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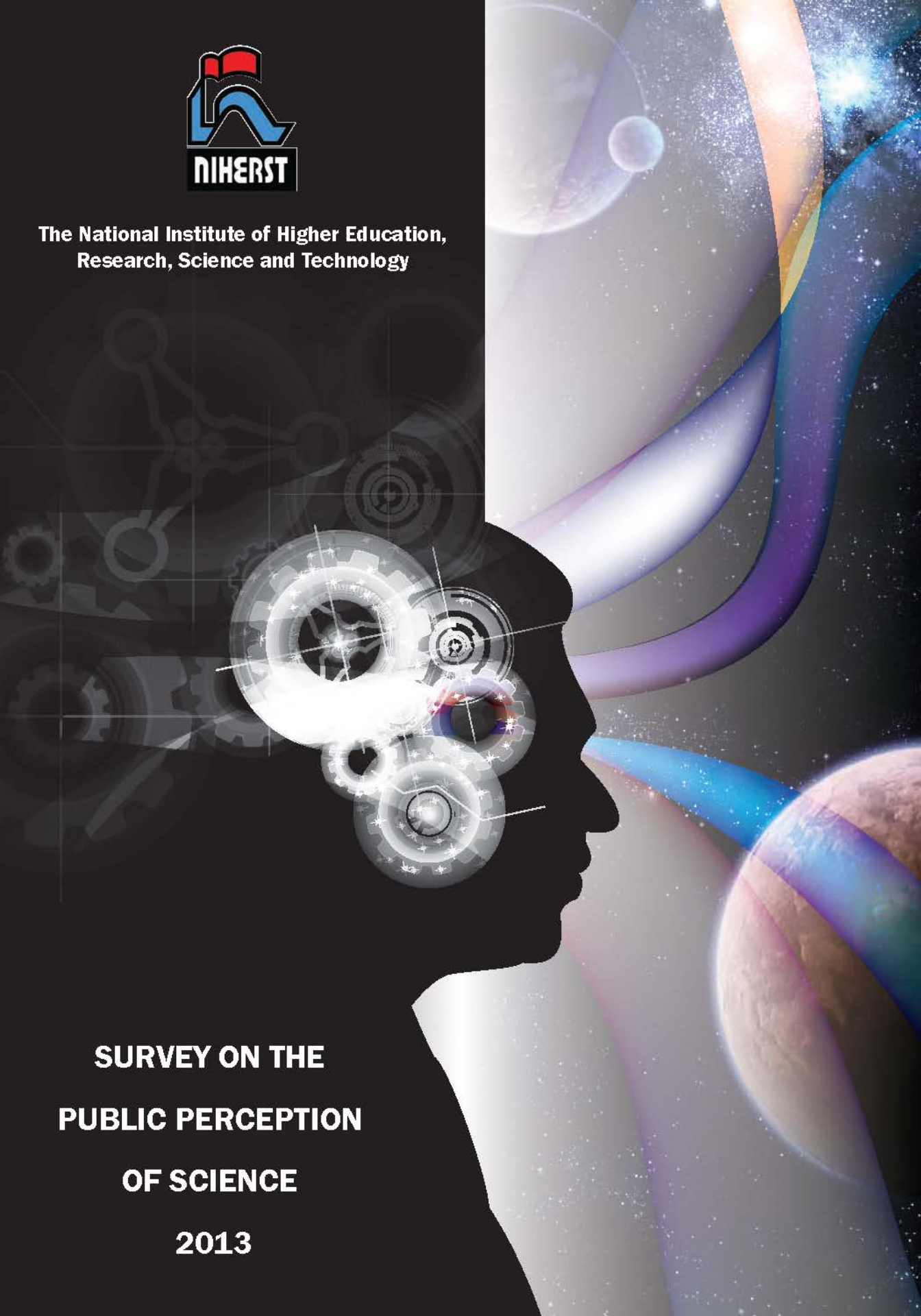
The National Institute of Higher Education,
Research, Science and Technology

SURVEY ON THE

PUBLIC PERCEPTION

OF SCIENCE

2013

NIHERST
Science and Technology Statistical Unit
#77 Eastern Main Road
St. Augustine
Trinidad and Tobago
Tel: 868-663-9320
Fax: 868-645-5007
e-mail: stresearch@niherst.gov.tt
website: http://niherst.gov.tt

Foreword

In this publication, the National Institute of Higher Education, Research, Science and Technology (NIHERST) presents the results of the Survey on the Public Perception of Science, 2012. This survey is the second of its kind to be conducted by NIHERST as a similar study was undertaken in 2005. This undertaking was designed to provide empirical data on the level of scientific awareness and literacy of the population of Trinidad and Tobago and has generated essential indicators for comparison with similar studies.

In general, the survey results revealed no significant change in the public's perception of science in 2012 compared to 2005.

The study focussed on the sources, interest and consumption of information and the popularisation of science and scientific research in Trinidad and Tobago. In addition, data on the demographic and socio-economic characteristics of respondents were also captured and included in this publication.

In keeping with NIHERST's support for the overall development of science and technology in Trinidad and Tobago, the empirical results of this study will measure changes in attitudes towards science overtime and also facilitate and inform the development of science policy, communication and popularisation.

NIHERST wishes to thank members of households who willingly provided the data collated in this report and also acknowledge the assistance of the Central Statistical Office.

Mrs. Maureen Manchouck
President

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Executive Summary

❖ Of the total sample of 2504 respondents, 46% were males and 54% were females. In terms of age, a relatively large proportion (34%) of the survey respondents was 50 years and over.

❖ The majority of respondents (51%) reported their highest level of educational attainment as secondary, followed by primary (27%).

❖ Forty-three percent (43%) of the respondents in 2012, expressed a high level of interest in science while 57% indicated a little or no interest.

❖ A substantial proportion of the survey respondents (75%) in 2012 felt that they were informed with respect to science and technology while one quarter (25%) considered themselves not informed; a similar pattern of response was observed in 2005. The proportion of respondents who considered themselves informed about science and technology increased in relation to educational attainment.

❖ The areas of science and technology that inspired a high level of interest were medicine and health (83%), environment (72%), agriculture (59%) and computers and IT (54%). However, a significant proportion of the sample indicated little or no interest in archaeology (84%), geology (83%), astronomy and space (79%), engineering (71%) and psychology (63%).

❖ The majority of respondents (92%) was of the opinion that scientific knowledge could improve one's ability to make decisions and over four-fifths (88%) agreed that the application of science and technology would change work opportunities positively.

❖ Eighty-five (85%) of the respondents especially amongst those with educational attainment were of the opinion that scientific developments were beneficial to everyone.

❖ There was significant agreement on the positive impact of science and technology. The majority of respondents agreed that: scientific and technological advances would help cure illnesses such as AIDS and cancer. (86%); government should increase investment in science and technology (86%); the benefits of science and technology were greater than the negative effects (85%); and science was the best way to get accurate knowledge about the world (79%). On the other hand, a substantial percentage (73%) agreed that society should use expenditure for science in more urgent activities. Three-quarters (75%) of the sample

disagreed that human beings today developed from earlier species of animal.

❖ A significant majority of the respondents was aware that smoking caused cancer (91%) and high blood pressure was also called hypertension (89%). Seventy percent (70%) or more knew that plants produced oxygen (83%), the centre of the earth was very hot (78%); light travelled faster than sound (78%); the earth rotated around the sun (71%) and white blood cells helped the body fight infection and other diseases (70%). Approximately a half or more of the respondents was aware that the continents had changed their positions over long periods of time (62%), the ozone layer absorbed ultraviolet radiation (56%) and the mother's gene did not decide the baby's gender (48%).

❖ Television was identified by 43% of the survey participants as their main source of information on science, followed by the Internet (25%). Compared with the results of a similar survey undertaken in 2005, the percentage of the respondents who accessed information on science on the Internet increased to 25% in 2012 from 10% in 2005.

❖ Three-quarters (75%) of the respondents were of the opinion that the media did not provide sufficient information on science.

❖ Over a half (56%) of the survey respondents read the newspapers daily or almost daily. Thirty-eight percent (38%) were occasional, once a week or seldom readers while 6% never read newspapers. However, only 13% read scientific articles regularly.

❖ Of the respondents engaged in television viewing, 22% accessed scientific information regularly.

❖ The percentage of respondents who never used the Internet to access scientific information decreased from 70% in 2005 to 48% in 2012.

❖ Only a third (35%) of the sample of respondents read books on science. The proportion of respondents who read books on science increased in relation to educational attainment.

❖ The majority (74%) of respondents never read science magazines; only 4% read them regularly and 16% once in a while.

❖ A substantial percentage (68%) of the survey respondents agreed that the quality of science and mathematics education in our schools was adequate while one-third (31%) disagreed.

- ❖ Overall, two-fifths of the respondents in each case read food labels always (38%) or sometimes (38%) and 15% read food labels whenever a new product was bought.

- ❖ Almost all of the survey respondents (96%) were of the opinion that foods containing GMOs should be labelled accordingly.

- ❖ Overall, over a half (57%) of the survey respondents knew their blood type. The majority of respondents with higher educational knew their blood type while those with primary education recorded the highest percentage (52%) where the blood type was unknown.

- ❖ A relatively large proportion of the respondents (45%) was of the opinion that HIV/AIDS resulted from a change in people's sexual habits while one-fifth indicated a scientist's experiment (20%) and people's ignorance (19%). This pattern of responses in 2012 was generally unchanged when compared to the results of the 2005 study.

- ❖ The survey participants were mostly familiar with the terms hormone (63%), DNA (61%), global warming (60%) and gene (60%). A substantial proportion of respondents was not familiar with the terms biodiversity (58%), catalyst (55%) and chlorophyll (42%).

- ❖ Over a half (56%) of the sample of respondents agreed that people who wanted to become scientists had to work abroad while 43% disagreed.

- ❖ A relatively large proportion of respondents (42%) indicated that a scientist's main reason for his/her choice of profession was the quest for knowledge; to solve people's problems (28%) was next in ranking.

- ❖ The majority of respondents (90%) in the Public Perception of Science Survey, 2012 would encourage their child/children to pursue a scientific career as observed in a similar study of 2005.

- ❖ A substantial percentage (68%) of the survey participants was of the opinion that scientific and technological research was conducted in Trinidad and Tobago and 69% identified the state as the main source of research funding.

- ❖ Of the respondents who were of the view that scientific and technological research was conducted in Trinidad and Tobago, an overwhelming majority (90%) stated that such undertaking was useful.

- ❖ A quarter (24%) of the survey respondents indicated that they had visited the NIHERST/NGC National Science Centre. Most (95%) of the

respondents who had visited the science centre were satisfied with the visit.

❖ An extremely small percentage (2%) of the sample had participated in protest actions or made complaints about problems arising from science and technology activity. However, the majority (85%) of respondents indicated that it was important to participate in these actions

❖ Overall, the participants of the survey by various age groups demonstrated positive attitudes towards the subject of this enquiry on the public perception of science. The majority (65%) stated that the study was interesting and 30% found it useful.

Methodology

Introduction

The empirical results of this second study on the public perception of science are intended to assist in monitoring the growth in knowledge, awareness and sources of science through a number of key indicators. This information can, therefore, assist researchers, decision-makers and science communicators in formulating and evaluating policies. This methodology describes the objectives, scope, coverage, data collection and processing of the results of the study.

Objectives of the Survey

The objectives of the survey were to determine the information needs of the public and provide indicators of public attitudes towards science including:

- ➢ scientific awareness and literacy,
- ➢ sources, interest and consumption of information,
- ➢ the popularisation of science,
- ➢ scientific research in Trinidad and Tobago and
- ➢ change in attitudes to science over time.

Scope

The scope of this study included information on the demographic and social characteristics of the respondents such as age, gender, educational attainment and employment status. Public perception towards science and technology was measured by examining the survey participants' knowledge, interest and attitudes towards science and technology. The enquiry also incorporated data on the sources of information on science and technology and scientific research in Trinidad and Tobago. Changes in knowledge and attitudes towards science over time were also highlighted in this publication by comparing the results to a similar study undertaken in 2005.

Sample Design

The sample design of the survey was based on the approach used by the Central Statistical Office in the conduct of its quarterly household surveys to generate labour

force statistics. Basically, the design consists of a two-stage sampling procedure in which enumeration districts (E.Ds. - small geographic areas) are selected at the first stage, followed by a random selection of a cluster of households within each E.D. at the second stage. At each stage, the sampling units are selected with probability proportional to size.

Coverage

Based on the above design, a representative sample of 2,504 households from 564 E.Ds. in all geographic areas of Trinidad and Tobago was selected for the study. These included households of all income groups and social strata of the population. From each of the selected household a respondent was chosen on the basis of having attained the age of sixteen or over and was the last household member to celebrate his/her birthday. In order to maintain the sample size of the survey vacant and close buildings and refusals were replaced. The following table shows the number of respondents by administrative areas.

Distribution of Respondents by Administrative Areas

Administrative area	No. of respondents (1)	Percentage of respondents (2)
Total	2504	100
Port of Spain	103	4
San Fernando	99	4
Arima	61	2
Pt. Fortin	45	2
Chaguanas	144	6
Diego Martin	195	8
St. Ann's	310	13
Tacarigua	258	10
Rest of St. George	127	5
Caroni	216	7
Victoria	339	14
St. Patrick	223	9
St. Andrew/ St. David	116	5
Nariva/ Mayaro	71	3
Tobago	197	8

Data Collection

A questionnaire was designed to include the underlying objectives. Data were subsequently collected by a group of experienced interviewers and supervisors who were trained in administering the survey questionnaire.

Data Processing

As completed questionnaires were received, data were edited for consistency and omissions. Where discrepancies were identified, questionnaires were returned to the field for verification and correction as necessary. Edited data were then captured in the Statistical Package for the Social Sciences (SPSS) version 16.0 software which was used to produce the tabulations in this report.

Results

The results of the survey are presented in the various tabulations and graphics which follow.

Table 1: Respondents by Gender within Age Groups

Age group (years)	Gender - percentage		
	Total	Male	Female
	(1)	(2)	(3)
All ages	100	46	54
Less than 20	100	54	46
20-29	100	41	59
30-39	100	45	55
40-49	100	49	51
50 and over	100	47	53

Table 1 shows a profile of the respondents by age group and gender who participated in the Public Perception of Science Survey, 2012. Of the total respondents 46% were males and 54% were females. In terms of age, a relatively large proportion (34%) of the survey respondents was 50 years and over (Table 2). A further examination of the data reveals a similar pattern of age distribution within both genders.

Chart 1: Respondents by Gender and Age Groups
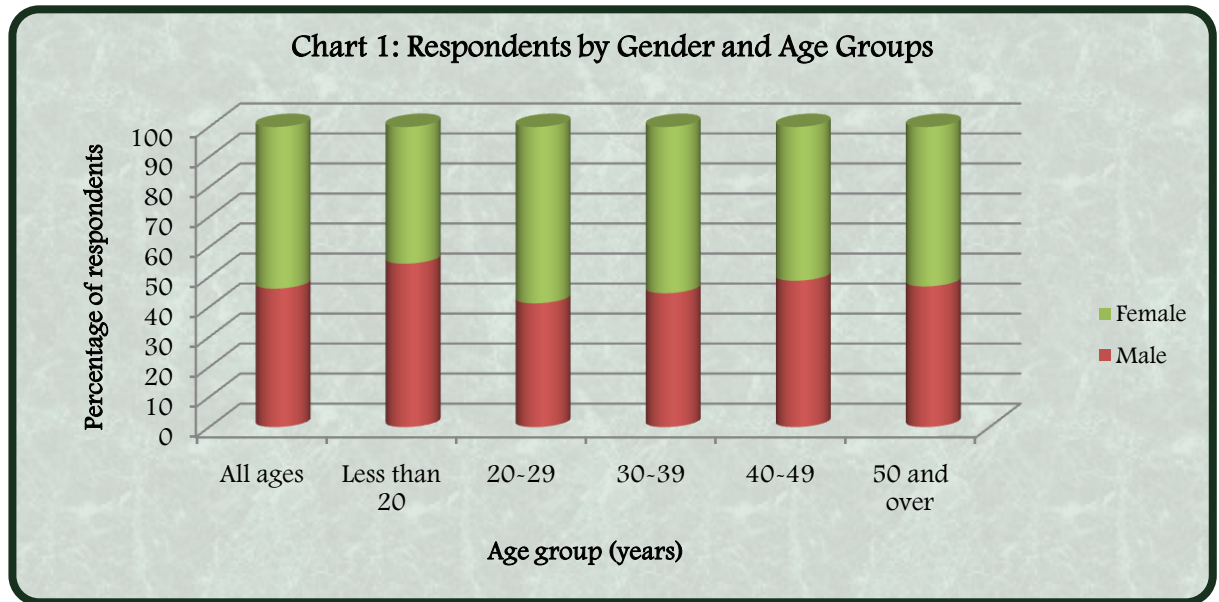
Source: Table 1

Table 2: Respondents by Age Groups within Gender

Age group (years)	Gender - percentage		
	Total	Male	Female
	(1)	(2)	(3)
All ages	100	100	100
Less than 20	7	8	6
20-29	20	18	22
30-39	21	21	22
40-49	18	19	17
50 and over	34	34	33

Age group (years)	Total	Highest level of educational attainment					
		None	Primary	Secondary	Diploma	Associate degree	Bachelor's degree and above
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		percentage of respondents					
All ages	100	1	27	51	8	5	8
Less than 20	100	0	6	84	6	1	3
20-29	100	0	9	61	11	8	12
30-39	100	0	14	59	11	7	9
40-49	100	0	21	58	9	4	7
50 and over	100	1	53	30	5	4	6

The majority of respondents (51%) reported their highest level of educational attainment as secondary, followed by primary (27%). A further review of the data by age group within educational attainment shows that the largest proportions of respondents with primary (67%) and no education (80%) were 50 years and over while approximately a third with an associate degree (31%) and a bachelor's degree and above (30%) was in the 20 -29 age category (Table 4).

Chart 2: Respondents by Educational Attainment - All Ages
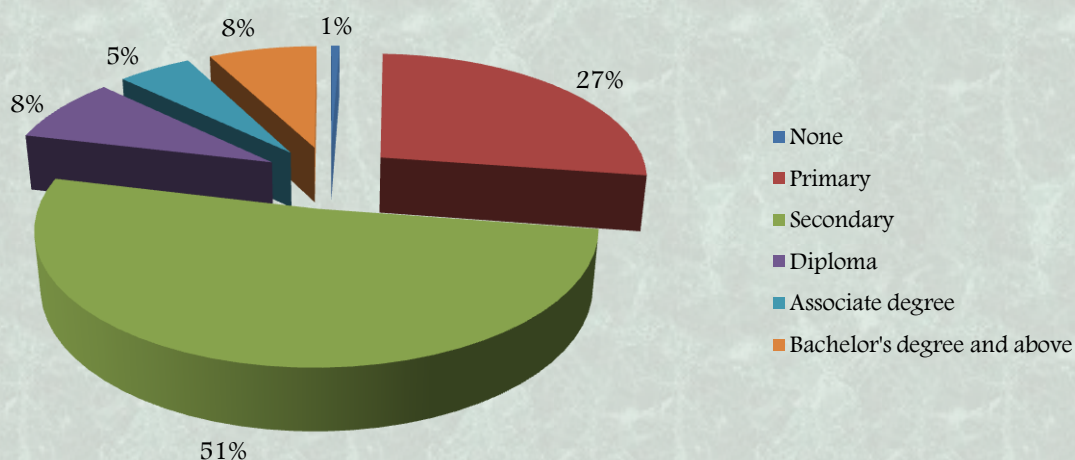
Source: Table 3

Table 4: Respondents by Age Groups within Educational Attainment

Age group (years)	Total	Highest level of educational attainment					
		None	Primary	Secondary	Diploma	Associate degree	Bachelor's degree and above
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			percentage of respondents				
All ages	100	100	100	100	100	100	100
Less than 20	7	0	2	12	5	1	3
20-29	20	0	6	24	26	31	30
30-39	21	7	11	25	28	28	25
40-49	18	13	14	20	20	12	16
50 and over	34	80	67	20	22	28	26

Age group (years)	Total	Employment status					
		Employed	Self-employed	Unemployed	Student	Retired	Home duties
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		percentage of respondents					
All ages	100	42	14	10	8	13	13
Less than 20	100	16	3	9	70	0	2
20-29	100	53	13	15	13	0	7
30-39	100	59	19	10	1	0	12
40-49	100	56	21	10	0	1	11
50 and over	100	23	10	6	0	39	21

Table 5: Respondents by Employment Status and Age Groups

Table 5 shows the percentage of respondents by age group and employment status. The majority of respondents (56%) were employed while 10% were unemployed. The highest level of unemployment (15%) was observed in the 20-29 age cohort.

Chart 3: Respondents by Employment Status - All Ages
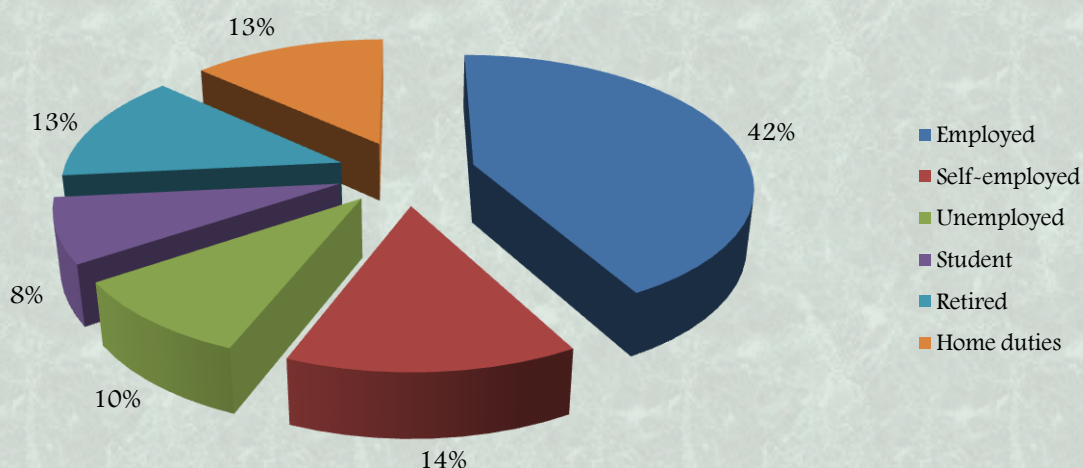
Source: Table 5

Table 6: Household Size by Gross Monthly Income

Household size	Total	Gross monthly income						
		<$2000	$2000 - $4999	$5000 - $9999	$10000 - $14999	$15000 - $19999	$20000 and over	Not stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	percentage of households							
Total	100	7	31	35	13	5	3	6
1 person	100	18	53	21	3	1	0	4
2 persons	100	8	40	31	9	3	3	6
3 persons	100	5	28	39	16	4	3	5
4 persons	100	4	26	37	17	8	4	5
5 or more persons	100	3	19	42	16	7	4	8

Overall, a relatively large proportion (35%) of the sample of households reported gross monthly incomes in the range of $5,000 - $9,999. Approximately a third (31%) of the gross monthly household incomes was between $2,000 - $4,999, especially amongst households with one (53%) and two persons (40%).

Chart 4: Household Size by Gross Monthly Income - All Households
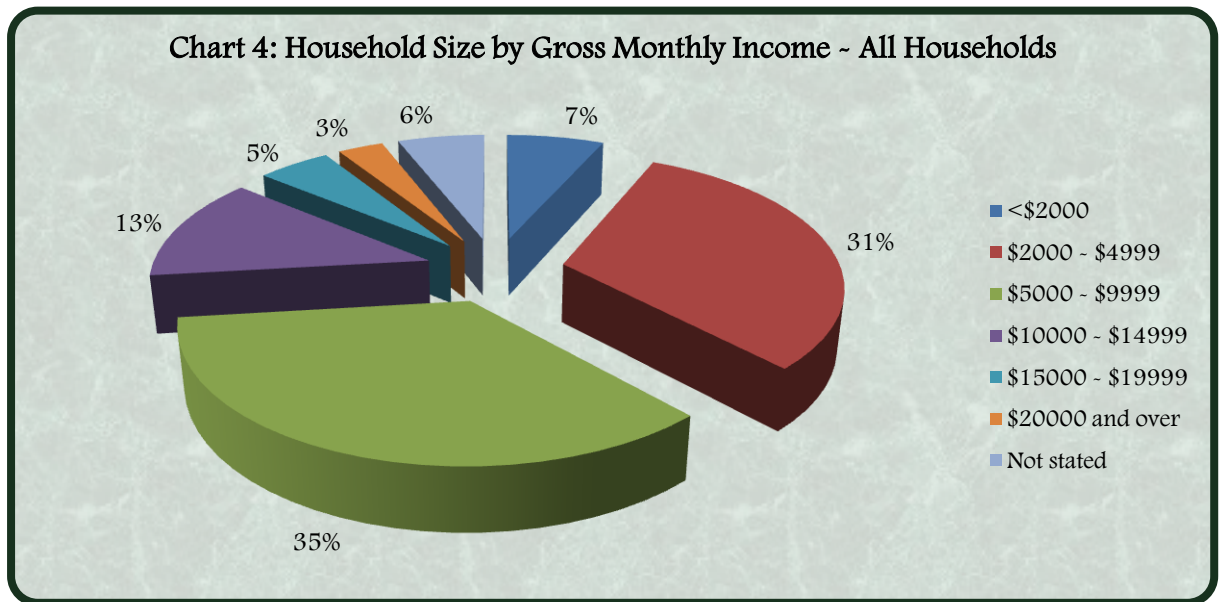
Source: Table 6

Table 7: Interest in Topical Areas

Area	Total	Level of interest			
		Very interested	Quite interested	A little interested	Not interested
	(1)	(2)	(3)	(4)	(5)
		percentage of respondents			
Politics	100	10	13	34	43
Arts and entertainment	100	20	26	32	22
Fashion	100	20	21	29	30
Science	100	19	24	34	23
Sports	100	31	26	29	15
Religion	100	42	32	18	8
Economics	100	19	25	34	22

Respondents were asked how interested they were in the above topical areas. Accumulatively, a substantial percentage of respondents was very interested and quite interested in religion (74%) and sports (57%). Forty-three percent (43%) of the respondents expressed a high level of interest in science while 57% indicated a little or no interest. A further review of the findings of the study shows a comparable level of interest in science by various age groups (Table 8). Politics inspired the least degree of interest amongst respondents as 77% reported little and no interest in this area. Data from the public perception of science survey, 2012, compared to the results of a previous undertaking in 2005, reveal a similar level of interest in science (Table 9).

Chart 5: Interest in Topical Areas
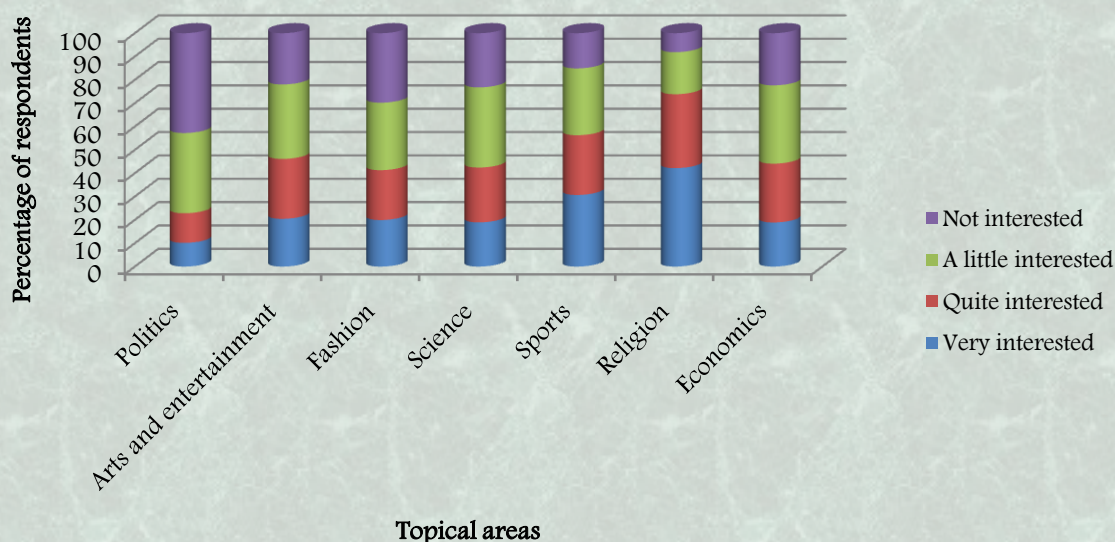
Source: Table 7

Table 8: Interest in Science by Age Groups

Age group (years)	Total	Level of interest			
		Very interested	Quite interested	A little interested	Not interested
	(1)	(2)	(3)	(4)	(5)
		percentage of respondents			
All ages	100	19	23	34	23
Less than 20	100	22	22	37	19
20-29	100	19	25	33	23
30-39	100	21	24	35	20
40-49	100	21	26	32	21
50 and over	100	16	21	35	28

Chart 6: Interest in Science by Age Groups
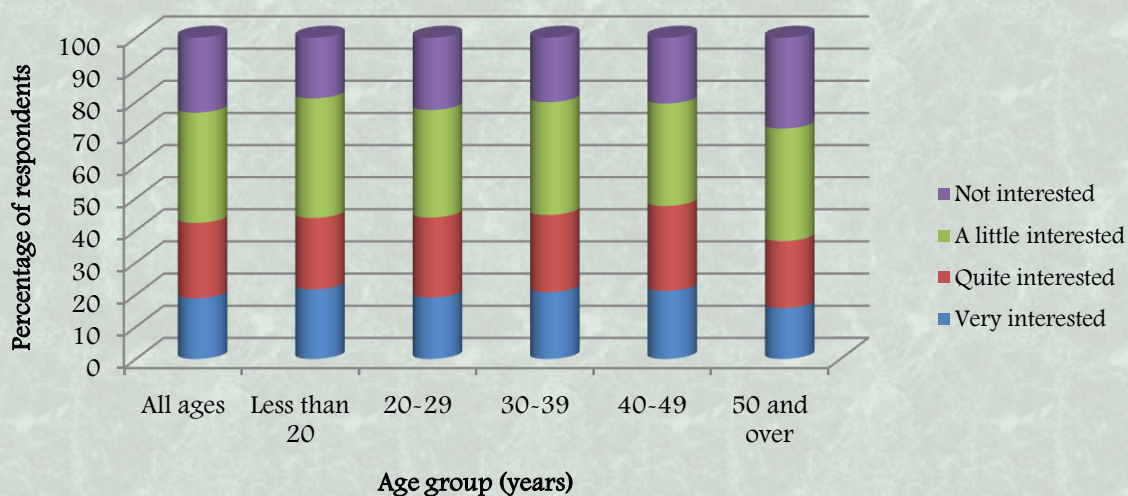
Source: Table 8

Table 9: Interest in Science, 2005 and 2012

Level of interest in science	Year	
	2005	2012
	(1)	(2)
	percentage of respondents	
Total	100	100
Very interested	21	19
Quite interested	24	24
A little interested	32	34
Not interested	23	23

| Age group (years) | Total | Informed about science and technology | | | | |
		Very well informed	Well informed	Informed	Not informed	Informed cols (2)+(3)+(4)
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All ages	100	7	13	55	25	75
Less than 20	100	10	21	52	18	83
20-29	100	9	14	55	22	78
30-39	100	6	13	58	24	77
40-49	100	6	14	57	24	77
50 and over	100	6	10	54	30	70

Table 10: Informed about Science and Technology by Age Groups

A substantial proportion of the survey respondents (75%) in 2012 felt that they were informed with respect to science and technology while one quarter (25%) considered themselves not informed (Table 10); a similar pattern of response was observed in 2005 (Table 11). Within the various age groups the highest percentage of respondents (30%) not informed was aged 50 years and over.
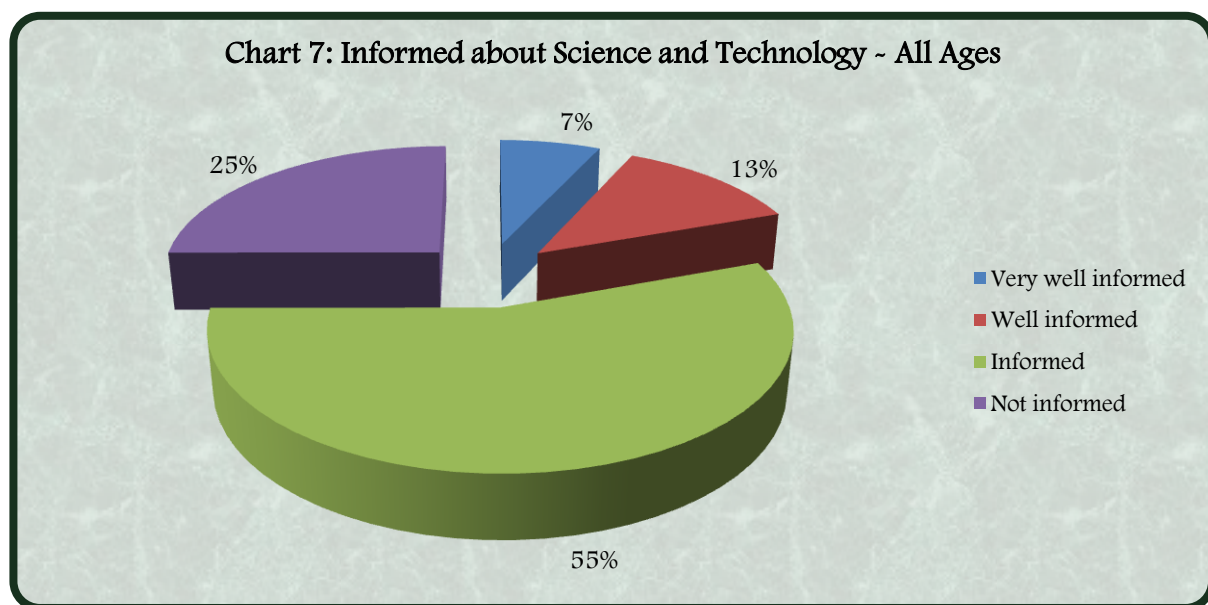
Chart 7: Informed about Science and Technology - All Ages

Source: Table 10

Informed about science and technology	Year	
	2005	2012
	(1)	(2)
	percentage of respondents	
Total	100	100
Very well-informed	6	7
Well-informed	14	13
Informed	54	55
Not informed	26	25

Highest level of educational attainment	Informed about science and technology					
	Total	Very well informed	Well informed	Informed	Not informed	Informed cols (2)+(3)+(4)
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All levels	100	7	13	55	25	75
None	100	0	0	27	73	27
Primary	100	4	7	52	37	63
Secondary	100	6	13	58	23	77
Diploma	100	10	17	57	16	84
Associate degree	100	11	18	55	15	84
Bachelor's degree and above	100	19	19	54	8	92

The survey results show that the proportion of respondents who considered themselves informed about science and technology increased in relation to educational attainment. Sixty-three percent (63%) of the sample with primary education considered themselves informed with respect to science and technology compared to 92% with a bachelor's degree and above.

Chart 8: Informed about Science and Technology by Educational Attainment

Source: Table 12

Age group (years)	Reason							
	Personal interest	To keep abreast of important developments	To make personal decisions	These are controversial issues for society	I need to do this for my job	Other	Not stated	Do not find out
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	percentage of respondents							
All ages	51	42	37	8	6	2	1	25
Less than 20	57	44	32	10	3	14	0	18
20-29	56	42	37	7	8	1	1	22
30-39	53	40	35	10	8	1	1	24
40-49	49	43	41	7	10	0	0	24
50 and over	45	43	37	7	4	0	1	30

Table 13: Reasons for Finding out about Scientific Issues by Age Groups

Most respondents (51%) stated that personal interest was the main reason for seeking information about scientific issues, followed by keeping abreast of important developments (42%), and personal decision-making (37%). This order of response was recorded for all age groups.

Chart 9: Reasons for Finding out about Scientific Issues ~ All Ages

Source: Table 13

Area of science and technology	Level of interest				
	Total	Very interested	Quite interested	A little interested	Not interested
	(1)	(2)	(3)	(4)	(5)
	percentage of respondents				
Medicine and health	100	54	29	14	3
Archaeology	100	6	10	23	61
Environment	100	40	32	18	10
Computers and IT	100	30	24	21	26
Astronomy and space	100	8	13	23	56
Geology	100	7	11	25	58
Engineering	100	15	13	24	47
Agriculture	100	30	29	26	15
Psychology	100	19	18	27	36

Table 14: Interest in Areas of Science and Technology

Table 14 shows respondents' level of interest in various areas of science and technology. The areas that inspired a high level of interest were medicine and health (83%), environment (72%), agriculture (59%) and computers and IT (54%). However, a significant proportion of the sample indicated little or no interest in archaeology (84%), geology (83%), astronomy and space (79%), engineering (71%) and psychology (63%).

Chart 10: Interest in Areas of Science and Technology

Source: Table 14

Age group (years)	Improvement			
	Total	Yes	No	Do not know
	(1)	(2)	(3)	(4)
	percentage of respondents			
All ages	100	92	6	2
Less than 20	100	94	6	0
20-29	100	92	5	3
30-39	100	92	6	2
40-49	100	93	7	0
50 and over	100	92	7	1

The majority of respondents (92%) was of the opinion that scientific knowledge could improve one's ability to make decisions.
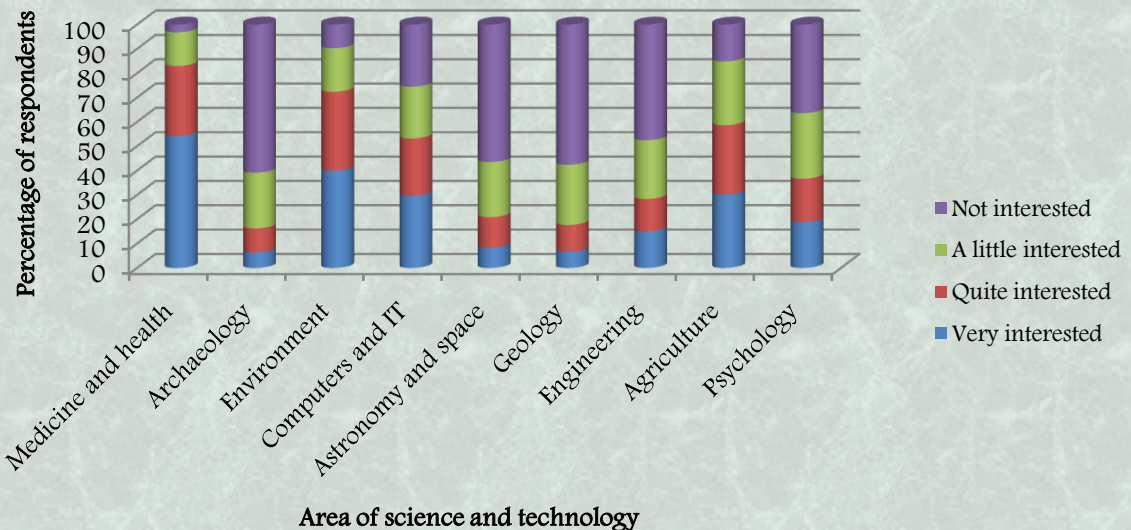
Chart 11: Impact of Scientific Knowledge on Decision-making
All Ages
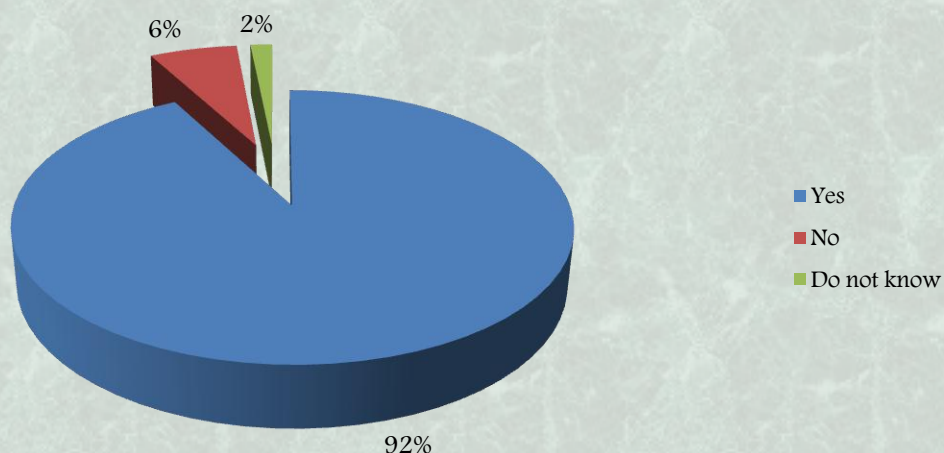
Source: Table 15

Table 16: Effect of Science and Technology on Work Opportunities by Employment Status

Employment status	Effect					
	Total	Change positively	Change negatively	Both positively and negatively	No change	Do not know
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
Total	100	88	4	1	7	1
Employed	100	89	4	0	7	0
Self-employed	100	88	3	1	7	1
Unemployed	100	86	5	2	7	1
Student	100	91	3	1	5	0
Retired	100	83	5	0	11	1
Home duties	100	91	5	1	3	0

Over four-fifths of the sample of respondents, overall (88%) and by employment status, agreed that the application of science and technology would change work opportunities positively while less than 10% were of the contrary opinion or that scientific and technological application would provide no change.

Chart 12: Effect of Science and Technology on Work Opportunities

Source: Table 16

	Benefit from scientific developments				
Educational attainment	Total	Everyone	Almost everyone	Only a few individuals	No one
	(1)	(2)	(3)	(4)	(5)
	percentage of respondents				
Total	100	53	32	15	1
None	100	20	27	53	0
Primary	100	47	32	20	0
Secondary	100	53	33	14	1
Diploma	100	62	28	10	0
Associate degree	100	59	32	8	2
Bachelor's degree and above	100	65	27	8	0
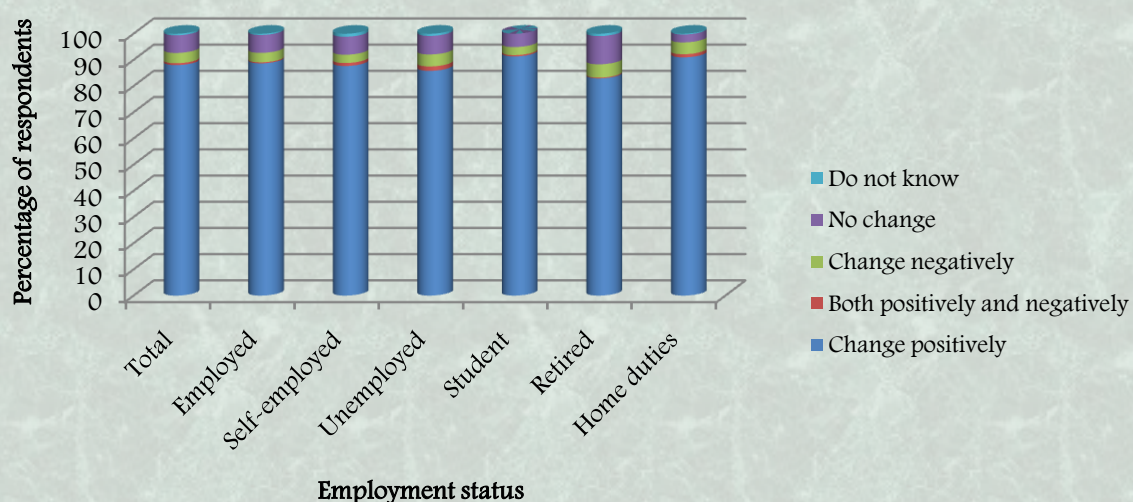
Table 17: Who Benefits from Scientific Developments by Educational Attainment

The survey results reveal that 85% of the respondents especially amongst those with educational attainment were of the opinion that scientific developments were beneficial to everyone.

Chart 13: Who Benefits from Scientific Developments - All Educational Attainment
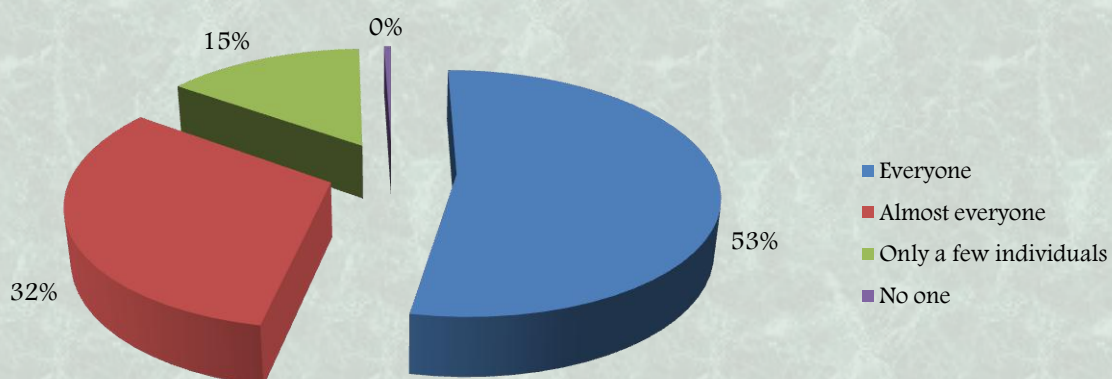
Source: Table 17

Table 18: Agreement with Statements on Science and Technology

Statement	Total	Strongly agree	Agree	Disagree	Strongly disagree	Do not know	Agree cols (2) + (3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				percentage of respondents			
1 The world of science cannot be understood by ordinary people.	100	7	44	43	5	1	51
2 Scientific and technological advances will help cure illnesses such as AIDS, cancer, etc.	100	29	57	11	2	1	86
3 The benefits of science and technology are greater than the negative effects.	100	23	62	10	2	3	85
4 Science is the best way to get accurate knowledge about the world.	100	21	58	18	2	1	79
5 Because of technological development science will dehumanise life.	100	5	35	46	9	5	40
6 Science and technology cause problems for humankind.	100	7	46	36	7	3	54
7 The government should increase investment in science and technology.	100	31	55	12	1	1	85
8 Society should use expenditure for science in more "urgent" activities.	100	14	59	22	3	2	73
9 Human beings today developed from earlier species of animal.	100	4	19	36	39	2	23

An analysis of the variations in responses to the series of statements in Table 18 indicates significant agreement on the positive impact of science and technology. The majority of respondents agreed that: scientific and technological advances would help cure illnesses such as AIDS, cancer, etc. (86%); the government should increase investment in science and technology (86%); the benefits of science and technology were greater than the negative effects (85%); and science was the best way to get accurate knowledge about the world (79%). On the other hand, a substantial percentage (73%) agreed that society should use expenditure for science in more urgent activities, but were more divided on the statements: science and technology caused problems for humankind (54%); the world of science could not be understood by ordinary people (51%); and because of technological development science would dehumanise life (40%). Three-quarters (75%) of the sample disagreed that human beings today developed from earlier species of animal.

Chart 14: Agreement with Statements on Science and Technology
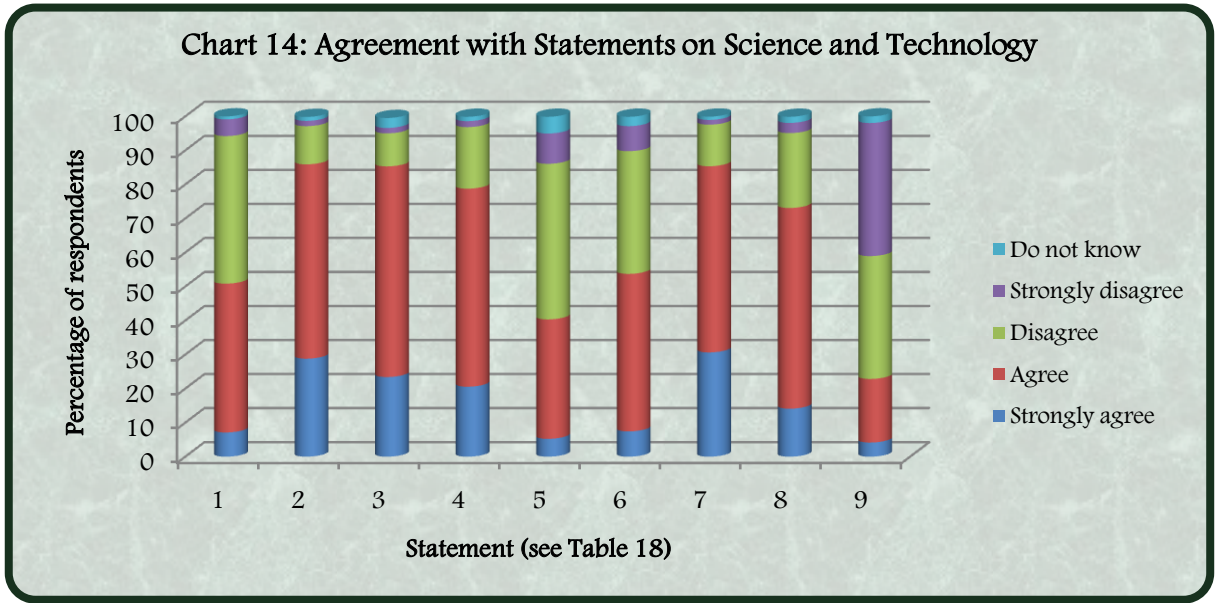
Source: Table 18

	Statement	Total	True	False	Do not know
		(1)	(2)	(3)	(4)
			percentage of respondents		
1	It is the mother's gene that decides whether the baby is a boy or a girl.	100	19	48	33
2	Antibiotics kill both viruses and bacteria.	100	60	25	14
3	The continents have changed their positions over long periods of time.	100	62	11	27
4	The centre of the earth is very hot.	100	78	4	18
5	Light travels faster than sound.	100	78	11	12
6	The earth goes around the sun.	100	71	11	18
7	Genetically modified crops are the only crops that have genes.	100	15	30	55
8	Electrons are smaller than atoms.	100	28	19	53
9	Plants produce oxygen.	100	83	6	10
10	All radioactivity is produced by man.	100	37	30	33
11	The ozone layer absorbs ultraviolet radiation.	100	56	8	36
12	White blood cells help the body fight infection and other diseases.	100	70	7	23
13	High blood pressure is also called hypertension.	100	89	2	8
14	Smoking causes cancer.	100	91	5	4

The statements above tested the respondents' knowledge of science. A significant majority of the respondents was aware that smoking caused cancer (91%) and high blood pressure was also called hypertension (89%). Correct responses of 70% or more were recorded for the following five statements: plants produced oxygen (83%), the centre of the earth was very hot (78%); light travelled faster than sound (78%); the earth rotated around the sun (71%); and white blood cells helped the body fight infection and other diseases (70%). Approximately a half or more of the respondents was aware that: the continents had changed their positions over long periods of time (62%); the ozone layer absorbed ultraviolet radiation (56%); and the mother's gene did not decide the baby's gender (48%). Less than a third of the respondents knew that: all radioactivity was not produced by man (30%); electrons were smaller than atoms (28%); and antibiotics did not kill both viruses and bacteria (25%). The cumulative frequency of the scores of the fourteen statements showed that 2%, 23% and 76% of the sample obtained 100%, 75%, and 50% and above of the correct responses respectively.

Chart 15: Knowledge of Science

Source: Table 19

Age group (years)	Source of information on science							
	Total	Newspapers	Books	Magazines	Radio	Television	Internet	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	percentage of respondents							
All ages	100	10	13	1	3	43	25	5
Less than 20	100	3	18	1	2	35	29	12
20-29	100	9	14	1	2	39	31	5
30-39	100	10	13	2	3	40	29	4
40-49	100	10	12	1	3	44	26	4
50 and over	100	13	12	1	4	47	17	6
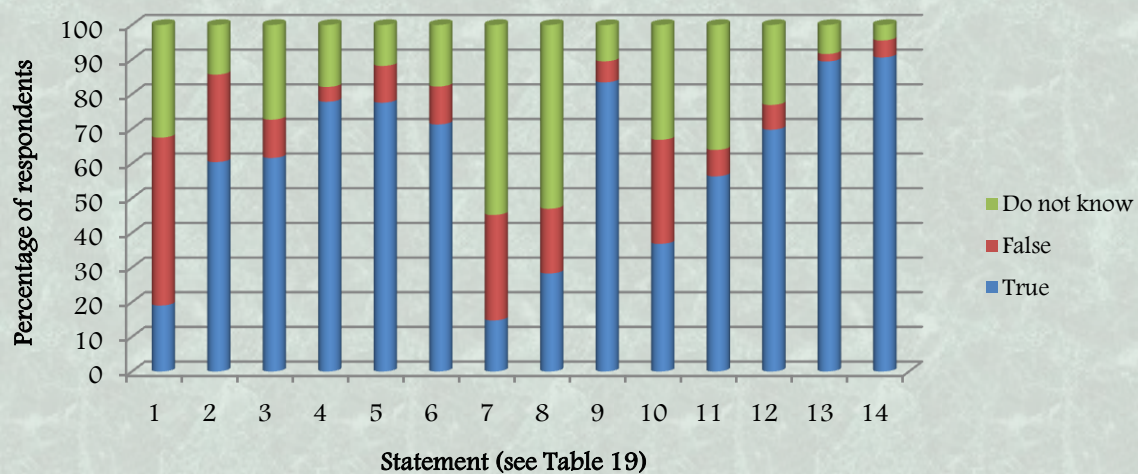
Table 20: Source of Information on Science by Age Group

When asked about the leading source of their information on science, a relatively large proportion of the survey participants identified the television (43%), followed by the Internet (25%) and books (13%). Compared with the results of similar survey undertaken in 2005, the percentage of the respondents who accessed information on science on the Internet increased to 25% in 2012 from 10% in 2005. Three-quarters (75%) of the respondents, overall and by various age groups, were of the opinion that the media did not provide sufficient information on science (Table 21).

Chart 16: Source of Information on Science - All Ages

Source: Table 20

Age group (years)	Enough media information on science			
	Total	Yes	No	Do not know
	(1)	(2)	(3)	(4)
	percentage of respondents			
All ages	100	23	75	2
Less than 20	100	24	76	1
20-29	100	23	75	2
30-39	100	21	77	2
40-49	100	22	75	3
50 and over	100	24	74	2

Chart 17: Enough Media Information on Science ~ All Ages

2%

23%

75%

- Yes
- No
- Do not know
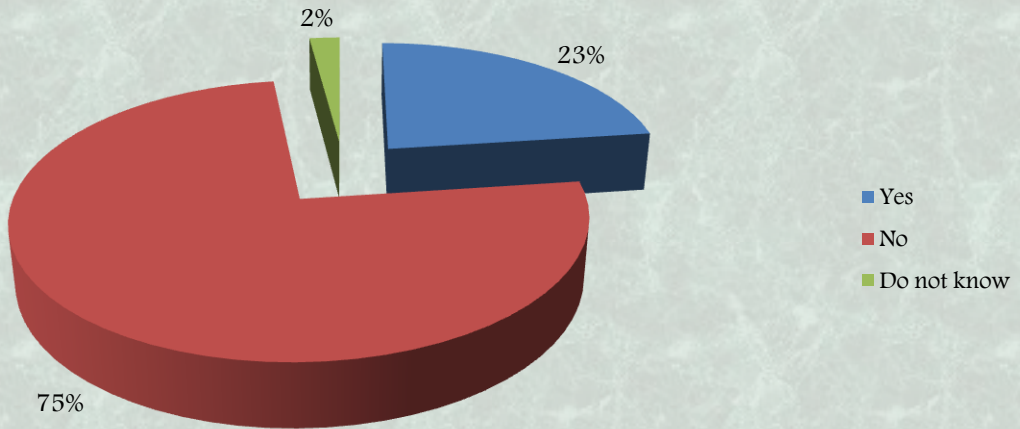
Source: Table 21

Age group (years)	Read newspapers					
	Total	Daily	Almost daily	Once a week	Seldom	Never
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All ages	100	30	26	13	25	6
Less than 20	100	18	21	23	30	8
20-29	100	29	26	13	27	4
30-39	100	28	24	14	28	7
40-49	100	31	31	13	21	4
50 and over	100	33	26	10	23	8

Table 22 shows that of the survey respondents over a half (56%), overall and within the age groups 20-29 and over, read the newspapers daily or almost daily. Thirty-eight percent (38%) were occasional, once a week or seldom readers while 6% never read newspapers. The survey results of 2012 also reveal that a half or more of the respondents with educational attainment, ranging from 49% of those with primary education to 66% with a bachelor's degree and above, read the newspapers frequently, daily and almost daily (Table 23).

Chart 18: Reading of Newspaper by Age Groups

Source: Table 22

Educational attainment	Read newspapers					
	Total	Daily	Almost daily	Once a week	Seldom	Never
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
Total	100	30	26	13	25	6
None	100	7	13	7	20	53
Primary	100	25	24	14	27	10
Secondary	100	30	27	13	25	5
Technical	100	36	28	10	21	5
Associate degree	100	29	21	15	30	5
Bachelor's degree and above	100	41	25	14	17	3
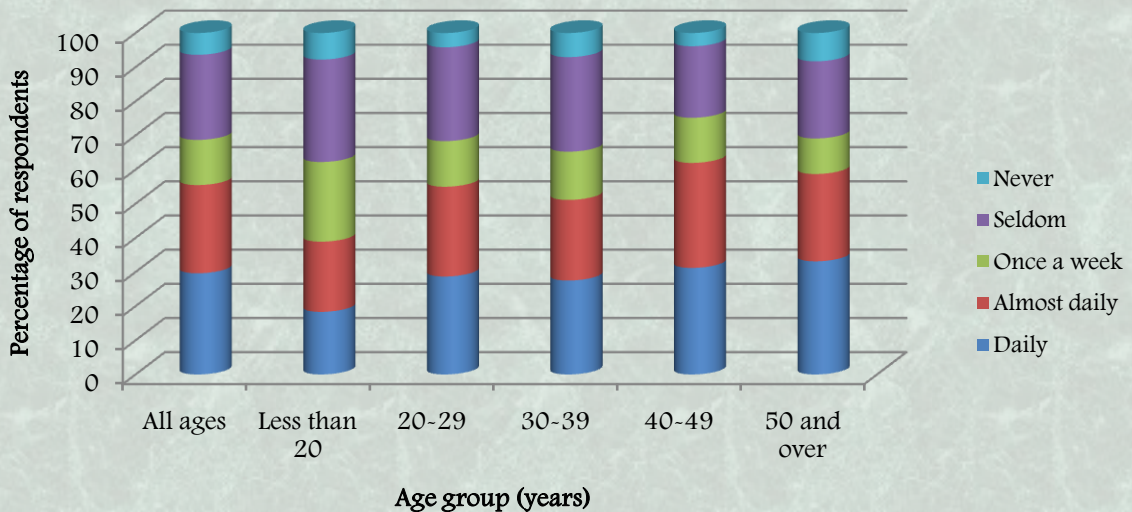
Chart 19: Reading of Newspapers by Educational Attainment

Source: Table 23

Age group (years)	Listening to radio					
	Total	Three or more hours daily	Less than three hours daily	Some days in the week	Seldom	Never
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All ages	100	43	20	19	14	2
Less than 20	100	41	18	23	14	3
20-29	100	42	23	20	13	3
30-39	100	43	19	21	15	2
40-49	100	44	20	22	13	2
50 and over	100	45	21	17	15	2

A relatively large percentage (43%) of respondents indicated that they listened to the radio three or more hours daily and one-fifth in each case listened less than three hours daily (20%) and some days in the week (19%). A similar pattern of responses was observed by age group.

Chart 20: Listening to Radio by Age Groups
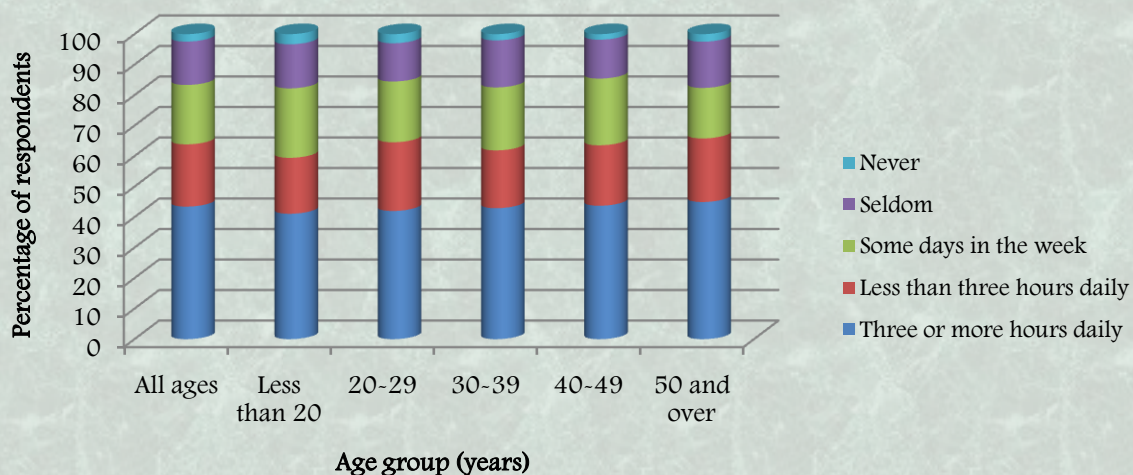
Source: Table 24

Table 25: Television Viewing by Age Groups

Age group (years)	Television viewing					
	Total	Three or more hours daily	Less than three hours daily	Some days in the week	Seldom	Never
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All ages	100	48	25	15	10	2
Less than 20	100	44	26	20	9	1
20-29	100	49	24	16	11	1
30-39	100	46	24	17	10	3
40-49	100	48	27	16	7	1
50 and over	100	50	25	11	10	3

Approximately a half (48%) of the sample of respondents reported television viewing of three or more hours daily, also seen as the modal viewing period of the various age groups. A quarter (25%) of the survey participants stated that they watched television less than three hours daily. A negligible 2% of the respondents never watched television.

Chart 21: Television Viewing by Age Groups
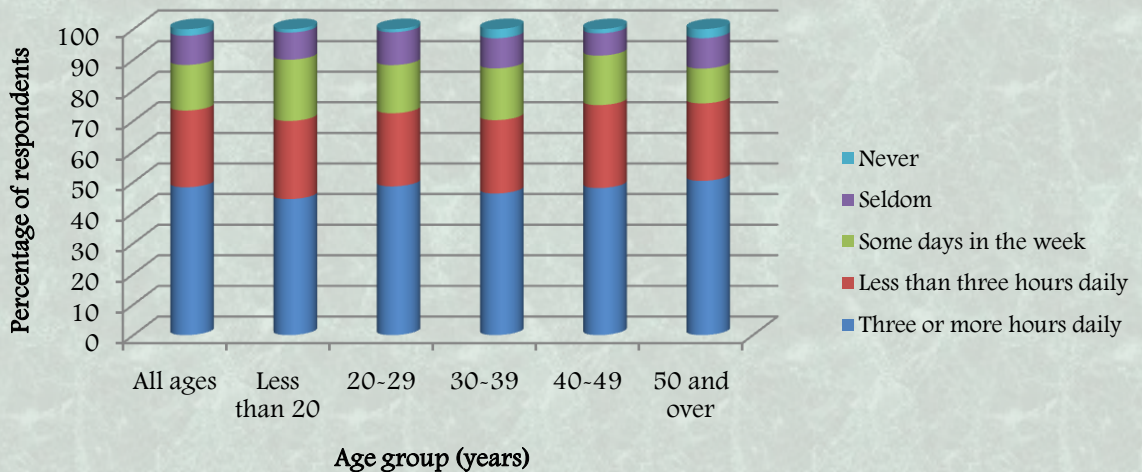
Source: Table 25

Age group (years)	Media type	Frequency of accessing scientific information				
		Total	Regularly	Once in a while	Only when I find something interesting	Never
		(1)	(2)	(3)	(4)	(5)
				percentage of respondents		
All ages	Newspapers	100	13	20	41	26
	Radio	100	5	17	31	46
	Television	100	22	28	40	9
	Internet	100	12	13	27	48
Less than 20	Newspapers	100	10	19	42	30
	Radio	100	3	19	28	51
	Television	100	27	24	38	10
	Internet	100	21	11	39	29
20-29	Newspapers	100	13	22	41	24
	Radio	100	3	19	28	50
	Television	100	23	29	40	8
	Internet	100	15	16	31	38
30-39	Newspapers	100	13	21	39	27
	Radio	100	6	19	29	46
	Television	100	24	27	40	9
	Internet	100	12	12	32	43
40-49	Newspapers	100	13	21	42	24
	Radio	100	5	16	36	42
	Television	100	24	29	40	8
	Internet	100	12	14	27	47
50 and over	Newspapers	100	13	18	42	27
	Radio	100	6	16	31	47
	Television	100	20	28	41	11
	Internet	100	8	12	18	62

Table 26 presents the frequencies with which respondents accessed scientific information from various types of electronic and print media. Television was identified as the main source of scientific information by all age groups. Of the respondents engaged in television viewing, 22% accessed scientific information regularly and a similar percentage in the case of newspaper readers (13%) and users of the Internet (12%). However, the majority of respondents sought scientific information from the media only on a subject of interest. The percentage of respondents who never used the Internet to access scientific information decreased from 70% in 2005 to 48% in 2012. The survey results also show that the proportion of respondents who used the Internet to access scientific information increased in relation to educational attainment (Table 27).

Chart 22: Accessing Scientific Information by Media Type ~ All Ages
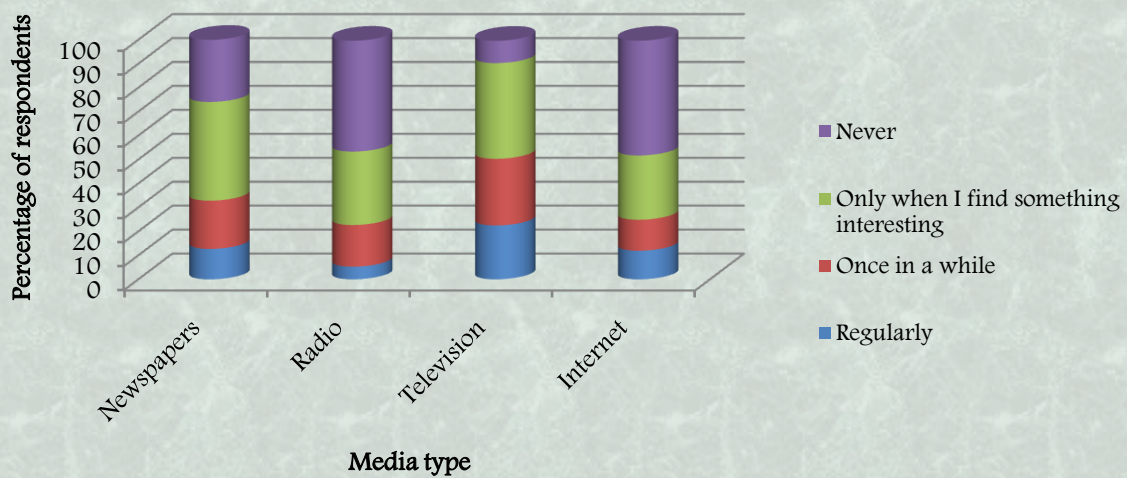
Legend:
- Never
- Only when I find something interesting
- Once in a while
- Regularly

X-axis: Media type (Newspapers, Radio, Television, Internet)
Y-axis: Percentage of respondents

Source: Table 26

Educational attainment	Media type	Frequency of accessing scientific information				
		Total	Regularly	Once in a while	Only when I find something interesting	Never
		(1)	(2)	(3)	(4)	(5)
		percentage of respondents				
Total	Newspapers	100	13	20	41	26
	Radio	100	5	17	31	46
	Television	100	22	28	40	9
	Internet	100	12	13	27	48
None	Newspapers	100	0	14	14	71
	Radio	100	0	29	29	43
	Television	100	21	36	36	7
	Internet	100	7	0	0	93
Primary	Newspapers	100	10	18	42	31
	Radio	100	4	14	34	48
	Television	100	17	28	42	13
	Internet	100	7	10	18	65
Secondary	Newspapers	100	12	21	42	25
	Radio	100	5	18	30	47
	Television	100	23	27	41	8
	Internet	100	12	12	28	47
Diploma	Newspapers	100	19	26	38	18
	Radio	100	9	26	26	39
	Television	100	25	33	33	8
	Internet	100	15	20	35	30
Associate degree	Newspapers	100	14	15	39	32
	Radio	100	7	13	28	52
	Television	100	26	21	39	14
	Internet	100	17	16	35	32
Bachelor's degree and above	Newspapers	100	24	18	41	17
	Radio	100	7	21	33	39
	Television	100	29	32	36	3
	Internet	100	24	18	38	20

Chart 23: Accessing Scientific Information from Newspapers by Educational Attainment

Legend:
- Never
- Only when I find something interesting
- Once in a while
- Regularly

Y-axis: Percentage of respondents

X-axis (Educational attainment): Total, None, Primary, Secondary, Diploma, Associate degree, Bachelor's degree and above
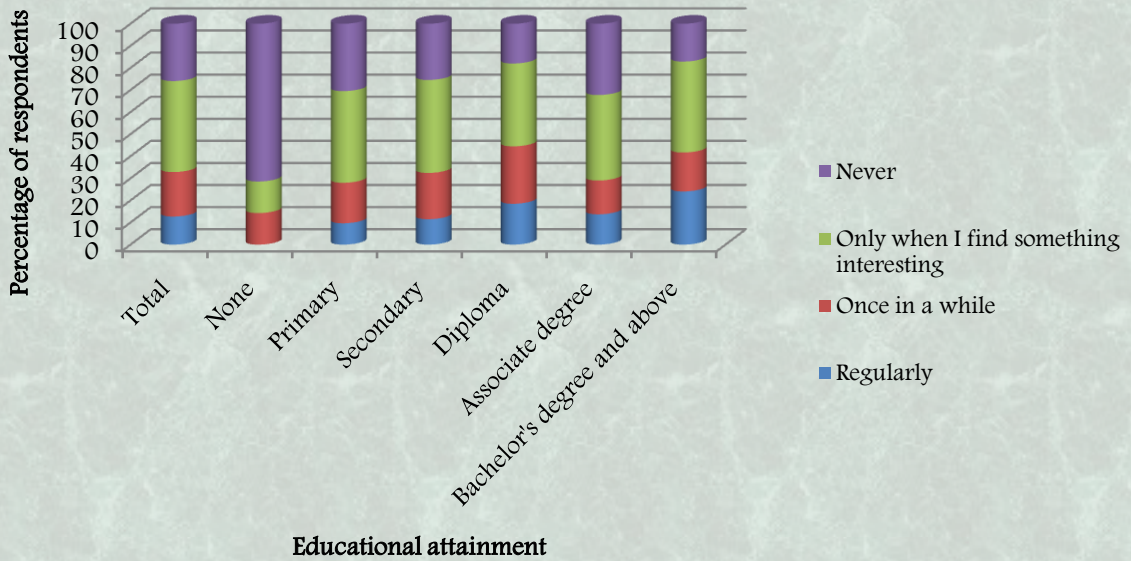
Chart 24: Accessing Scientific Information from Radio by Educational Attainment

Legend:
- Never
- Only when I find something interesting
- Once in a while
- Regularly

Y-axis: Percentage of respondents

X-axis (Educational attainment): Total, None, Primary, Secondary, Diploma, Associate degree, Bachelor's degree and above
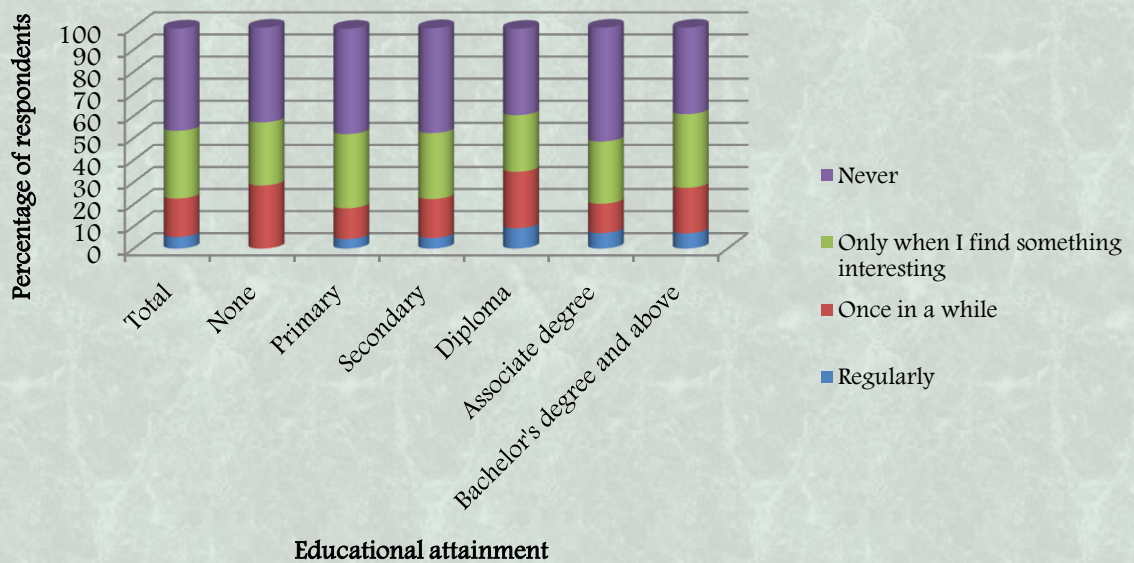
Source: Table 27

Chart 25: Accessing Scientific Information from Television by Educational Attainment
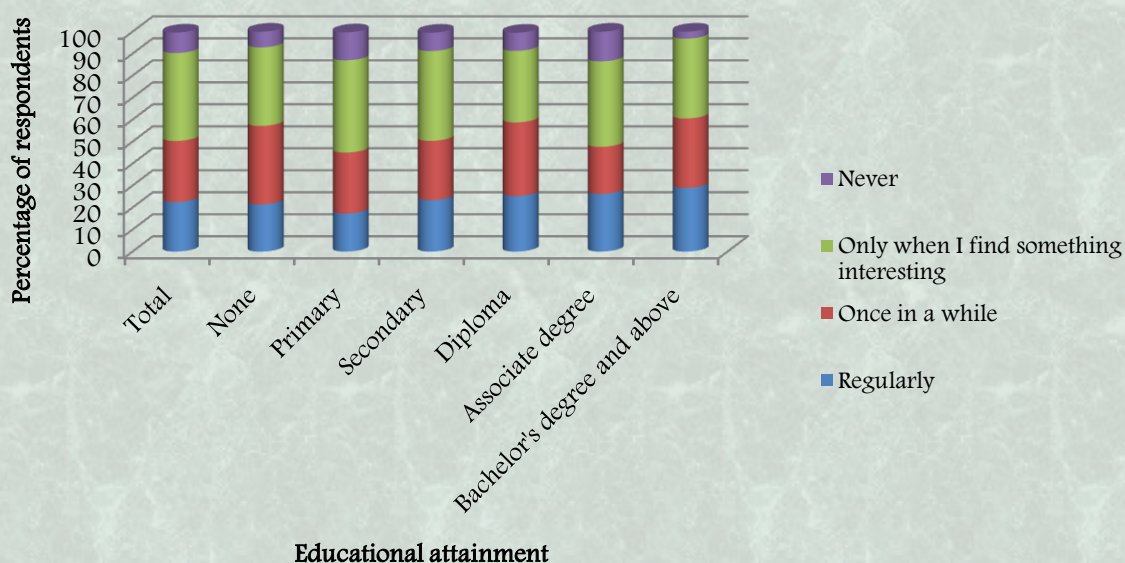
Chart 26: Accessing Scientific Information from Internet by Educational Attainment

Source: Table 27

Age group (years)	Reading books on science		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
All ages	100	35	65
Less than 20	100	47	53
20-29	100	41	59
30-39	100	36	64
40-49	100	33	67
50 and over	100	31	69

The above table shows that only a third (35%) of the sample of respondents read books on science. The highest percentage of respondents (47%) that read books on science was observed among the less than 20 age group with the largest proportion of students (Table 5). The data reveal an inverse relationship between the age cohorts and the proportion of respondents who read books on science.

Chart 27: Reading of Books in Science by Age Groups

Source: Table 28

Educational attainment	Reading books on science		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	35	65
None	100	7	93
Primary	100	24	76
Secondary	100	34	66
Diploma	100	50	50
Associate degree	100	42	58
Bachelor's degree and above	100	62	38

Table 29 shows that the proportion of respondents who read books on science increased in relation to educational attainment. A quarter (24%) of the respondents with primary education read books on science compared to three-fifths (62%) with a bachelor's degree and above.

Chart 28: Reading of Books on Science by Educational Attainment

Source: Table 29

Age group (years)	Reading of science magazines				
	Total	Regularly	Once in a while	I used to	Never
	(1)	(2)	(3)	(4)	(5)
	percentage of respondents				
All ages	100	4	16	7	74
Less than 20	100	3	19	7	71
20-29	100	3	18	8	71
30-39	100	3	18	7	72
40-49	100	5	16	8	72
50 and over	100	4	13	5	78
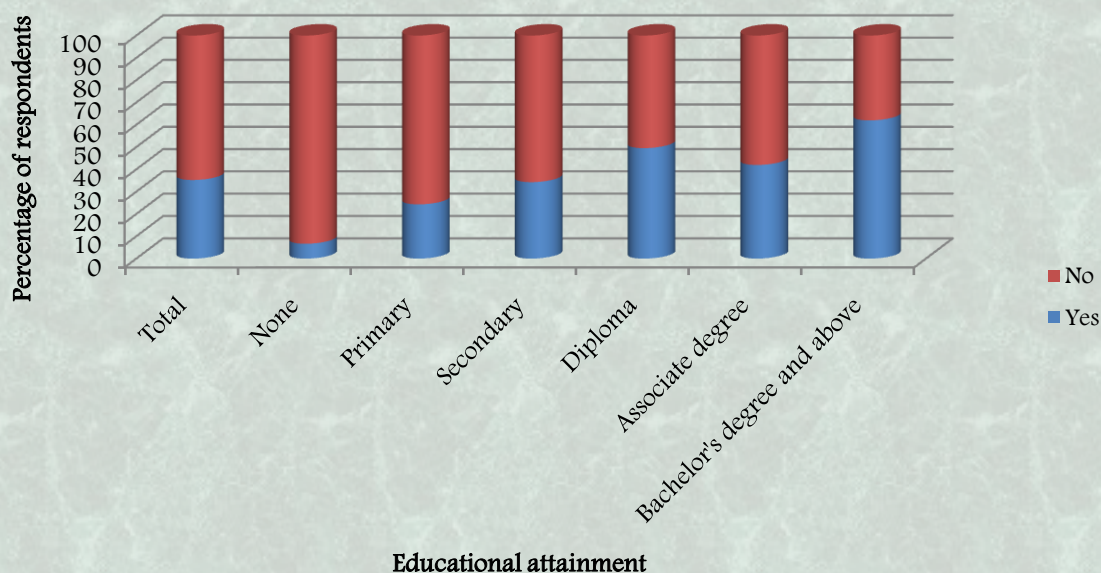
Table 30: Reading of Science Magazines by Age Groups

The majority (74%) of respondents never read science magazines; only 4% read them regularly and 16% once in a while. A similar pattern of responses was recorded in all age groups (Table 30). By educational attainment, respondents with tertiary level qualification read science magazines more often as shown (Table 31). National Geographic was identified as the most widely read science magazine.

Chart 29: Reading of Science Magazines - All Ages

Source: Table 30

Educational attainment	Reading of science magazines				
	Total	Regularly	Once in a while	I used to	Never
	(1)	(2)	(3)	(4)	(5)
	percentage of respondents				
Total	100	4	16	7	74
None	100	0	7	0	93
Primary	100	2	11	5	83
Secondary	100	3	15	7	75
Diploma	100	5	29	9	57
Associate degree	100	8	15	8	69
Bachelor's degree and above	100	10	30	10	49
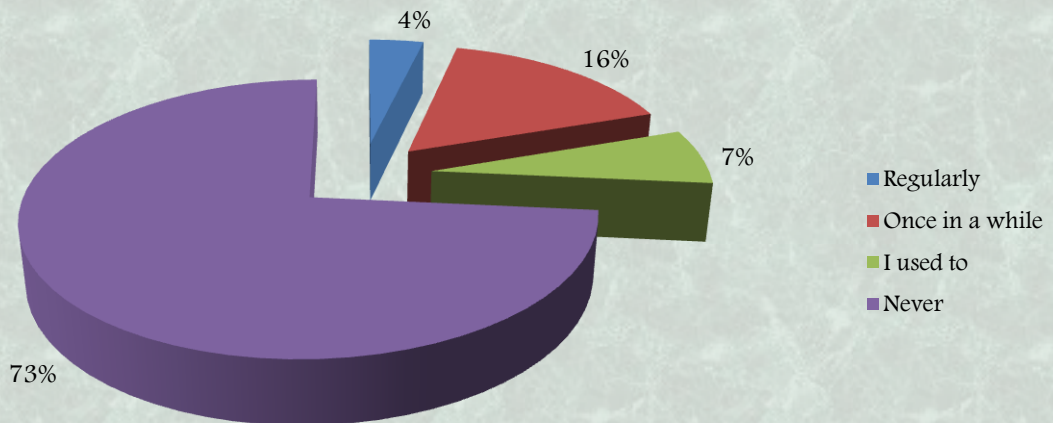
Table 31: Reading of Science Magazines by Educational Attainment

Chart 30: Reading of Science Magazines by Educational Attainment

Source: Table 31

Age group (years)	Quality of science and mathematics education						
	Total	Strongly agree	Agree	Disagree	Strongly disagree	Do not know	Agree cols (2) + (3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	percentage of respondents						
All ages	100	13	54	28	3	1	68
Less than 20	100	10	55	27	5	2	65
20-29	100	10	52	30	7	1	62
30-39	100	8	54	31	6	2	61
40-49	100	10	52	27	6	5	62
50 and over	100	10	53	28	6	3	63

Table 32 shows that a substantial percentage (68%) of the survey respondents agreed that the quality of science and mathematics education in our schools was adequate while one-third (31%) disagreed. A similar pattern of responses was observed by age groups and educational attainment (Table 33).

Chart 31: Quality of Science and Mathematics by Age Groups

Source: Table 32

Educational attainment	Quality of science and mathematics education						
	Total	Strongly agree	Agree	Disagree	Strongly disagree	Do not know	Agree cols (2) + (3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	percentage of respondents						
Total	100	10	53	28	6	3	63
None	100	7	73	7	0	13	80
Primary	100	10	53	28	5	4	63
Secondary	100	9	56	28	5	3	65
Diploma	100	9	47	34	8	2	56
Associate degree	100	11	51	24	10	4	63
Bachelor's degree and above	100	14	44	30	10	2	58
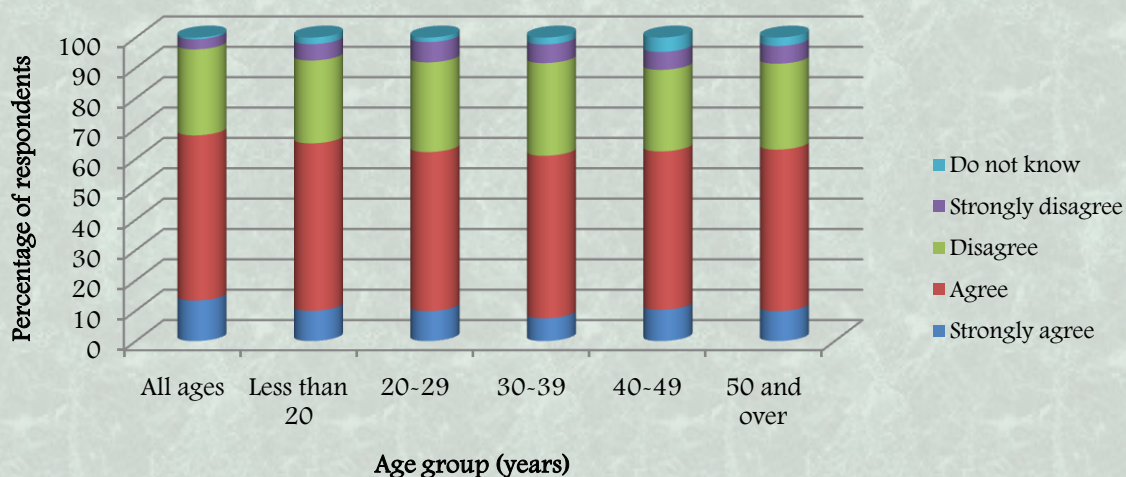
Chart 32: Quality of Science and Mathematics Education in Schools by Educational Attainment

Source: Table 33

Age group (years)	Read food labels				
	Total	Always	Always when I buy a new product	Sometimes	Never
	(1)	(2)	(3)	(4)	(5)
	percentage of respondents				
All ages	100	38	15	38	9
Less than 20	100	32	14	42	12
20-29	100	38	17	37	7
30-39	100	40	16	36	8
40-49	100	42	16	37	5
50 and over	100	34	13	41	11

Overall, two-fifths of the respondents in each case read food labels always (38%) or sometimes (38%); 15% read food labels whenever a new product was bought. The survey results of 2012 reveal that respondents in the less than 20, and 50 and over age groups read food labels less frequently than their counterparts in the other age categories (Table 34). A further review of the data by educational attainment shows that over a third of the respondents with educational attainment always read food labels (Table 35).

Chart 33: Read Food Labels by Age Groups
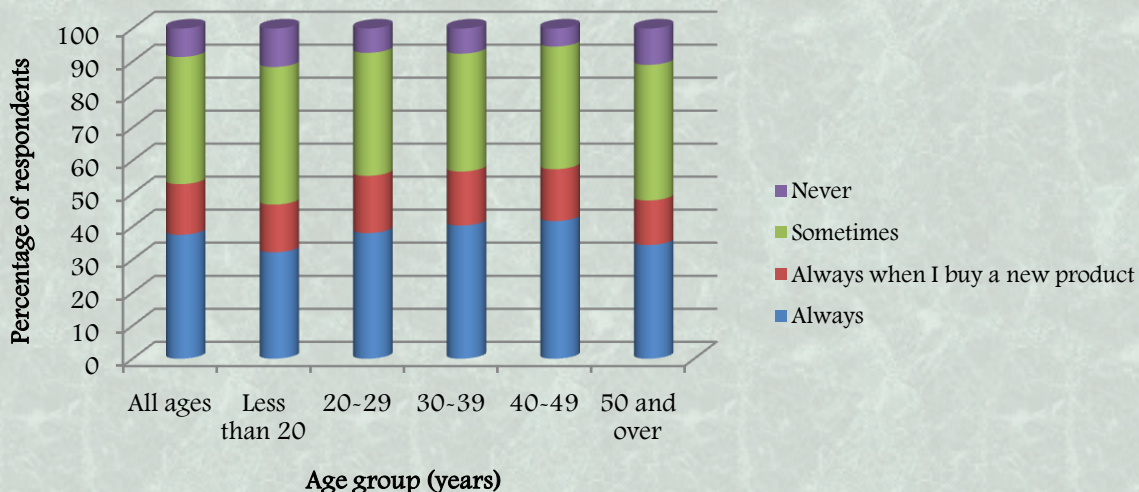
Source: Table 34

Table 35: Read Food Labels by Educational Attainment

Educational attainment	Read food labels				
	Total	Always	Always when I buy a new product	Sometimes	Never
	(1)	(2)	(3)	(4)	(5)
	percentage of respondents				
Total	100	38	15	38	9
None	100	13	0	20	67
Primary	100	35	14	39	12
Secondary	100	38	16	39	7
Diploma	100	39	15	41	5
Associate degree	100	38	17	39	6
Bachelor's degree and above	100	45	17	32	6

Chart 34: Read Food Labels by Educational Attainment

Source: Table 35

Age group (years)	Label food with GMOs			
	Total	Yes	No	Do not know
	(1)	(2)	(3)	(4)
	percentage of respondents			
All ages	100	96	3	1
Less than 20	100	97	3	1
20-29	100	97	2	1
30-39	100	96	3	1
40-49	100	97	3	0
50 and over	100	96	4	1

Almost all of the survey respondents (96%), overall and by various age groups (Table 36), and educational attainment (Table 37), were of the opinion that foods containing GMOs should be labelled accordingly.
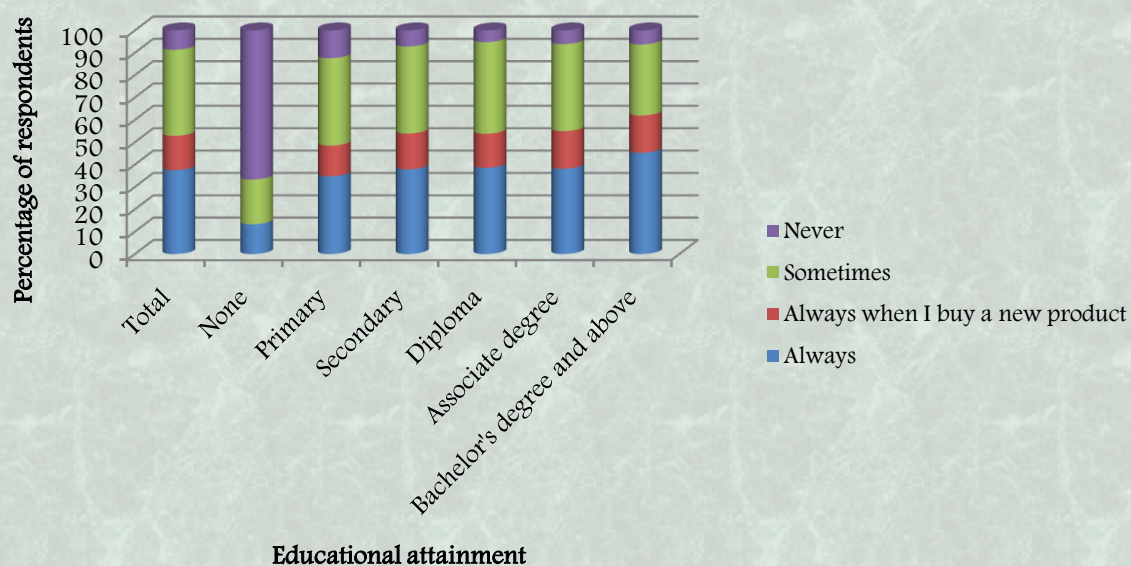
Chart 35: Labelling of Foods Containing Genetically Modified Organisms (GMOs) - All Ages
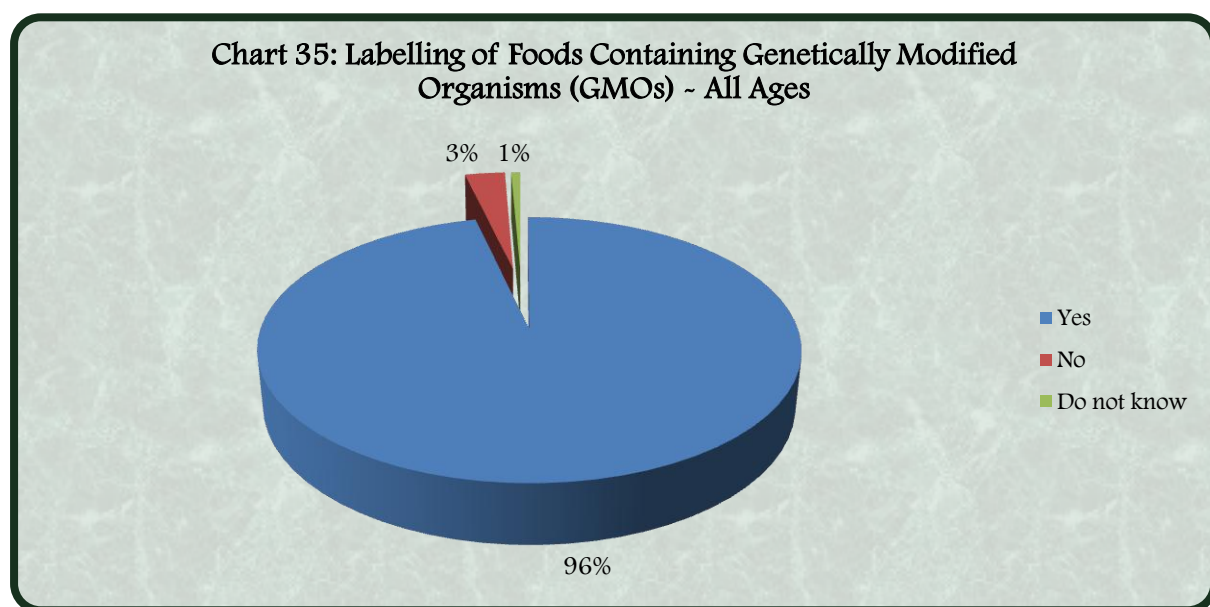
Source: Table 36

Table 37: Labelling of Foods Containing GMOs by Educational Attainment

Educational attainment	Label food with GMOs			
	Total	Yes	No	Do not know
	(1)	(2)	(3)	(4)
	percentage of respondents			
Total	100	96	3	1
None	100	93	0	7
Primary	100	95	4	1
Secondary	100	97	3	1
Diploma	100	98	2	0
Associate degree	100	96	3	1
Bachelor's degree and above	100	98	2	1

Age group (years)	Blood type known		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
All ages	100	57	43
Less than 20	100	43	57
20-29	100	56	44
30-39	100	61	39
40-49	100	59	41
50 and over	100	56	44

Overall, over a half (57%) of the survey respondents knew their blood type. This pattern of response was recorded in all age groups except the less than 20 age category where less than a half (43%) was aware of their blood type (Table 38). By educational attainment, two-thirds or more of the respondents with a diploma (70%), associate degree (68%) and bachelor's degree and above (66%) education knew their blood type while those with primary education recorded the highest percentage (52%) where the blood type was unknown (Table 39).

Chart 36: Blood Type Known by Age Groups

Source: Table 38

Educational attainment	Blood type known		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	57	43
None	100	53	47
Primary	100	48	52
Secondary	100	56	44
Diploma	100	70	30
Associate degree	100	68	32
Bachelor's degree and above	100	66	34
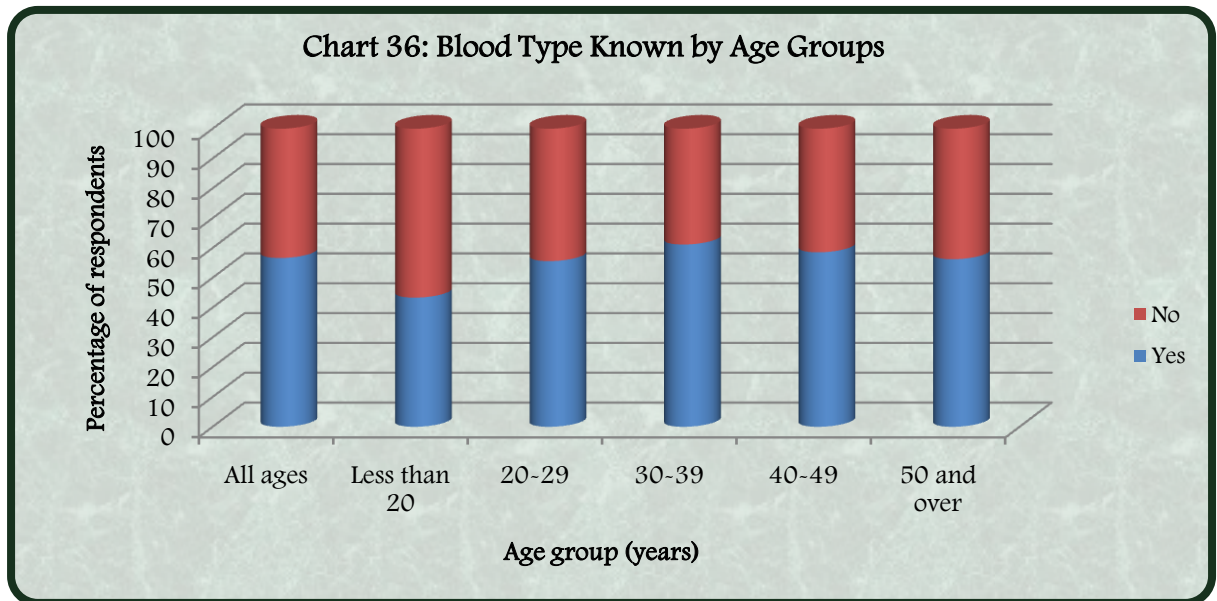
Chart 37: Blood Type Known by Educational Attainment

Source: Table 39

Question put to doctor	Percentage of respondents		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
1 How to follow instructions for treatment	100	77	23
2 What are the side effects of treatment	100	82	18
3 What causes the illness	100	73	27
4 What are the negative effects of the illness	100	68	32
5 No questions	100	3	97
6 Other	100	3	97

Respondents were asked to select the questions they would ask when a doctor told them about certain medication or treatment and illness. The majority of respondents selected the following options: what were the side effects of the treatment (82%); how to follow instructions for treatment (77%); what caused the illness (73%); and what were the negative effects of the illness (68%). Only 3% indicated that they would not ask the doctor any questions.

Chart 38: Questions on Illness and Treatment

Source: Table 40

Age group (years)	Cause of HIV/AIDS					
	Total	The natural evolution of illnesses	Change in people's sexual habits	A scientist's experiment	People's ignorance	Do not know
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All ages	100	10	45	20	19	5
Less than 20	100	9	47	18	21	5
20-29	100	9	42	22	22	5
30-39	100	10	46	19	21	4
40-49	100	11	42	26	16	5
50 and over	100	10	49	16	18	7

A relatively large proportion of the respondents (45%) was of the opinion that HIV/AIDS resulted from a change in people's sexual habits while one-fifth indicated a scientist's experiment (20%) and people's ignorance (19%). This pattern of responses in 2012, both by age group (Table 41) and educational attainment (Table 42), was generally unchanged when compared to the results of the 2005 study.

Chart 39: Causes of HIV/AIDS by Age Groups

Source: Table 41

Educational attainment	Cause of HIV/AIDS					
	Total	The natural evolution of illnesses	Change in people's sexual habits	A scientist's experiment	People's ignorance	Do not know
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
Total	100	10	45	20	19	5
None	100	0	53	27	7	13
Primary	100	9	44	17	22	8
Secondary	100	10	47	19	20	4
Diploma	100	7	44	25	17	6
Associate degree	100	11	40	24	20	5
Bachelor's degree and above	100	16	45	22	11	7

Chart 40: Causes of HIV/AIDS by Educational Attainment
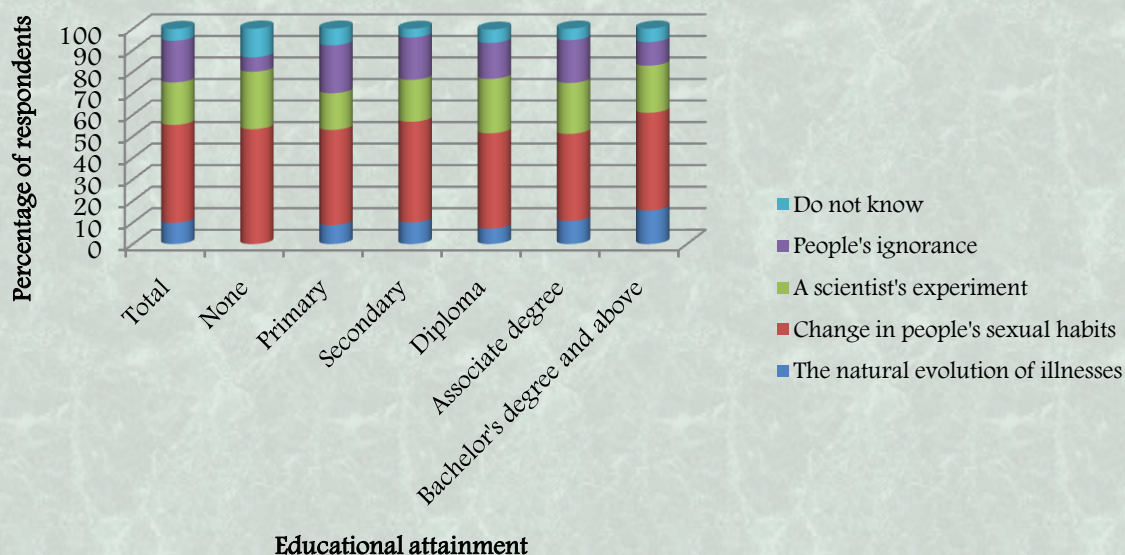
Source: Table 42

Table 43: Familiarity with Selected Scientific Terms

Scientific term	Familiarity					
	Total	Very familiar	Familiar	Vaguely familiar	Not familiar	Familiar cols (2) + (3)
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
Catalyst	100	11	18	17	55	29
Chlorophyll	100	17	23	17	42	40
Hormone	100	25	38	25	12	63
DNA	100	25	36	21	18	61
Global warming	100	25	35	22	19	60
Biodiversity	100	11	16	15	58	27
Gene	100	24	36	25	16	60
Thermostat	100	21	26	18	35	47

Table 43 shows the level of familiarity with selected scientific terms. The survey participants were mostly familiar with the terms hormone (63%), DNA (61%), global warming (60%) and gene (60%). A substantial proportion of respondents was not familiar with the terms biodiversity (58%), catalyst (55%) and chlorophyll (42%). However, the level of familiarity with these three scientific terms increased with that of educational attainment (Table 44).

Chart 41: Familiarity with Selected Scientific Terms
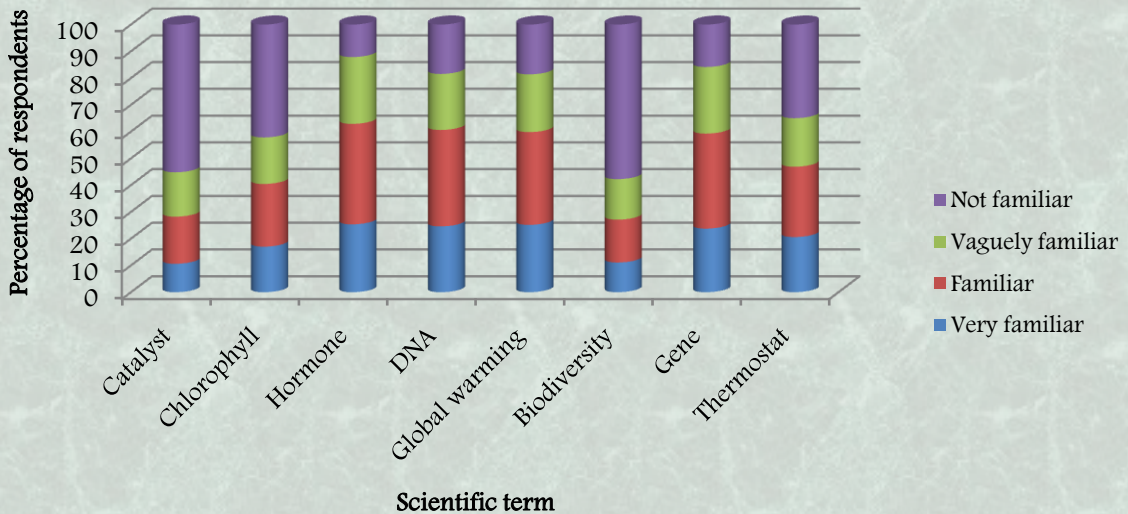
Source: Table 43

Catalyst

Educational attainment	Familiarity				
	Total	Very familiar	Familiar	Vaguely familiar	Not familiar
	(1)	(2)	(3)	(4)	(5)
			percentage of respondents		
Total	100	11	18	17	55
None	100	0	0	0	100
Primary	100	5	12	12	71
Secondary	100	8	17	19	55
Diploma	100	17	29	13	41
Associate degree	100	19	24	23	34
Bachelor's degree and above	100	33	26	15	26

Chlorophyll

Educational attainment	Familiarity				
	Total	Very familiar	Familiar	Vaguely familiar	Not familiar
	(1)	(2)	(3)	(4)	(5)
			percentage of respondents		
Total	100	17	23	17	42
None	100	0	7	0	93
Primary	100	10	15	15	59
Secondary	100	16	24	19	41
Diploma	100	23	34	15	28
Associate degree	100	26	34	20	21
Bachelor's degree and above	100	36	31	16	17

Biodiversity

Educational attainment	Familiarity				
	Total	Very familiar	Familiar	Vaguely familiar	Not familiar
	(1)	(2)	(3)	(4)	(5)
			percentage of respondents		
Total	100	11	16	15	58
None	100	0	7		93
Primary	100	7	9	10	73
Secondary	100	9	16	17	58
Diploma	100	13	29	16	42
Associate degree	100	19	19	24	37
Bachelor's degree and above	100	32	24	15	29

Familiar	cols (2) + (3)
	(6)
	29
	0
	17
	25
	46
	43
	59

Familiar	cols (2) + (3)
	(6)
	40
	7
	25
	40
	57
	60
	67

Familiar	cols (2) + (3)
	(6)
	27
	7
	16
	25
	42
	38
	56

Chart 42: Familiarity with the Term Catalyst by Education Attainment
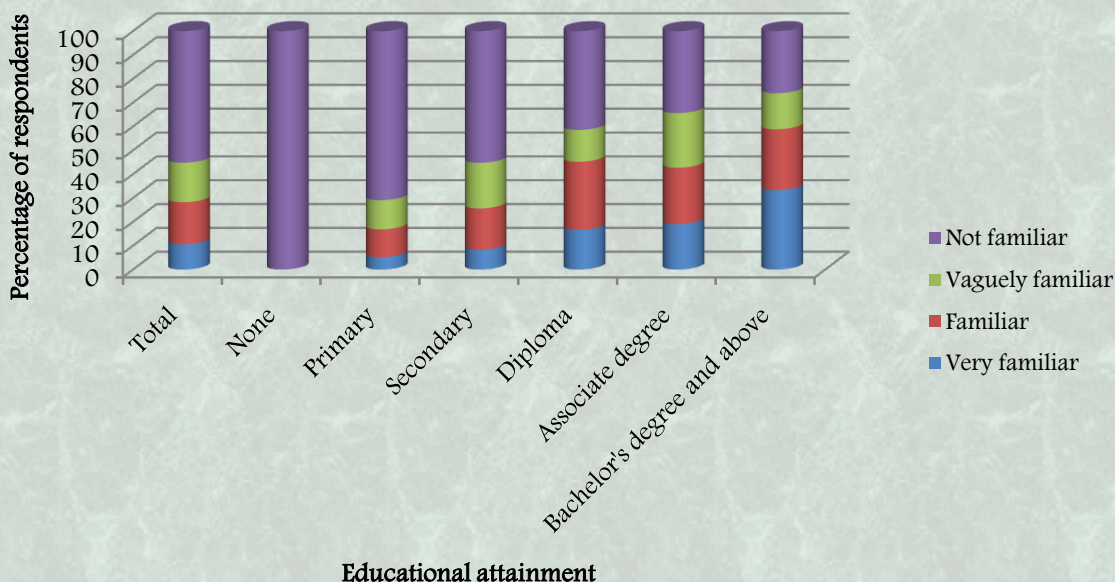
Chart 43: Familiarity with the Term Chlorophyll by Educational Attainment
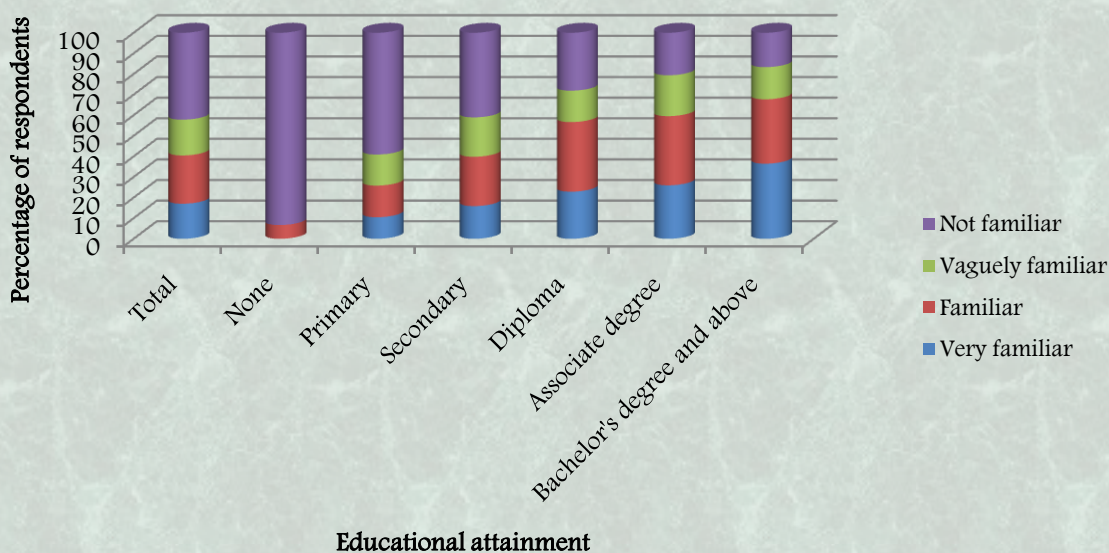
Source: Table 44

Chart 44: Familiarity with the Term Biodiversity by Educational Attainment
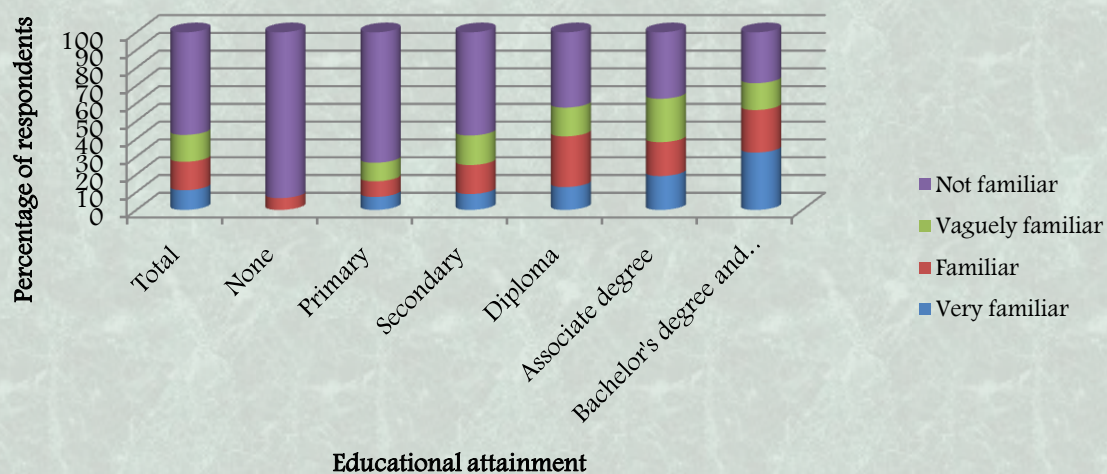
Source: Table 44

Educational attainment	Work abroad to become scientist						
	Total	Strongly agree	Agree	Disagree	Strongly disagree	Do not know	Agree cols (2)+(3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	percentage of respondents						
Total	100	13	43	38	5	1	56
None	100	13	60	20	0	7	73
Primary	100	11	47	37	4	1	58
Secondary	100	13	44	37	4	1	57
Diploma	100	17	37	40	5	1	53
Associate degree	100	21	37	34	5	2	59
Bachelor's degree and above	100	16	31	43	9	1	47

Over a half (56%) of the sample of respondents agreed that people who wanted to become scientists had to work abroad while 43% disagreed. The highest level of disagreement was recorded amongst respondents with a bachelor's degree and above (52%) (Table 45) and respondents who stated they were very well-informed with respect to science and technology (53%) (Table 46).
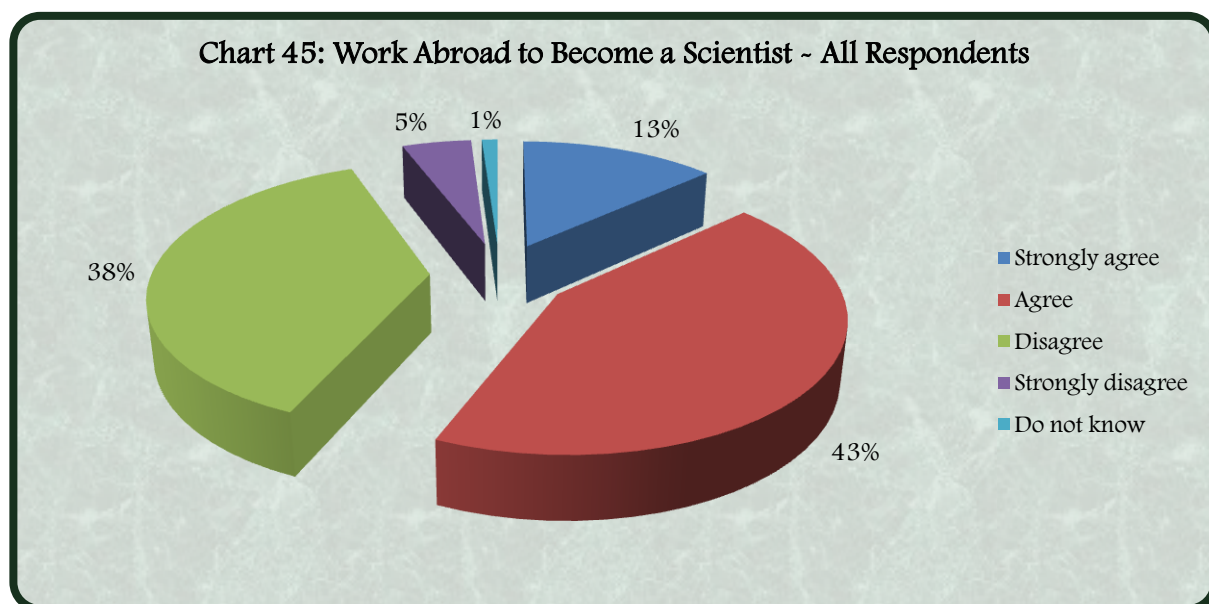
Chart 45: Work Abroad to Become a Scientist - All Respondents

- Strongly agree
- Agree
- Disagree
- Strongly disagree
- Do not know

Source: Table 45

Informed on science and technology	Work abroad to become a scientist						
	Total	Strongly agree	Agree	Disagree	Strongly disagree	Do not know	Agree cols (2)+(3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	percentage of respondents						
Total	100	13	43	38	5	1	56
Very well-informed	100	19	27	41	12	1	46
Well-informed	100	15	40	40	4	1	55
Informed	100	14	43	38	5	1	57
Not informed	100	10	50	35	3	3	59

Educational attainment	Total	To make money	For prestige	To do good	To solve people's problems	Quest for knowledge	To gain power	Love science	Do not know
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
					percentage of respondents				
Total	100	13	2	12	28	42	2	1	1
None	100	33	0	13	40	7	0	0	7
Primary	100	13	2	15	30	36	2	0	1
Secondary	100	12	2	12	28	44	2	0	0
Diploma	100	13	2	9	26	49	0	1	0
Associate Degree	100	11	1	15	27	45	1	1	0
Bachelor's Degree and above	100	14	3	7	24	51	0	2	0

Table 47: Scientist's Reason for Choice of Profession by Educational Attainment

Main reason for choice of profession

A relatively large proportion of respondents (42%), especially amongst those with educational attainment (Table 47) and those informed on science and technology (Table 48), indicated that a scientist's main reason for his/her choice of profession was the quest for knowledge; to solve people's problems (28%) was next in ranking.

Chart 46: Scientist's Reason for Choice of Profession
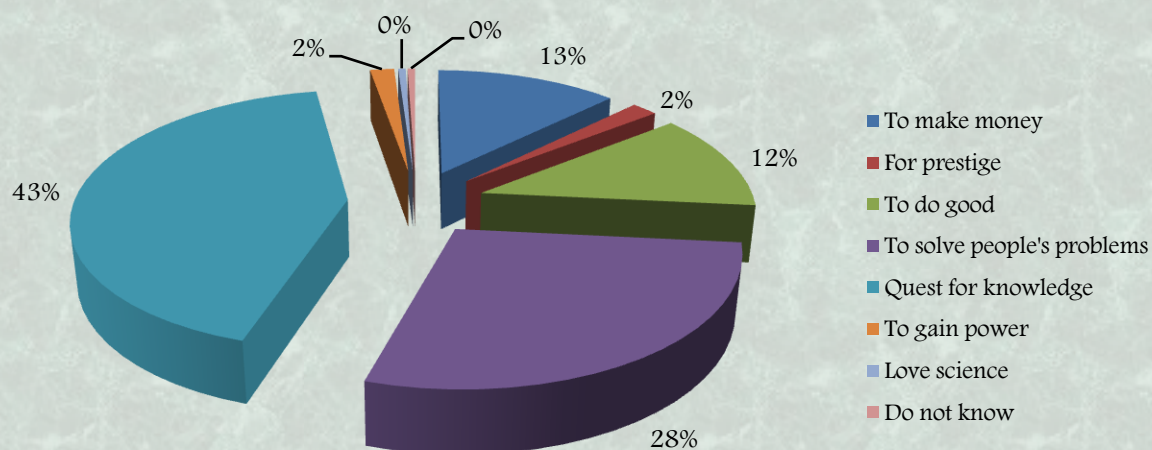
- To make money — 13%
- For prestige — 2%
- To do good — 12%
- To solve people's problems — 28%
- Quest for knowledge — 43%
- To gain power — 2%
- Love science — 0%
- Do not know — 0%

Source: Table 47

Informed on science and technology	Main reason for choice of profession								
	Total	To make money	For prestige	To do good	To solve people's problems	Quest for knowledge	To gain power	Love science	Do not know
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	percentage of respondents								
Total	100	13	2	12	28	42	2	1	1
Very well-informed	100	8	1	9	24	57	0	1	1
Well-informed	100	13	3	12	25	46	0	0	0
Informed	100	11	2	10	29	45	2	1	1
Not informed	100	18	2	17	29	30	3	0	1

Table 49: Encourage Child to Pursue Scientific Career by Educational Attainment

Educational attainment	Encourage child		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	90	10
None	100	80	20
Primary	100	89	11
Secondary	100	90	10
Diploma	100	92	8
Associate degree	100	90	10
Bachelor's degree and above	100	92	8

The table above shows that a significant majority of respondents (90%) in the Public Perception of Science Survey, 2012 would encourage their child/children to pursue a scientific career as observed in a similar study of 2005.

Chart 47: Encourage Child to Pursue Scientific Career
All Respondents
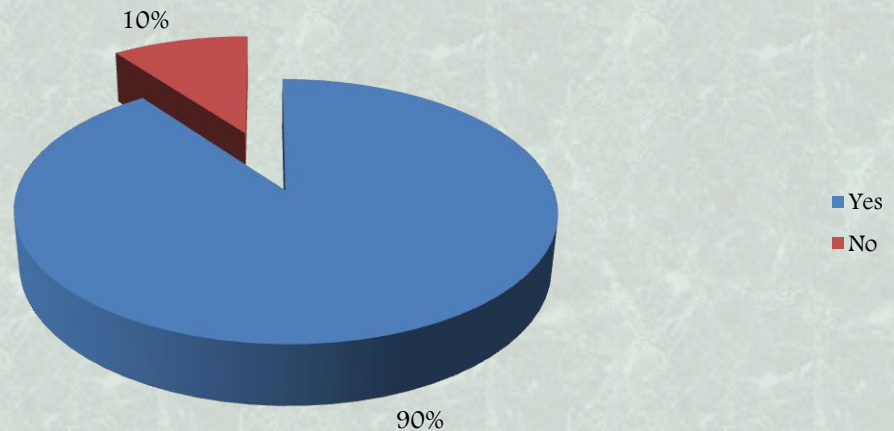
Source: Table 49

Table 50: Name Local Scientist

Informed on science and technology	Name local scientist		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	10	90
Very well-informed	100	25	75
Well-informed	100	19	81
Informed	100	9	91
Not informed	100	4	96

The survey results reveal that only a small percentage (10%) of the respondents could recall the name of a local scientist (Table 50). However, a substantial percentage (68%) of the survey participants, especially amongst those informed about scientific activities (Table 51), was of the opinion that scientific and technological research was conducted in Trinidad and Tobago.

Chart 48: Name Local Scientist - All Respondents

Source: Table 50

Informed on science and technology	Science and technology research		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	68	32
Very well-informed	100	81	19
Well-informed	100	82	18
Informed	100	71	29
Not informed	100	50	50
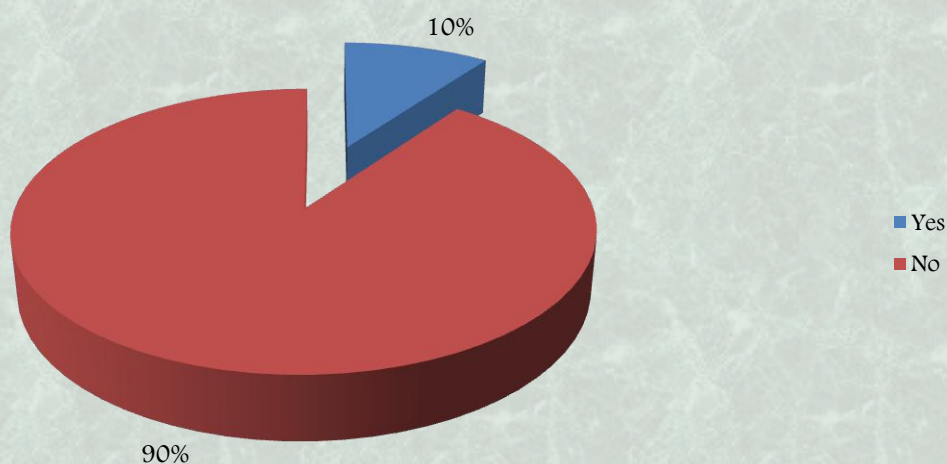
Chart 49: Science and Technology Research in Trinidad and Tobago
All Respondents

32%

68%

- Yes
- No

Source: Table 51

Informed on science and technology	Name institution		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	61	39
Very well-informed	100	76	24
Well-informed	100	67	33
Informed	100	64	36
Not informed	100	42	58
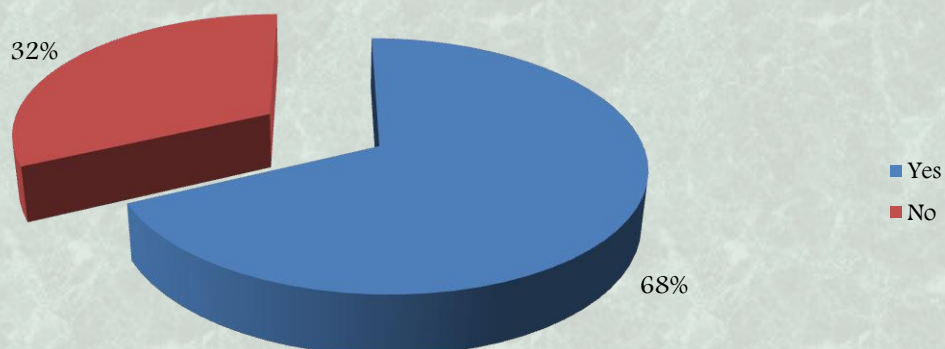
Table 52: Name Science and Technology Institution

Three-fifths (61%) of the survey respondents overall, and more so of those who were informed of scientific and technological research undertaken in Trinidad and Tobago, were able to name an institution where such activity was conducted. The institutions mainly identified were: The University of the West Indies, Caribbean Industrial Research Institute and The University of Trinidad and Tobago.

Chart 50: Name Science and Technology Institution

Source: Table 52

Informed on science and technology	Research useful			
	Total	Yes	No	Do not know
	(1)	(2)	(3)	(4)
	percentage of respondents			
Total	100	90	6	4
Very well-informed	100	92	6	2
Well-informed	100	92	5	3
Informed	100	90	6	4
Not informed	100	85	9	6
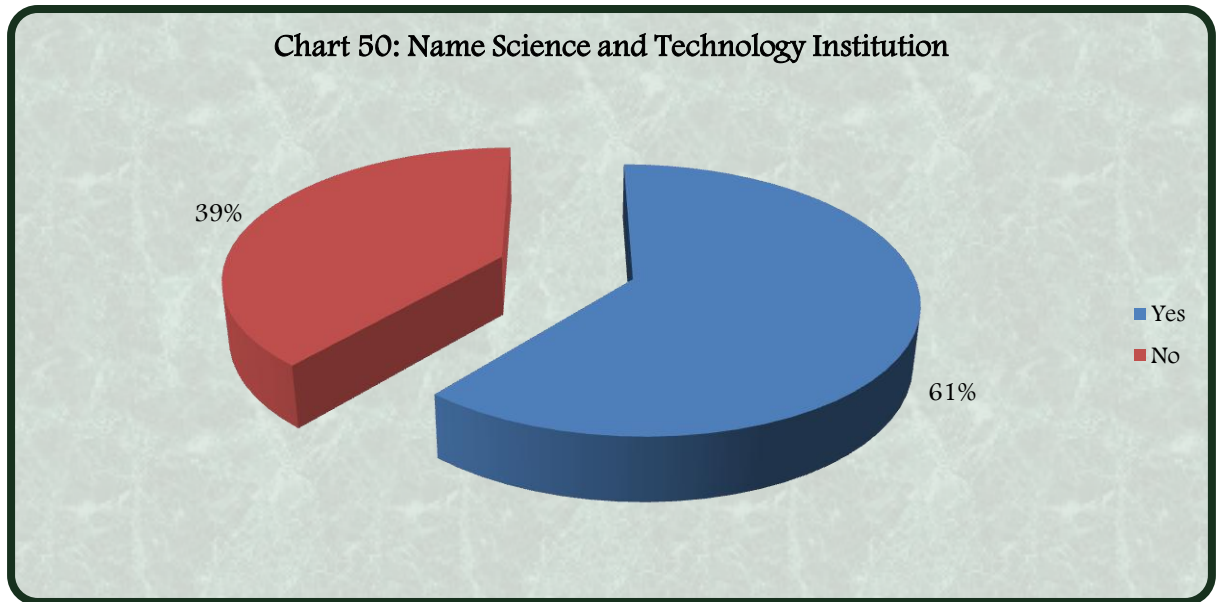
Table 53: Usefulness of Research

Of the respondents who were of the view that scientific and technological research was conducted in Trinidad and Tobago, an overwhelming majority (90%) stated that such undertaking was useful.

Chart 51: Usefulness of Research
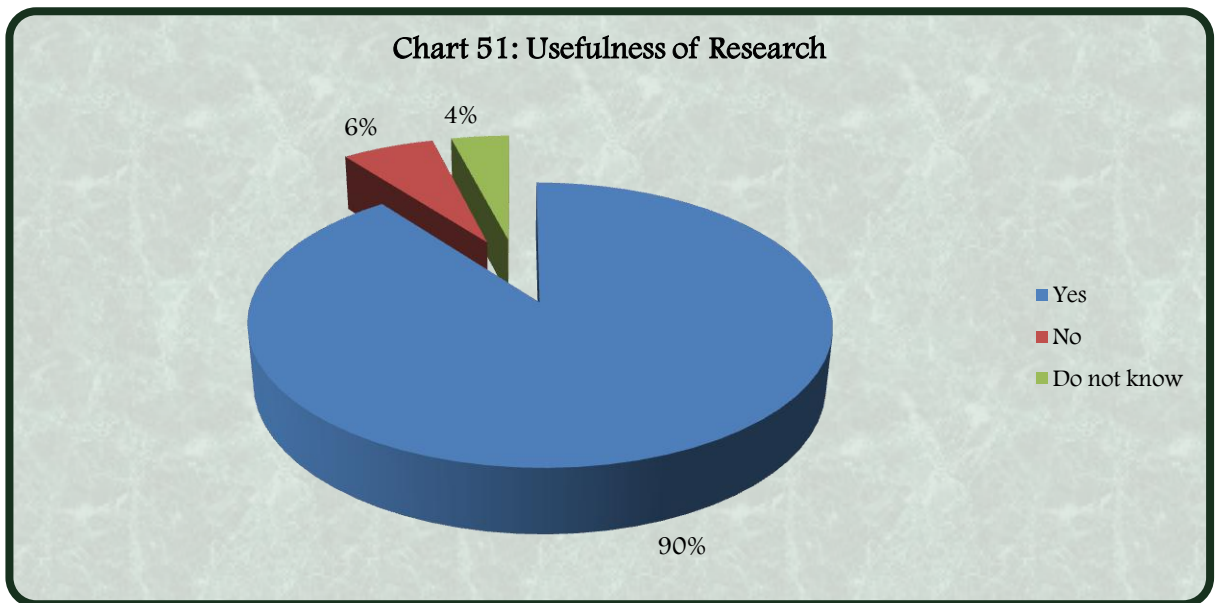
Source: Table 53

Table 54: Source of Science and Technology Financing

Source of financing	Percentage of respondents
	(1)
Total	100
Scientists	3
Private enterprises	4
Private foundations	3
Foreign countries	4
Government	69
International organisations	7
Do not know	10

Government was identified as the main source of research funding by the majority (69%) of respondents who thought research was conducted locally.

Chart 52: Source of Science and Technology Financing

Source: Table 54

Age group (years)	Visited the science centre		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
All ages	100	24	76
Less than 20	100	31	69
20-29	100	27	73
30-39	100	24	76
40-49	100	25	75
50 and over	100	20	80

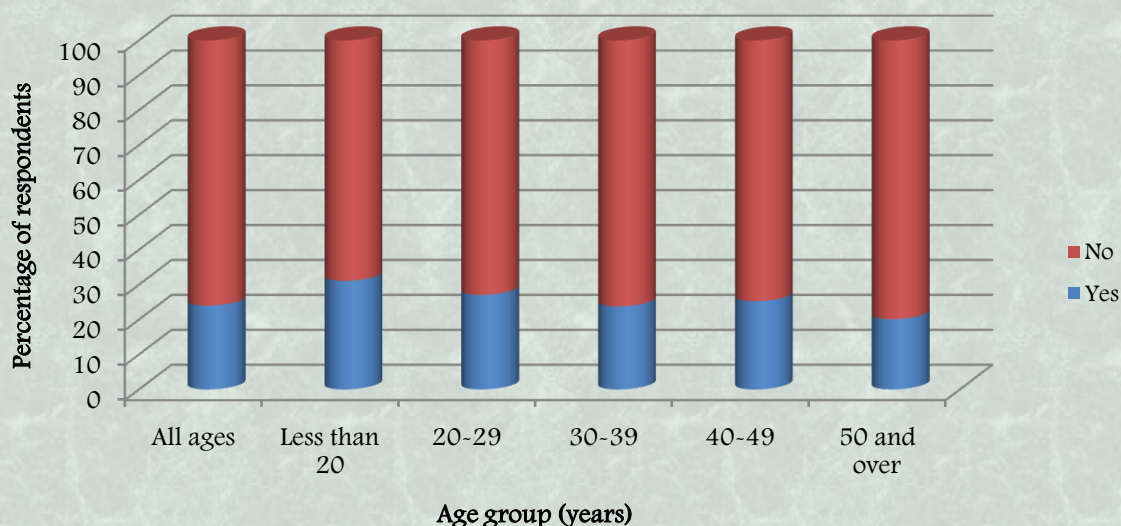A quarter (24%) of the survey respondents indicated that they had visited the NIHERST/NGC National Science Centre while 76% never did. The data show that approximately one-third (31%) of respondents in the less than 20 age group were past visitors to the science centre (Table 55). A further review of the data by educational attainment reveals a positive relationship between educational attainment and visits to the science centre where 43% with a bachelors' degree or above qualification visited compared to 16% with primary education (Table 55). Additionally, respondents who were informed about science and technology were more inclined to visit the science centre than those not informed (Table 57). Table 58 shows that most (95%) of the respondents who had visited the science centre were satisfied with the visit.

Chart 53: Visited NIHERST/National Science Centre by Age Groups

Source: Table 55

Educational attainment	Visited the science centre		
	Total	Yes	No
	(1)	(2)	(3)
Total	percentage of respondents		
None	100	7	93
Primary	100	16	84
Secondary	100	24	76
Diploma	100	32	68
Associate degree	100	27	73
Bachelor's degree and above	100	43	57

Chart 54: Visited NIHERST/NGC National Science Centre by Educational Attainment

Source: Table 56

Informed on science and technology	Visited the science centre		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Total	100	24	76
Very well-informed	100	38	62
Well-informed	100	38	62
Informed	100	25	75
Not informed	100	10	90

Age group (years)	Satisfied with visit - percentage of respondent		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
All ages	100	95	5
Less than 20	100	98	2
20-29	100	95	5
30-39	100	95	5
40-49	100	95	5
50 and over	100	95	5

Chart 55: Satisfied with Visit to the NIHERST/NGC National Science Centre All Ages

5%

95%

Yes
No
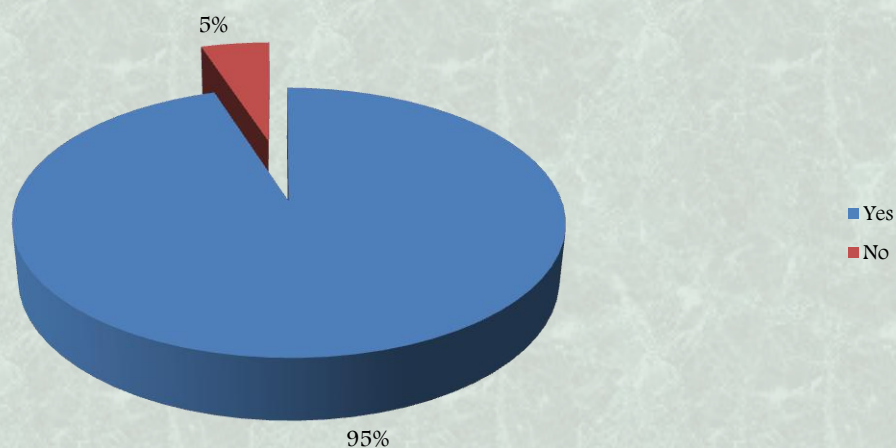
Source: Table 58

Table 59: Protest Actions Concerning Science and Technology

	Protest action					
	Participation			Important to participate		
	Total	Yes	No	Total	Yes	No
Percentage of respondents	(1)	(2)	(3)	(4)	(5)	(6)
	100	2	98	100	85	15

Table 60: Type of Protest Action

Type of action	Participation		
	Total	Yes	No
	(1)	(2)	(3)
	percentage of respondents		
Protest rally	100	55	45
Public forum	100	31	69
Written petition	100	29	71
Other	100	3	97

Table 59 shows that an extremely small percentage (2%) of the sample had participated in protest actions or made complaints about problems arising from science and technology activity. However, when asked if it was important to participate in these actions the majority (85%) of respondents replied in the affirmative. The main form of protest action was protest rally (55%) followed by public forum (31%) and written petition (29%) (Table 60).

Chart 56: Participation in Protest Action
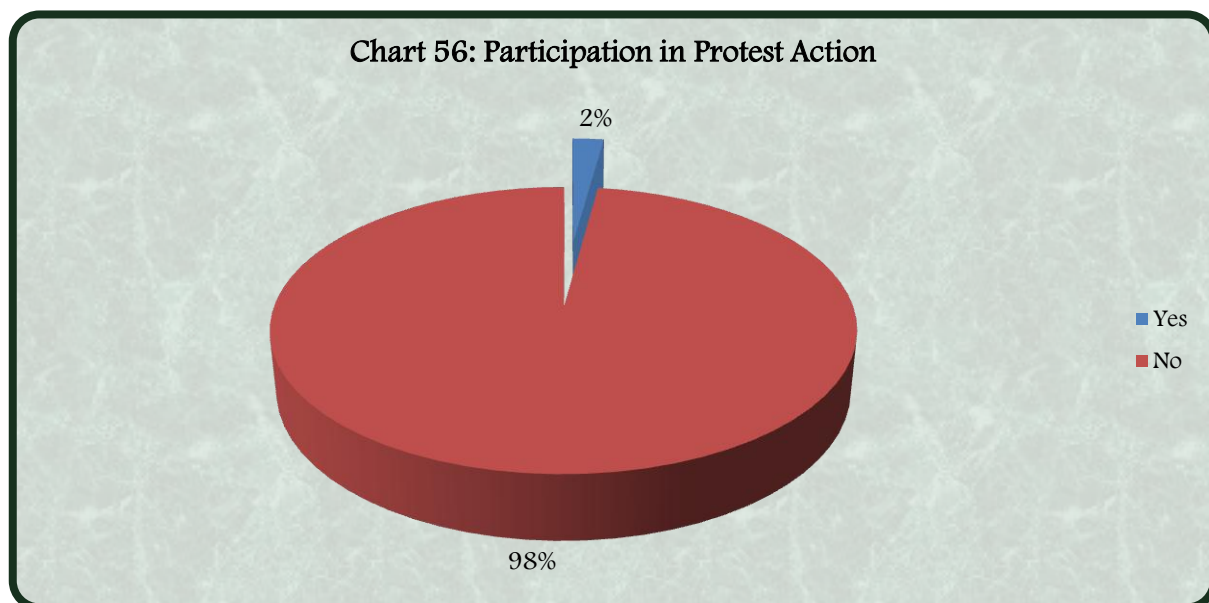
Source: Table 59

Chart 57: Important to Participation in Protest Action

15%

85%

Yes
No
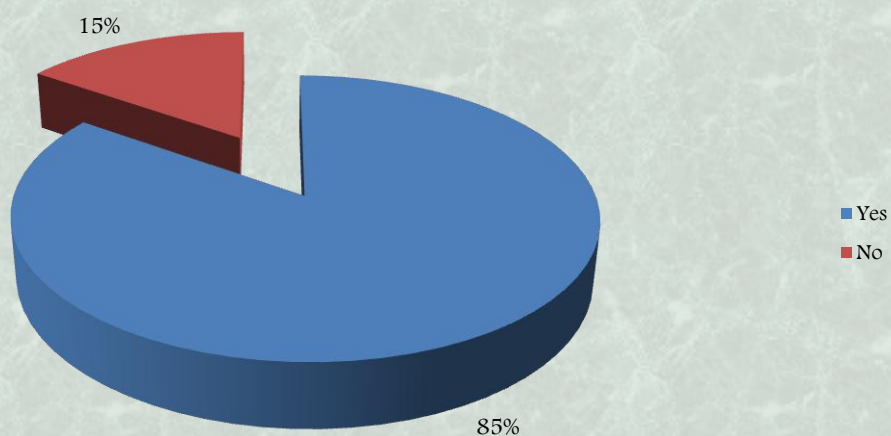
Source: Table 59

Table 61: Main Obstacles to Participating in Issues on Science and Technology

Main obstacle	Percentage of respondents
	(1)
Total	100
People are not interested	26
People have more important problems to complain about	19
There are no channels for participation	9
Complaints do not produce results	15
People are not knowledgeable enough to participate	26
People are afraid of the consequences	1
Not stated	4

The survey data show that peoples' lack of interest (26%) and insufficient knowledge (26%) were the two main obstacles to participating in science and technology issues. One-fifth (19%) of the respondents indicated that there were more important problems about which to complain.

Age group (years)	Comment					
	Total	Interesting	Useful	Difficult	Boring	Other
	(1)	(2)	(3)	(4)	(5)	(6)
	percentage of respondents					
All ages	100	65	30	3	1	1
Less than 20	100	64	31	3	1	1
20-29	100	65	30	3	1	0
30-39	100	69	27	2	1	1
40-49	100	69	27	3	0	1
50 and over	100	61	32	4	1	0

Overall, the participants of the survey by various age groups demonstrated positive attitudes towards the subject of the enquiry on the public perception of science. The majority (65%) stated that the study was interesting and 30% found it useful.

Chart 58: Comments on Survey
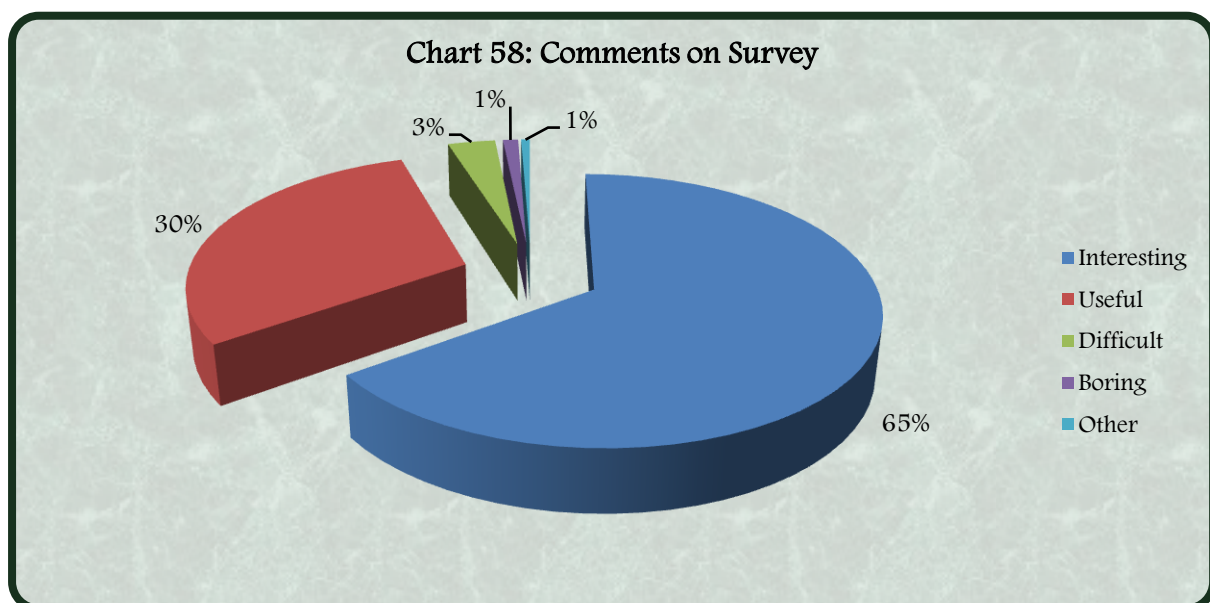
Source: Table 62

Administrative areas	Medicine and Health		Archaeology		Environment		Computers and IT		Astronomy and Space		Geology		Engineering		Agriculture		Psychology	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	2012	2005	2012	2005	2012	2005	2012	2005	2012	2005	2012	2005	2012	2005	2012	2005	2012	2005
Total	83.0	82.8	16.3	14.4	72.4	78.6	53.2	57.5	20.9	18.9	17.7	19.4	28.4	28.1	58.7	57.7	36.7	40.3
Port of Spain	85.4	93.8	22.3	9.4	76.7	81.3	58.3	46.9	22.3	10.9	22.3	10.9	35.9	26.6	62.1	42.2	43.7	28.1
San Fernando	79.8	84.8	14.1	12.1	72.7	89.4	60.6	60.6	23.2	24.2	21.2	13.6	20.2	24.2	48.5	69.7	32.3	39.4
Arima	88.5	93.2	24.6	13.6	86.9	79.5	65.6	65.9	24.6	22.7	21.3	22.7	36.1	29.5	63.9	56.8	62.3	56.8
Point Fortin	80.0	96.4	44.4	0.0	84.4	100.0	73.3	60.7	48.9	0.0	31.1	3.6	44.4	21.4	62.2	39.3	57.8	64.3
Chaguanas	85.4	85.9	15.3	17.6	79.9	84.7	61.8	68.2	28.5	28.2	22.2	29.4	25.7	35.3	57.6	56.5	36.8	44.7
Diego Martin	76.9	88.6	13.8	18.2	65.6	82.6	44.1	62.9	12.3	18.9	13.8	22.0	23.1	31.1	52.8	54.5	33.8	45.5
St Anns	83.9	67.6	11.9	10.2	64.8	86.2	46.5	54.2	17.4	16.0	14.5	12.0	23.5	32.0	54.8	60.9	31.0	35.1
Tacarigua	86.8	80.0	13.2	14.7	72.5	77.1	50.4	68.8	19.0	22.4	17.4	20.6	26.0	28.8	64.0	51.2	39.1	48.8
Rest of St George	83.5	87.4	14.2	24.1	74.8	77.0	54.3	56.3	18.9	19.5	12.6	27.6	23.6	27.6	63.0	56.3	36.2	52.9
Caroni	75.0	85.5	14.4	18.1	67.6	68.8	48.1	51.4	18.1	25.4	12.0	19.6	25.0	30.4	52.3	59.4	27.3	38.4
Victoria	85.0	84.1	13.6	17.8	66.7	76.6	48.7	59.8	16.2	20.6	15.6	23.4	34.5	28.0	53.7	56.1	26.0	35.5
St Patrick	78.5	83.9	15.2	16.8	70.9	73.7	53.4	51.1	23.8	17.5	17.0	25.5	29.1	28.5	57.8	59.9	38.1	42.3
St Andrew/St David	80.2	75.0	24.1	4.7	75.9	71.9	53.4	42.2	30.2	9.4	19.8	12.5	32.8	26.6	63.8	67.2	39.7	17.2
Nariva/Mayaro	85.9	80.0	14.1	12.5	70.4	40.0	43.7	45.0	16.9	17.5	12.7	12.5	23.9	7.5	63.4	70.0	33.8	35.0
Tobago	90.9	89.1	24.4	7.9	89.8	83.2	71.6	57.4	27.4	11.9	29.4	17.8	34.5	18.8	74.1	62.4	57.9	37.6