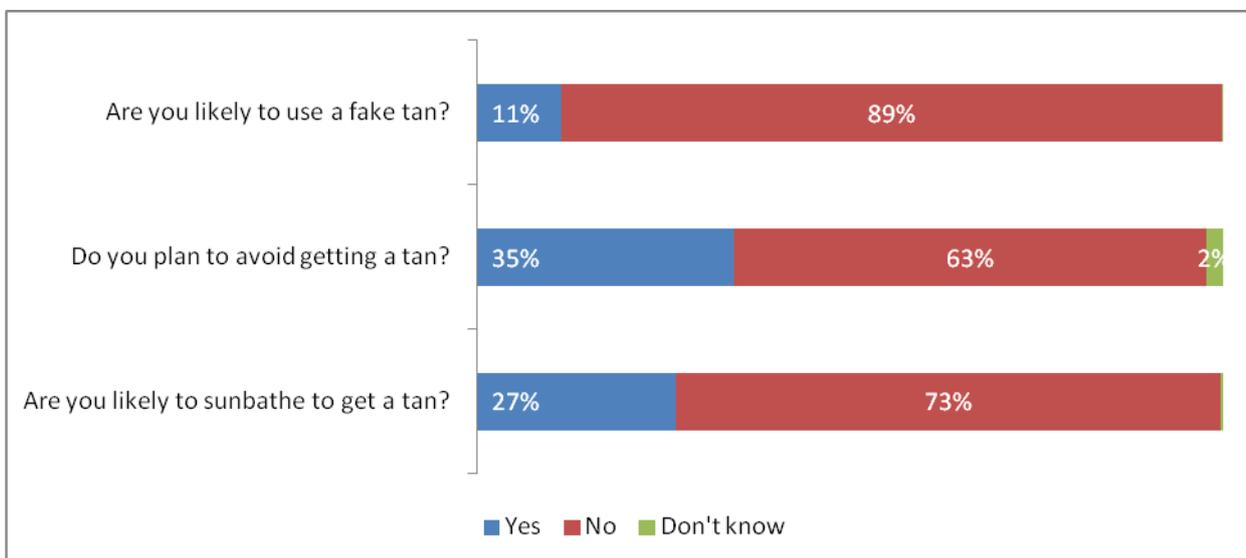


Figure 8-1: Intended tanning behaviours for the rest of the summer, 2013.

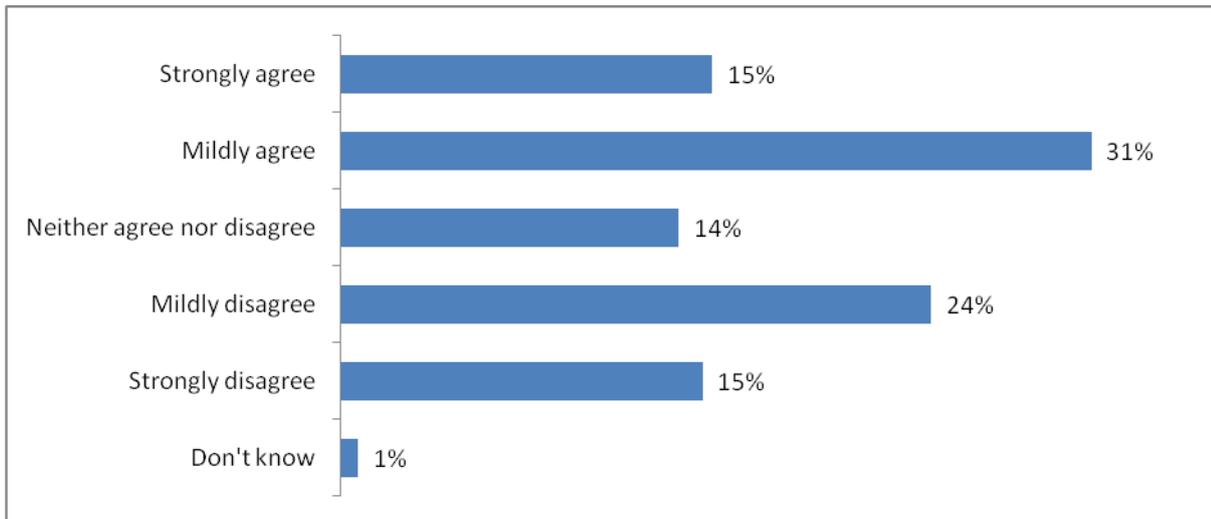
Base: all youth (n=698)

## 8.2 AGREEMENT WITH SUNTANNING STATEMENTS

All respondents were asked to indicate their agreement with nine statements about their attitudes to tanning, responding on a five point scale.

### 8.2.1 “I feel more healthy with a suntan”

Around half (46%) of all respondents agreed with this statement, including 15% who strongly agreed. Four out of 10 (39%) respondents disagreed, including 15% who strongly disagreed (see Figure 8-2).

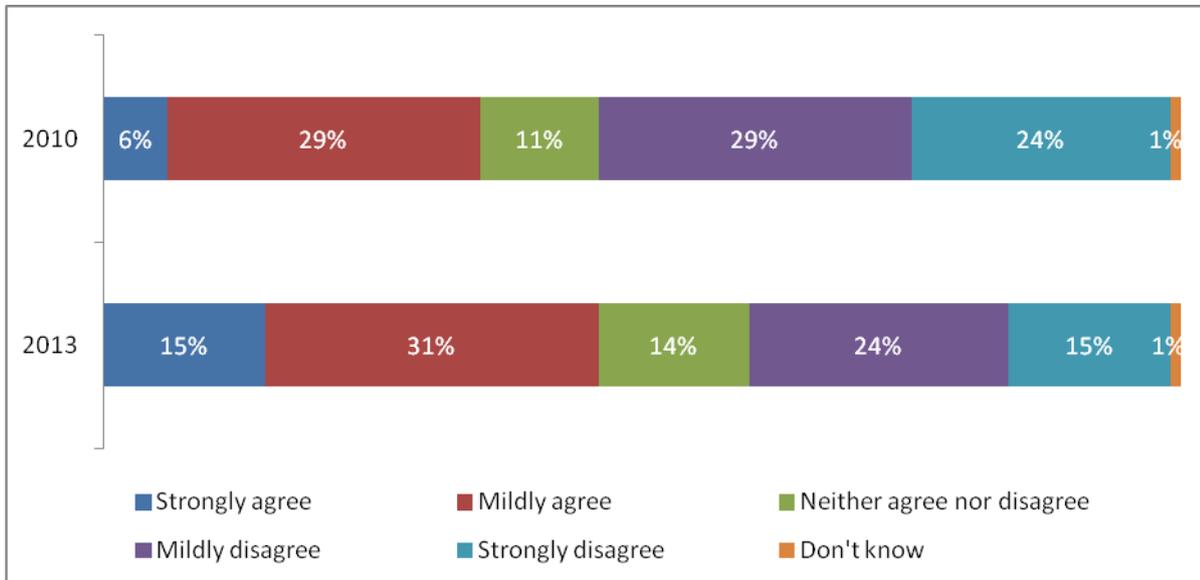


**Figure 8-2: Agreement with “I feel more healthy with a suntan”, 2013.**

Base: all youth (n=698)

### 2010 and 2013 comparison

In 2013 significantly more respondents agreed with the statement (46%) compared with 2010 (35%), see Figure 8-3.

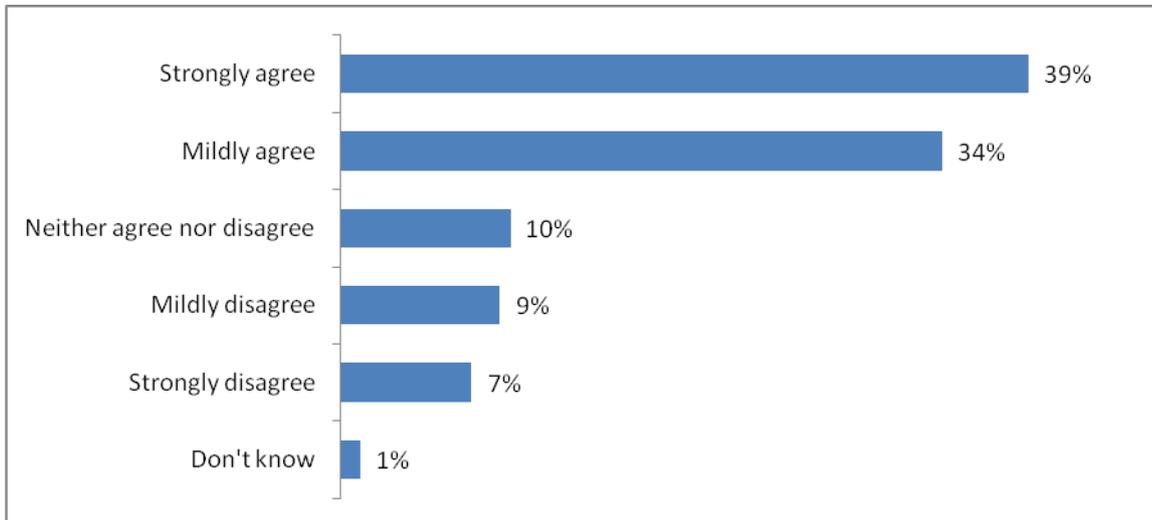


**Figure 8-3: Agreement with “I feel more healthy with a suntan”, by year.**

Base: all youth (2010, n=618; 2013, n=698)

### 8.2.2 “Most of my friends think a suntan is a good thing”

Nearly three in four (73%) respondents agreed with this statement, including 39% who strongly agreed. Around 2 out of 10 (16%) respondents disagreed, including 7% who strongly disagreed (see Figure 8-4).

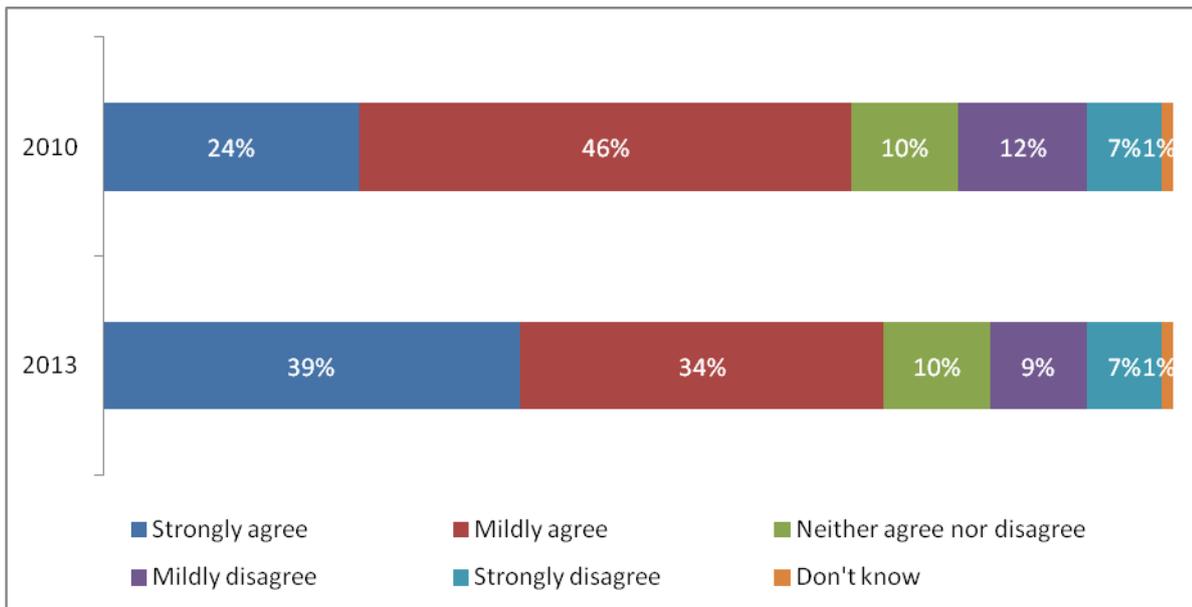


**Figure 8-4: Agreement with “Most of my friends think a suntan is a good thing”, 2013.**

Base: all youth (n=698)

### 2010 and 2013 comparison

In 2013 a significantly larger proportion of respondents reported that they strongly agreed with the statement “most of my friends think a suntan is a good thing” (39%) compared with 2010 (24%). However, the overall agreement rate (agree and strongly agree – combined) did not differ significantly, see Figure 8-5.



**Figure 8-5: Agreement with “Most of my friends think a suntan is a good thing”, by year.**

Base: all youth (2010, n=618; 2013, n=698)

### 8.2.3 “A suntan makes me feel better about myself”

One-half of respondents (51%) agreed with this statement, including 20% who strongly agreed. Four out of 10 respondents (38%) disagreed, including 20% who strongly disagreed (see Figure 8-6).

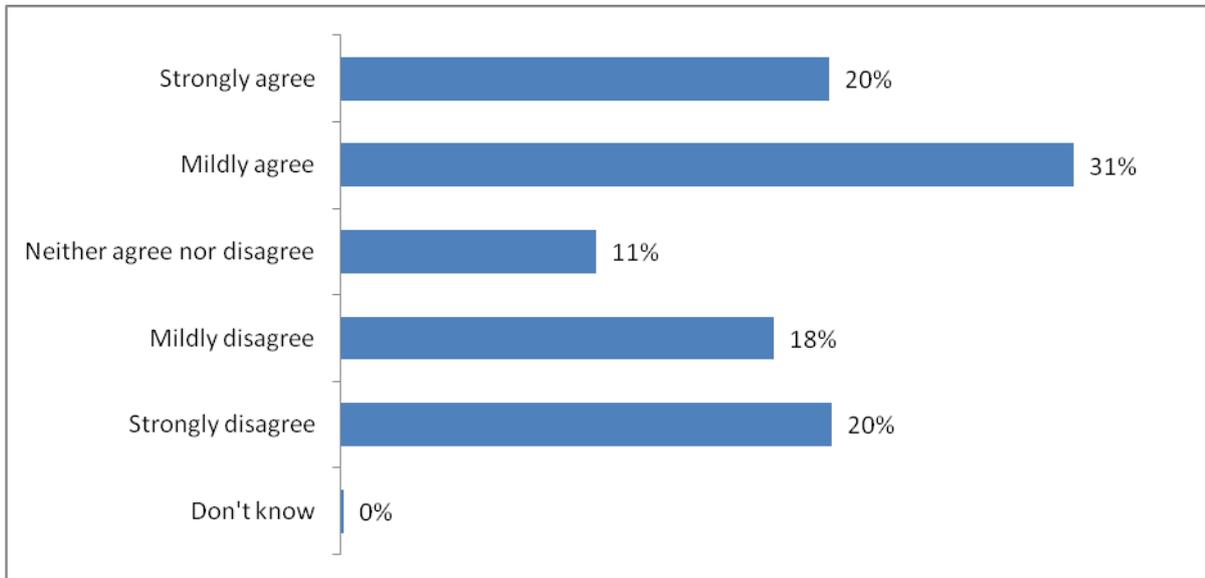
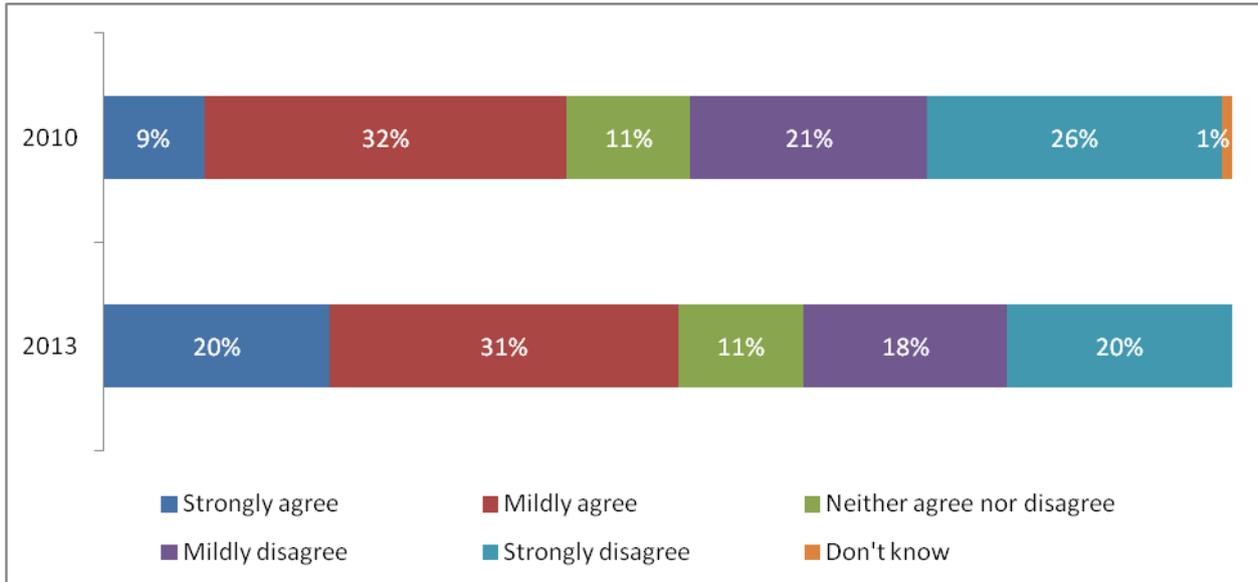


Figure 8-6: Agreement with “A suntan makes me feel better about myself”, 2013.

Base: all youth (n=698)

## 2010 and 2013 comparison

In 2013 a significantly larger proportion of respondents reported that they strongly agreed with the statement “a suntan makes me feel better about myself” (20%) compared with 2010 (9%), see Figure 8-7.

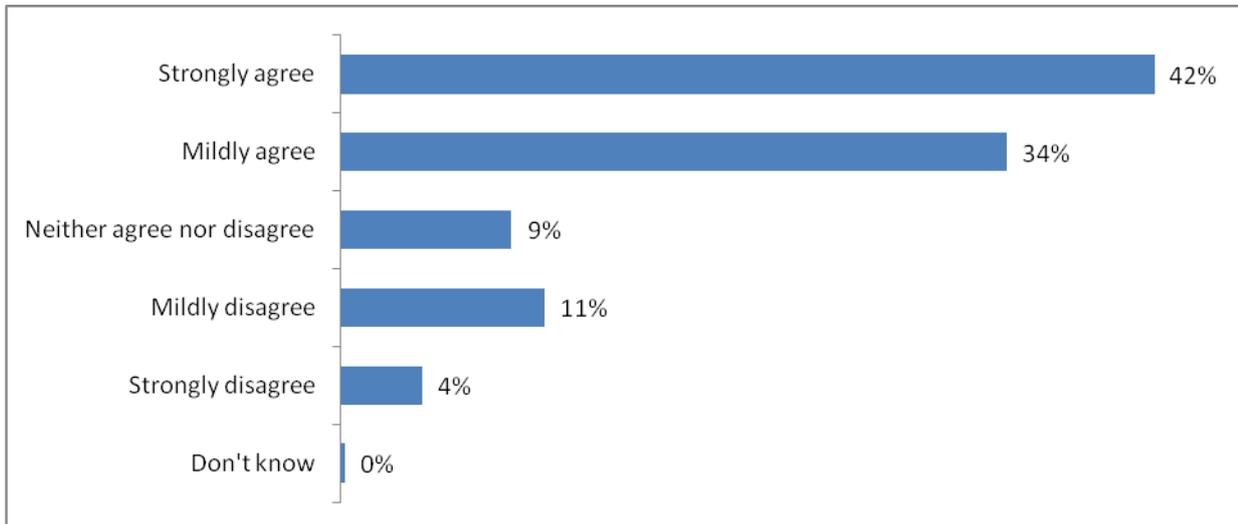


**Figure 8-7: Agreement with “A suntan makes me feel better about myself”, by year.**

Base: all youth (2010, n=618; 2013, n=698)

### 8.2.4 “I often encourage others to protect their skin from the sun”

Approximately three-quarters (76%) of respondents agreed with this statement, including 4 out of 10 (42%) who strongly agreed. 15% of respondents disagreed, and 4% of those strongly disagreed (see Figure 8-8).

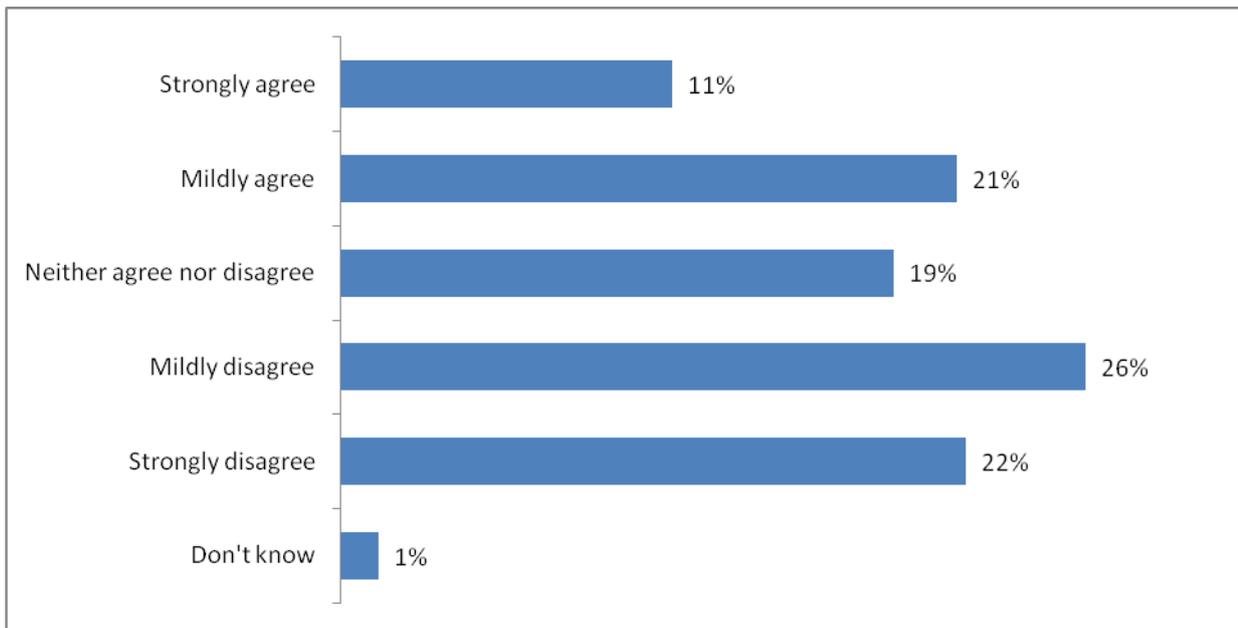


**Figure 8-8: Agreement with “I often encourage others to protect their skin from the sun”, 2013.**

Base: all youth (n=698)

### 8.2.5 “A tan shows I care about my appearance”

Approximately 3 out of 10 (32%) respondents agreed with this statement, including 1 out of 10 (11%) who strongly agreed. One-half (48%) of all respondents disagreed, including 2 out of 10 (22%) who strongly disagreed. Around 2 out of 10 (19%) neither agreed nor disagreed with this statement (see Figure 8-9).

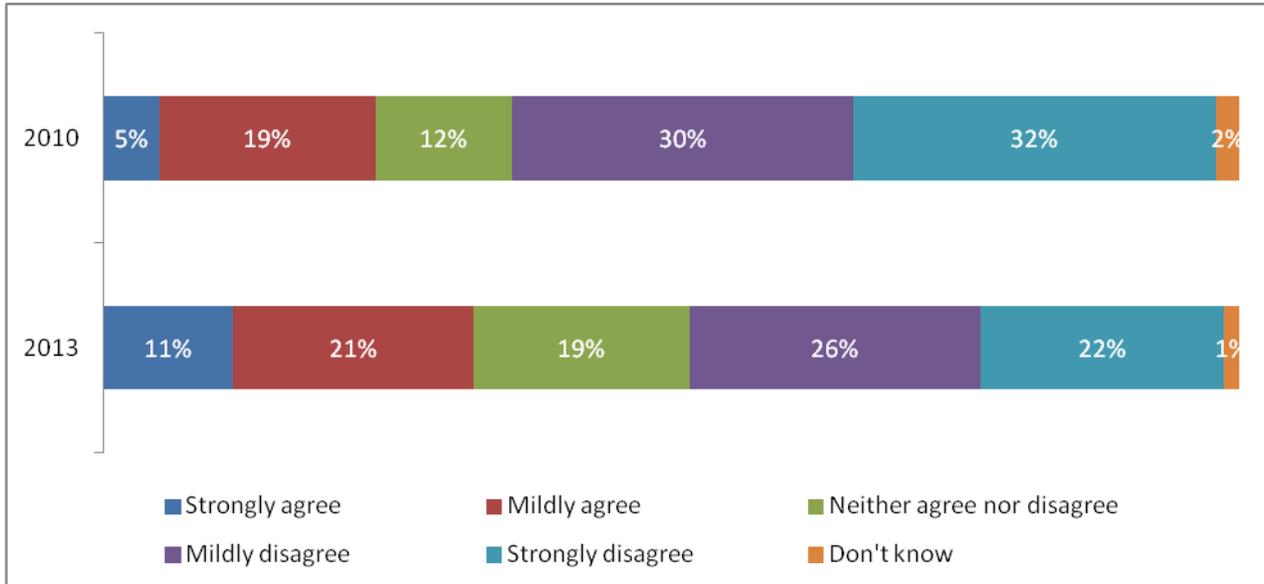


**Figure 8-9: Agreement with “A tan shows I care about my appearance”, 2013.**

Base: all youth (n=698)

### 2010 and 2013 comparison

In 2013 a significantly larger proportion of respondents reported that they agreed with the statement “A tan shows I care about my appearance” (32%) compared with 2010 (24%), see Figure 8-10.

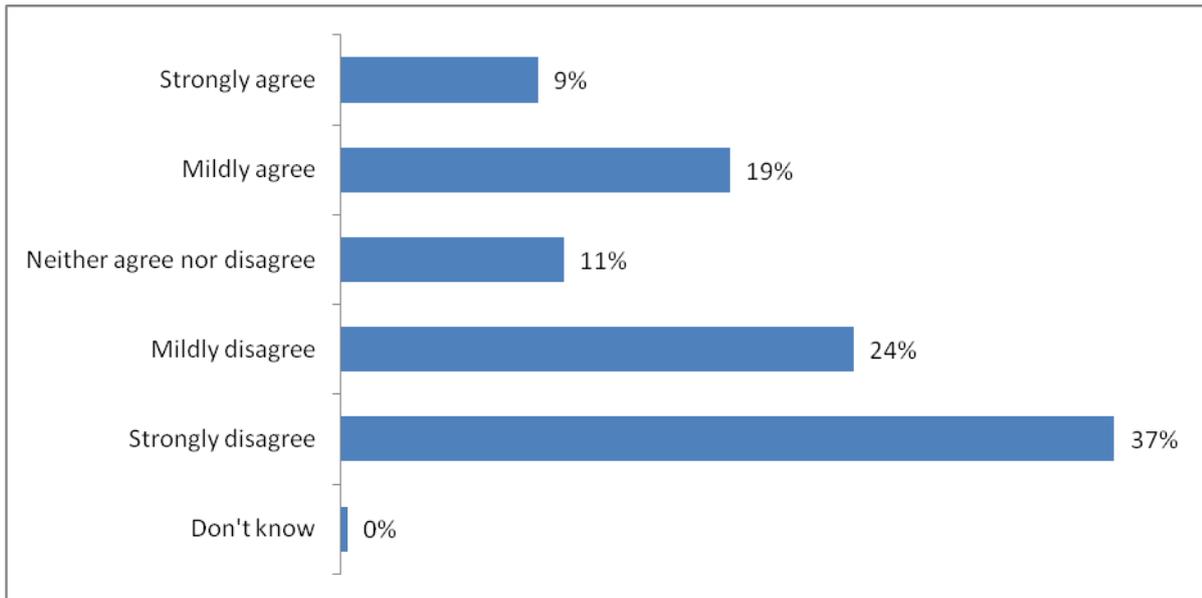


**Figure 8-10: Agreement with “A tan shows I care about my appearance”, by year.**

Base: all youth (2010, n=618; 2013, n=698)

### 8.2.6 “Seeing tanned people on TV, in films and in magazines makes me want to have a tan”

Around 3 out of 10 (28%) respondents agreed with this statement, including 1 out of 10 (9%) who strongly agreed. Six out of 10 (61%) respondents disagreed, including just under 4 out 10 (37%) who strongly disagreed. Around 1 in 10 (11%) neither agreed nor disagreed with this statement (see Figure 8-11).

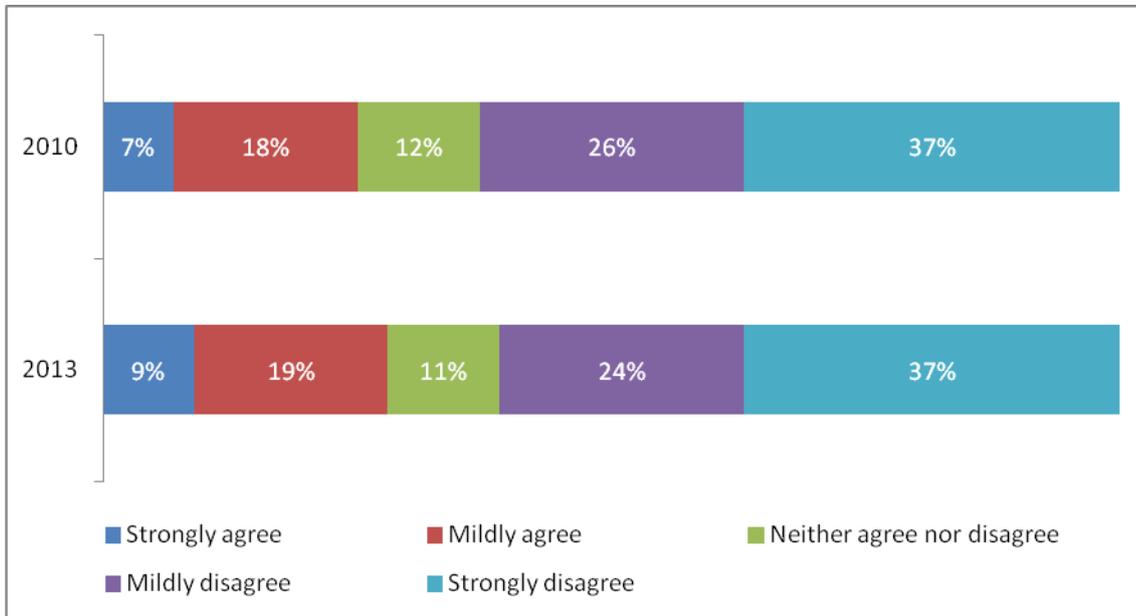


**Figure 8-11: Agreement with “Seeing tanned people on TV, in films and in magazines makes me want to have a tan”, 2013.**

Base: all youth (n=698)

## 2010 and 2013 comparison

No differences were found between 2010 and 2013 in the responses to “seeing tanned people on TV, in films and in magazines makes me want to have a tan”, see Figure 8-12.

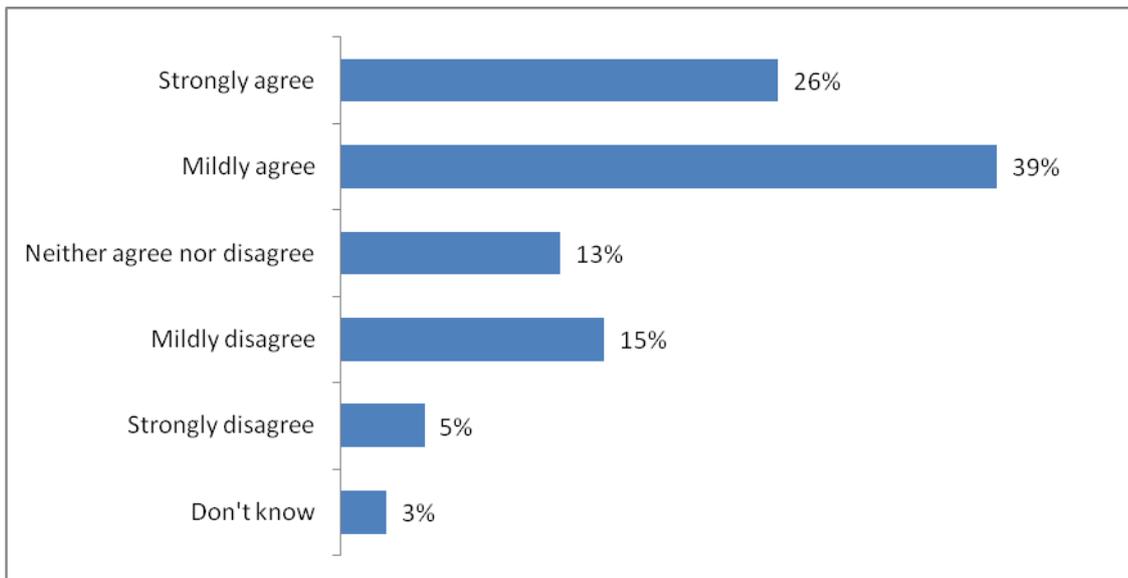


**Figure 8-12: Agreement with “Seeing tanned people on TV, in films and in magazines makes me want to have a tan”, 2013.**

Base: all youth (2010, n=618; 2013, n=698)

### 8.2.7 “Tanning is part of the Kiwi summer”

Around two out of three (65%) respondents agreed with this statement, including one-quarter (26%) who strongly agreed. Two out of 10 (20%) respondents disagreed, including less than 1 out 10 (5%) who strongly disagreed. Around 1 in 10 (13%) neither agreed nor disagreed with this statement (see Figure 8-13).

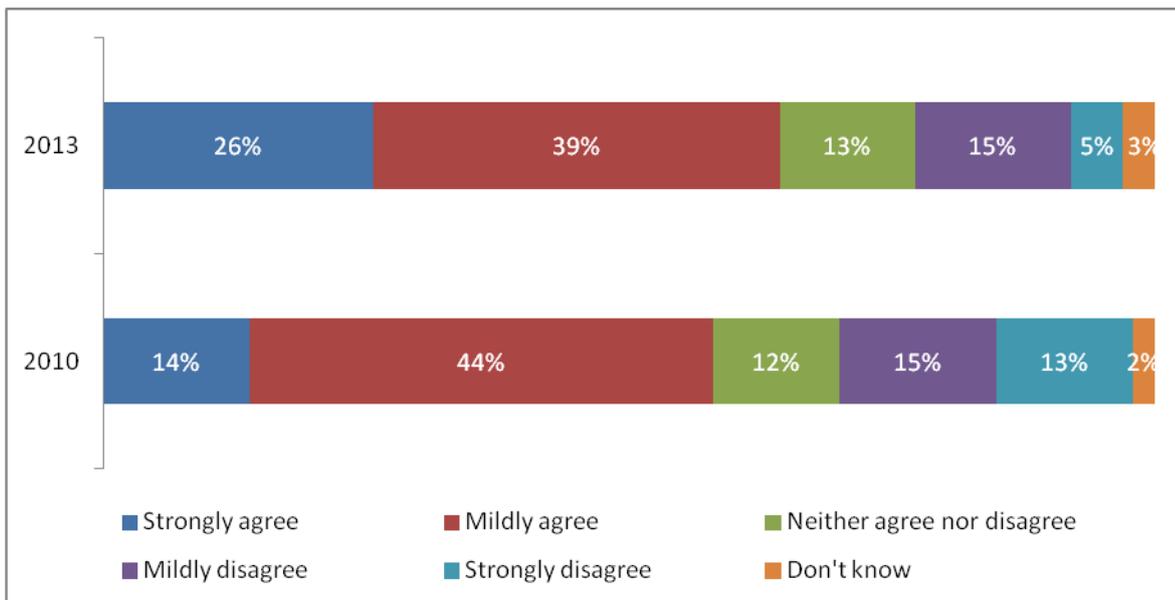


**Figure 8-13: Agreement with “Tanning is part of the Kiwi summer”, 2013.**

Base: all youth (n=698)

## 2010 and 2013 comparison

In 2013 a significantly larger proportion of respondents strongly agreed with the statement “tanning is part of the Kiwi summer” (26%), compared with 2010 (14%). In 2013 a significantly smaller proportion of respondents strongly disagreed with the statement (5%), compared with 2010 (13%), see Figure 8-14.

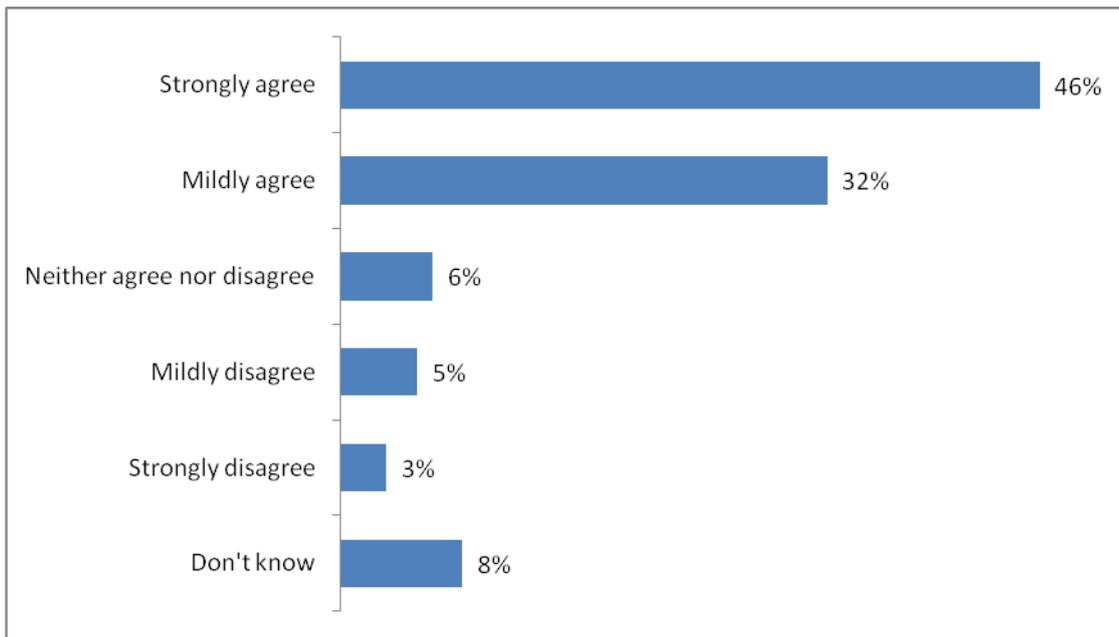


**Figure 8-14: Agreement with “Tanning is part of the Kiwi summer”, by year.**

Base: all youth (2010, n=618; 2013, n=698)

### 8.2.8 “Over time tanning can make my skin age faster than it naturally would”

Around 8 out of 10 (78%) respondents agreed with this statement, including just under one-half (46%) who strongly agreed. Only 1 out of 10 (8%) respondents disagreed, including only 3% who strongly disagreed. Around 1 in 10 (6%) neither agreed nor disagreed with this statement (see Figure 8-15).

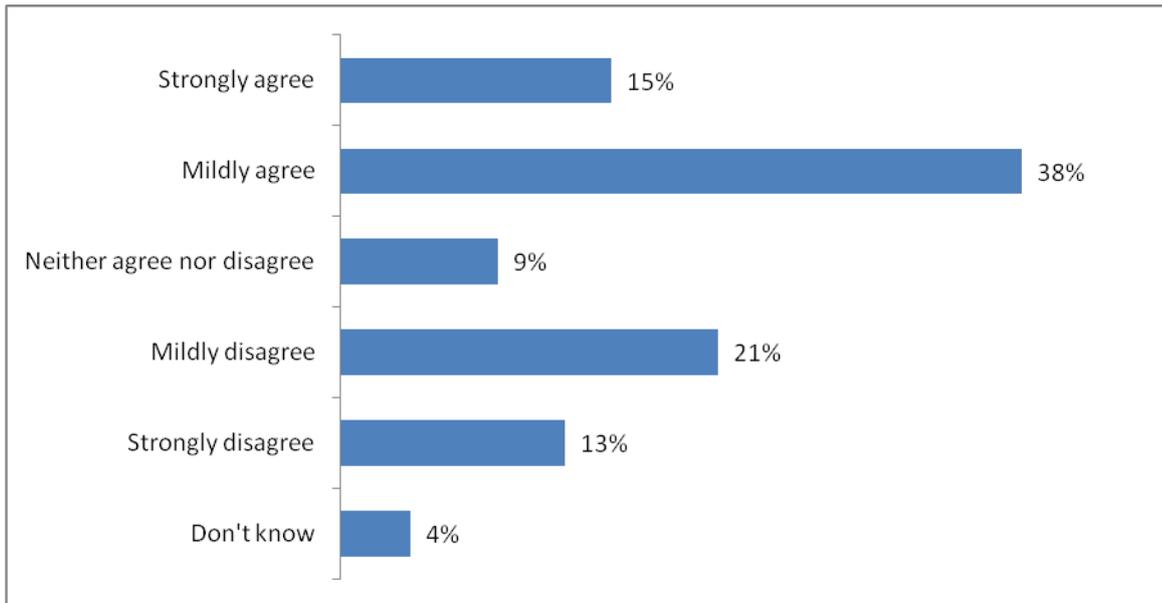


**Figure 8-15: Agreement with “Over time tanning can make my skin age faster than it naturally would”, 2013.**

Base: all youth (n=698)

### 8.2.9 “It is likely that I already have some permanent damage to my skin from sun exposure”

Approximately one-half (53%) of respondents agreed with this statement, including more than 1 out of 10 (15%) who strongly agreed. Around one-third (34%) of respondents disagreed, including 1 out of 10 (13%) who strongly disagreed. Around 1 in 10 (9%) neither agreed nor disagreed with this statement (see Figure 8-16).



**Figure 8-16: Agreement with “It is likely that I already have some permanent damage to my skin from sun exposure”, 2013.**

Base: all youth (n=698)

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Data preparation was conducted by Danny Tu and analysis was conducted by Rowan Peck (HPA).

This report was contributed to by Rowan Peck, Rebecca Gray, Danny Tu and Dr Darren Walton (HPA).

## REVIEW

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The report has not undergone external peer review.

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