Alcohol use and alcohol-related harms: exploring risk and protective factors among young people living in urban disadvantage

Volume 2

In submission of the award of: Doctor of Philosophy

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The University of Dublin, Trinity College

Supervisors:
Professor Catherine Comiskey
Dr Sonam Prakashini Banka-Cullen
Dr Eleanor Hollywood

2023

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Appendix 1 – Ethical Approval, Faculty of Health Sciences, TCD

Coláiste na Tríonóide, Baile Átha Cliath
Trinity College Dublin
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Prof Catherine Comiskey,
School of Nursing & Midwifery
Trinity College Dublin
24 D'Olier Street
Dublin 2
Ireland

11th February 2019

Ref: 181211

Title of Study: Alcohol use, binge drinking and related hidden harms to young people living in urban disadvantage.

Dear Prof Comiskey,

Further to a meeting of the Faculty of Health Sciences Ethics Committee held in December 2018. We are pleased to inform you that the above project has ethical approval to proceed.

As a researcher you must ensure that you comply with other relevant regulations, including DATA PROTECTION and HEALTH AND SAFETY.

Yours sincerely,

p.p. Gloria Brown
Prof. Brian O'Connell
Chairperson
Faculty Research Ethics Committee

Appendix 2 – Parent Consent Form and Student Assent Form

PARENT/GUARDIAN CONSENT FORM

Research Topic:

Alcohol Use, binge drinking and related hidden harms to young people.

Research coordinator: Marie Hyland.
Contact Details: hylandm3@tcd.ie / 01 8962220

Parent Name: _____

Child's Name: _____

School Name: _____ Class: _____

I confirm that I have read and understand the Information Leaflet for Parents/Guardians for the above research study and have received an explanation of the nature, purpose and duration of the study. I understand what my child's involvement will be. In the unlikely event of any adverse events or incidents, the research team will report to the principal of the school/centres, who in turn will contact the parents/guardians if they deem necessary.

I have had time to consider whether I want my child to take part in this study. Any questions have been answered satisfactorily.

I have explained this study to my child and I am happy that he/she understands what is involved. I understand that my child's participation is voluntary (that my child and I have a choice as to whether she/he participates) and that my child is free to withdraw participation at any time if they choose or withdraw their data at any stage, if they choose.

I also understand that my child will be contacted to participate in a follow-up phase from 24 months onwards. I consent to be contacted directly or my child to be contacted directly, regarding the follow-up phase 2.

I understand that the information collected may be presented and/or published in academic journals and at conferences, but that no individual will be identifiable from the information. Your child's answers will be kept confidential and the principal, teachers or parents will **NOT** have access to this information at any time during the research or afterwards. Only the research team will have access to the information.

I am fully informed of the risks and benefits and agree for my child to take part and have their data processed in this research study.

Name of Parent (in block letters) _____

Signature _____ Date: _____

STUDENT CONSENT FORM

Research Topic:

Alcohol Use, binge drinking and related hidden harms to young people.

I confirm that I have read and understand the Information Leaflet for Students for the above research study and have received an explanation of the nature, purpose and duration of the study. I understand what my involvement will be.

I have had time to consider whether I want to take part in this study. Any questions have been answered satisfactorily. I fully understand the nature of the research.

I understand that my participation is voluntary and that I am free to withdraw at any time or request that my data be withdrawn from the study at any time. Also I understand that I will be asked to participate in a follow-up phase from 24 months onwards. I give my consent to be contacted at a later stage regarding Phase 2.

I understand that the information collected may be presented and/or published in academic journals and at conferences, but that no individual will be identifiable from the information. Your answers will be kept confidential and the principal, teachers or parents will **NOT** have access to this information at any time during the research or afterwards. Only the research team will have access to the information.

I am fully informed of the risks and benefits and agree to take part and have my data processed in this research study.

Name (in block letters) _____

Signature _____ Date: _____

Appendix 3 – Information leaflet for School Teachers

Further Information:

This research is being conducted to assist decisions and policies around preventing and reducing alcohol-related harms to young people. I very much hope that you will support of this very worthwhile and necessary research. If you require any further assistance or have any questions about the research, please feel free to contact me.

Main Contacts.

Research coordinator Marie Hyland
email: hylandm3@tcd.ie
Tel: 087 99 23 226
Principle Investigator Prof. Catherine Comiskey
email: ccomiske@tcd.ie

Thank you very much for supporting this research study. Please keep this information for your records.

Data Controller's Identity:
The Provost, Fellows, Foundation Scholars, and the other members of Board, of the College of the Holy and Undivided Trinity of Queen Elizabeth.
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Secretary's Office. Trinity College Dublin,
Dublin 2, Ireland. Email: dataprotection@tcd.ie

Under data protection legislation you have the right to request access to your data and a copy of it. You have the right to have any inaccurate information corrected or deleted. You have the right to lodge a complaint with the Data Protection Commissioner.

Trinity College Dublin
The University of Dublin

Research Information for Teachers

Research Topic:

Alcohol use, binge drinking and related hidden harms to young people.

Research coordinator Marie Hyland
Contact Details: *hylandm3@tcd.ie*
Principle investigator Prof. Catherine Comiskey
Contact Details: *ccomiske@tcd.ie*

Trinity College Dublin
The University of Dublin

Introduction

My name is Marie Hyland and I am part of a research team conducting research on behalf of Trinity College Dublin on the following topic:

Alcohol Use, binge drinking and related hidden harms to young people.

Background and Purpose:

The main aim of this research is to provide an internationally comparable estimate of the scale of binge drinking among young people in the Tallaght region and to provide a comprehensive estimate and description of the scale and scope of the related acute and chronic harms as evidenced within the National Children's Hospital data and related statistics.

The aim will be realised by collaboration and partnership with local schools, the National Children's Hospital, the Childhood Development Initiative and Tallaght Local Drug and Alcohol Task Force. The results will be shared with the local schools, communities and the local task force. The results of this study will have important implications for future National Children's Hospital policies and planning on reducing alcohol harms to young people. The findings will be shared nationally and internationally to inform best practice for the Children's Hospital Group moving forward.

What happens if my student takes part?
All students in fifth & sixth year are invited to participate.

I will be visiting the school during class time, at a time that has been arranged with the principal and yourself, in advance. I will ask all participating children in the class to complete six questionnaires. These questionnaires are specifically designed for young people and mainly require a tick box response. There are no wrong answers. A research assistant will be available at all times to assist students, if required. It is anticipated that the six questionnaires will take no more than 45 minutes in total to complete.

What will happen to the results of the study?

The information from the questionnaire responses will offer greater insights into patterns of alcohol use and alcohol-related harms. The study's results will be published in academic journals and presented at academic conferences. The results will be disseminated nationally and internationally.

However at no point will any student be identifiable.

How will my student's information be protected?

The student's answers will remain completely confidential. The principal, teachers, parents or other students will not have access to the students answers, at any time throughout the research or afterwards. Each student will be assigned a personal ID number. The number will be used for all information relating to this study. The information which links names and numbers will be stored separately in a secure location in Trinity College until the research is completed. Access is only possible by the research team and is password protected. Once the study is completed your student's name will be removed and all of the data will be destroyed after 5 years. This study has been approved by the Faculty of Health Sciences Research Ethics Committee, Trinity College Dublin.

Are there any risks involved in this study?

There are no known risks involved with this study. However if for any reason a question raises minor negative feelings for a student contact information on support services will be offered. The research team will report any adverse events or incidents to the principal of the school who in turn will contact the parents/guardians, if they deem necessary. The well-being of your students will be paramount and your students can decide to withdraw from the study, at any time.

Voluntary Participation:

It is up to the parent/guardian and your students to decide whether they are going to take part or not. Participation is completely voluntary. Your students are free to withdraw at any time, or request to have their data withdrawn at any stage. I will remind them of this when I meet them.

Important: The Consent Form.

Every student participating on the day must sign a consent form and have a consent form signed by their parent/guardian. Please note that research practice guidelines do not allow me to make exceptions and verbal permission cannot replace the signed consent form. With your permission a box will be placed in the school for returning consent forms.

Appendix 4 – Information Leaflet for Parents/Guardians

Voluntary Participation:

It is up to you and your child to decide whether your child is going to take part or not. Participation is completely voluntary. Your child is free to withdraw at any time. I will remind them of this when I meet them. Your child may also request to have their data withdrawn from the study at any time.

Important: The Consent Form.

There is a consent form attached to this information sheet.
Every child participating in the research must have a consent form which you have signed.
Please note that research practice guidelines do not allow me to make exceptions and verbal permission cannot replace the signed consent form. It is important to remember to return the signed form to school as without it your child will not be allowed to take part.

Further information:

This research is being conducted to assist decisions and policies around preventing and reducing alcohol-related harms to young people. I very much hope that you will agree to let your child take part in this research. If you require any further assistance or have any questions about the research, please feel free to contact me directly.

Thank you very much for supporting this research study. Please keep this information for your records.

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The Provost, Fellows, Foundation Scholars, and the other members of Board, of the College of the Holy and Undivided Trinity of Queen Elizabeth.
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Trinity College Dublin
The University of Dublin

Research Information for Parents

Trinity College Dublin
The University of Dublin

Introduction

My name is Marie Hyland and I am part of a research team conducting research on behalf of Trinity College Dublin on the following topic:

Alcohol use, binge drinking and related hidden harms to young people

Background and Purpose:

The main aim of this research is to offer greater insights into patterns of alcohol use and the associated alcohol related harms, physical health, mental well-being and parental relationship of young people in the local area.
The aim will be realised by collaboration and partnership with local schools, youth education centres and the National Children's Hospital. The results will be shared with the local schools, parents, local community task force and the National Children's hospital. The results of this study will have important implications for future National Children's Hospital policies and planning on reducing alcohol harms to young people. The findings will be shared nationally and internationally to inform best practice for the Children's Hospital Group moving forward.

What happens if my child takes part?

This research will take place in two phases. Phase 1 will be completed now and phase 2 will take place from 24 months onwards. All students aged 15 - 17 years are invited to participate.

Phase 1:
I will be visiting your child's school during class time, at a time that has been arranged with the principal. I will ask all participating students in the class to complete six questionnaires. These questionnaires are specifically designed for young people and mainly require a tick box response. A research assistant will be available at all times to assist students, if required. It is anticipated that the six questionnaires will take approximately 45 minutes in total to complete. Every effort will be made to limit the amount of time students are away from their core studies.

Phase 2:
After 24 months your child will be contacted to participate in a similar process as Phase 1. The same six questionnaires will be completed again in phase 2. In order to contact your child for this second phase we will require full contact details now. This information will be held securely on a password protected computer in Trinity College. All hardcopy information will be securely locked in a filing cabinet in Trinity College.

What will happen to the results of the study?

The study's results will be published in academic journals and presented at academic conferences. The results will be disseminated nationally and internationally.

However at no point will any individual be identifiable.

How will my Child's information be protected?

The child's answers will remain completely confidential, at all times The principal, teachers, parents or other students will not have access, at any time throughout the research or afterwards, to your child's answers.
Only the research team will have access to the data. Each child will be assigned a personal ID number. The number will be used for all information relating to this study. The information which links names and numbers will be stored separately in a secure location in Trinity College until the research is completed. Access is only possible by the main researcher and is password protected. Once the study is completed your child's name will be removed and all of the data will be destroyed after 5 years. This study has been approved by the Faculty of Health Sciences Research Ethics Committee, Trinity College Dublin.

Are there any risks involved in this study?

There are no known risks involved with this study. However if for any reason a question raises minor negative feelings for a student, contact information on support services will be offered. The research team will report any adverse events or incidents to the principal of the school/centres, who in turn will contact the parents/guardians, if they deem necessary. The well-being of your child with be paramount and your child can decide to withdraw their participation from the study, at any time. A request from either a student or parent to withdraw participation from the study will be respected.

Appendix 5 – Information Leaflet for Students

Main Contacts.
Research coordinator Marie Hyland
email: hylandm3@tcd.ie
Principle Investigator Prof. Catherine Comiskey
email: ccomiske@tcd.ie

Thank you very much for supporting this research study. Please keep this information for your records.

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Trinity College Dublin
The University of Dublin

Research Information for Students

Research Topic:

Alcohol use, binge drinking and related hidden harms to young people.

Research coordinator Marie Hyland
Contact Details: *hylandm3@tcd.ie*
Principle investigator Prof. Catherine Comiskey
Contact Details: *ccomiske@tcd.ie*

Trinity College Dublin
The University of Dublin

What happens if I take part?

This research will take place in two phases. Phase 1 will be completed now and phase 2 will take place from 24 months later. All fifth and sixth year students or all those aged 15-17 years in youth training centres are invited to take part in this research. Please read carefully the information below before deciding to participate or not.

Phase 1:
I will be visiting your school during class time, at a time that has been arranged with the principal. I will ask all participating students in the class to complete six questionnaires. These questionnaires are designed for young people and mainly require you to answer by ticking a box. There are no wrong answers. A research assistant will be available at all times to assist students, if required. It is anticipated that all the questionnaires will take approximately 45 minutes in total to complete. Every effort will be made to limit the amount of time you are away from your core studies. This is completely voluntary and you have the right to withdraw at any time.

Phase 2:
Approximately 24 months later, you will be contacted to participate in the same process again, as Phase 1. We require your contact details now, in order for us to contact you for the follow-up second phase, as you may be finished school at this stage. This information will be held securely on a password protected computer in Trinity College. All hardcopy information will be securely locked in a filing cabinet in Trinity College.

Are there any risks involved in this study?

There are no known risks involved with this study. However if for any reason a question raises minor negative feelings for a student, contact information on support services will be offered. The research team will report any adverse events or incidents to the principal of the school/centres, who in turn will contact the parents/guardians, if they deem necessary. Your well-being will be paramount and you can decide to withdraw from the study, at any time. You may request to have your data withdrawn from the study at any stage.

What will happen to the results of the study?

The information gathered will offer greater insights into patterns of alcohol use and the associated alcohol related harms, physical health, mental well-being and parental relationship of young people. The study's results will be published in academic journals and presented at academic conferences. The results will be distributed nationally and internationally.

However at no point will any individual be identified.

Participation is completely voluntary and so you are not obliged to take part. Participation is confidential and your information will be treated in the strictest confidence. You will be given a student ID number to protect your identity. Your principle, teachers and parents will NOT have to access to your answers, at any stage throughout the research or afterwards. Only the research team will have access to your information.

The questionnaires you complete will be securely stored and your answers from the questionnaires will be transferred from paper record to electronic format and stored on a password protected computer in Trinity College, Dublin. Once the study is completed your name will be removed and all of the data will be destroyed after 5 years.

Important: The Consent Form.

There is a consent form attached to this information sheet. To participate in the research you must sign and return it to the school. A Parent/Guardian must also sign the consent form. Please note that research practice guidelines do not allow me to make exceptions and verbal permission cannot replace the signed consent form. It is important to remember to return the signed form to school as without it you will not be able to participate.

Should you require any further information about the research, please contact me directly. I am happy to answer any of your questions.

Appendix 6 – Research Poster for Schools

We want to know about *YOUR* health!

- Our research team will be coming to your school soon.
- We are interested in your physical health and wellbeing.
- We would like to know about your health behaviours, especially around alcohol use.
- Please remember to return your consent forms.

Trinity College Dublin
The University of Dublin

Appendix 7 – Attending Protocol and Survey Questionnaire Checklist

Attending Protocol - Responsibilities of Field Researchers will be allocated prior to arriving on site.

- Check- in with the School Secretary.

- Meet with the gatekeeper and introduce the research team.

- Establish which room is to be used to administer the surveys questionnaires.

- Set up the desks appropriately before the students arrive.

- The research coordinator to run through the Survey Questionnaire Checklist when all students are present.

- The research coordinator to close the session using the de-briefing section of Survey Questionnaire Checklist at the end of the session.

- Leave the room back the way it was found.

- Let the gatekeeper and secretary know that the team is leaving the building.

Survey Questionnaire checklist

Preparing the Students

Arrange with gatekeeper a spare room.

Ensure all students have a pen.

Introduce the team.

Hand out survey questionnaires based on the

Correct ID Number.

What the questions are about

(e.g. health, well-being, alcohol use).

That there is no right or wrong answer.

Purpose/aim of study.

Not to put their names on the survey.

All answers are confidential.

The right to withdraw at any time.

Answer as honestly as possible.

Focus on their own survey.

To put up their hand if they need help.

The process of going through the booklet.

Highlight specific areas within the survey

E.g. 6, not a tick box answer but a number.

Debriefing the students

Thank you and debrief sheet.

Confidentiality.

Have they any other questions.

Contact details.

Thank you.

Signed : _____

Appendix 8 – Debrief for Students

DEBRIEF FOR STUDENTS

Thank you for taking part in this research which will assist decisions and policies around preventing and reducing alcohol-related harms to young people. The results will be shared with local schools, Youth Reach, the National Children's Hospital, The Childhood Development Initiative and Tallaght Local Drug and Alcohol Task Force. They will inform best practice for the Children's Hospital Group going forward.

If you have been affected by any of the issues raised while taking part in this research and wish to seek advice, please contact your school counsellor or
Samaritans – Free phone No. 116 123
Childline – 1800 66 66 66

If you have any concerns regarding taking part or wish to discuss any aspect of the research please contact Marie Hyland – hylandm3@tcd.ie or 01 896 22 20.

THANK YOU FOR YOUR TIME TODAY AND WE LOOK FORWARD TO CONTACTNG YOU AGAIN IN TWO YEARS TIME.

Appendix 9 – Survey Questionnaire

Survey Number

Demographic Questions

Gender: Male, Female or other (please circle your answer).

Age: _____

Date of Birth: Day _____ Month _____ Year _____

Who do you live with?

Place an "X" beside all those living in your home..

☐ Mother	☐ Father	☐ Brother
☐ Sister	☐ Grandfather	☐ Grandmother
☐ Stepmother	☐ Stepfather	☐ Stepsister
☐ Stepbrother	☐ Other adult relative	
☐ Foster Parent		

How many brothers do you have? (Include your stepbrothers)

Please write a number _____

How many sisters do you have? (include your stepsisters)

Please write a number _____

If you have brothers and sisters, how many are older than you?

Please write a number _____

Do you have a medical condition (like diabetes asthma, eczema, etc.)

Please circle one Yes No Don't know

If yes, what is it? _____

Race/Ethnicity: Please circle one of the following

White Black Hispanic Asian Bi-racial Other

KIDSCREEN 27 (KIDSCREEN Group, 2006)
Health related quality of life questionnaire for young people

1 PHYSICAL ACTIVITIES AND HEALTH

In general how would you say your health is?

- ☐ Excellent
- ☐ Very Good
- ☐ Good
- ☐ Fair
- ☐ Poor

Thinking about the last week . . .

	Not at all	Slightly	Moderately	Very	Extremely
2 Have your felt fit and well?	☐	☐	☐	☐	☐
3 Have you been physically active (Eg. Running, biking, climbing)	☐	☐	☐	☐	☐
4 Have you been able to run well?	☐	☐	☐	☐	☐

Thinking about the last week . . .

	Never	Seldom	Quite Often	Very Often	Always
5 Have you felt full of energy?	☐	☐	☐	☐	☐

2. FEELINGS

Thinking about the last week . . .

	Not at all	Slightly	Moderately	Very	Extremely
1 Has your life been enjoyable?	☐	☐	☐	☐	☐

Thinking about the last week . . .

	Never	Seldom	Quite Often	Very Often	Always
2 Have you been in good mood?	☐	☐	☐	☐	☐
3 Have you had fun?	☐	☐	☐	☐	☐

3. GENERAL MOOD

Think about the last week . . .

	Never	Seldom	Quite Often	Very Often	Always
1 Have you felt sad?					
2 Have you felt so bad that you didn't want to do anything?					
3 Have you felt lonely?					

4. ABOUT YOURSELF.

Thinking about the last week . . .

	Never	Seldom	Quite Often	Very Often	Always
1 Have you been happy with the way you are?					

5.FREE TIME

Think about the last week. . .

	Never	Seldom	Quite Often	Very Often	Always
1 Have you had enough time for yourself?					
2 Have you been able to do the things that you want to do in your free time?					

6. FAMILY AND HOME LIFE

Thinking about the last week. . .

	Never	Seldom	Quite Often	Very Often	Always
1 Have your parent(s) had enough time for you?					
2 Have your parent(s) treated you fairly?					
3 Have you been able to talk to your parent(s) when you wanted to?					

7. MONEY MATTERS

Thinking about the last week. . .

	Never	Seldom	Quite Often	Very Often	Always
1 Have you had enough money to do the same things as your friends?					
2 Have you had enough money for your expenses?					

8. FRIENDS

Thinking about the last week. . .

	Never	Seldom	Quite Often	Very Often	Always
1 Have you spent time with your friends?					
2 Have you had fun with your friends?					
3 Have you and your friends helped each other?					
4 Have you been able to rely on your friends?					

9. SCHOOL AND LEARNING

Thinking about the last week. . .

	Not at all	Slightly	Moderately	Very	Extremely
1 Have you been happy at school?					
2 Have you got on well at school?					

	Never	Seldom	Quite Often	Very Often	Always
3 Have you been able to pay attention?					
4 Have you got along with your teachers?					

AUDIT (Babor, Higgins-Biddle, Saunders, Monteiro, 2001)
Please, place an **X** in one box that best describes your answer to each question:

A1. How often do you have a drink containing alcohol?

- (0). Never.
- (1). Monthly or less.
- (2). 2-4 times a month
- (3). 2-3 times a week.
- (4). 4 or more times a week.

A2. How many drinks containing alcohol do you have on a typical day when you are drinking?

- (0). 1 or 2
- (1). 3 or 4
- (2). 5 or 6
- (3). 7 to 9
- (4). 10 or more

A3. How often do you have six or more drinks on one occasion?

- (0). Never.
- (1). Less than monthly.
- (2). Monthly.
- (3). Weekly.
- (4). Daily or almost daily.

A4. How often during the last year have you found that you were not able to stop drinking once you had started?

- (0). Never.
- (1). Less than monthly.
- (2). Monthly.
- (3). Weekly.
- (4). Daily or almost daily.

A5. How often during the last year have you failed to do what was normally expected of you because of drinking?

- (0). Never.
- (1). Less than monthly.
- (2). Monthly.
- (3). Weekly.
- (4). Daily or almost daily.

A6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

- (0). Never.
- (1). Less than monthly.
- (2). Monthly.
- (3). Weekly.
- (4). Daily or almost daily.

A7. How often during the last year have you had a feeling of guilt or remorse after drinking?

- (0). Never.
- (1). Less than monthly.
- (2). Monthly.
- (3). Weekly.
- (4). Daily or almost daily.

A8. How often during the last year have you been unable to remember what happened the night before because of your drinking?

- (0). Never.
- (1). Less than monthly.
- (2). Monthly.
- (3). Weekly.
- (4). Daily or almost daily.

A9. Have you or someone else been injured because of your drinking?

- (0). No.
- (2). Yes, but not in the last year.
- (4). Yes, during the last year.

A10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?

- (0). No.
- (2). Yes, but not in the last year.
- (4). Yes, during the last year.

Revised items for AUDIT (Cortés-Tomás, Giménez-Costa, Motos-Sellés, Sancerni-Beitia, 2017)
Please, place an **X** in one box that best describes your answer to each question:

A2r. How many drinks do you tend to have on a day when you drink alcohol?

Please mark the number of drinks taken beside the appropriate drink

☐  **1/2 PINT** = 1 standard drink

☐  **PINT** = 2 standard drinks

☐  **WINE - PUB MEASURE** = 1 standard drink

☐  **WINE - HOME MEASURE** = 1.5 standard drinks

☐  **SPIRIT - PUB MEASURE** = 1 standard drink

☐  **SPIRIT - HOME MEASURE** = 2 standard drinks

☐  **CAN OF BEER 330ml** = 1 standard drink

☐  **CAN OF BEER 500ml** = 1.7 standard drink

☐  **CAN OF CIDER 330ml** = 1 standard drink

☐  **CAN OF CIDER 500ml** = 1.8 standard drink

☐  **PLASTIC BOTTLE OF CIDER 1L** = 3.6 standard drinks

☐  **ALCOPOPS** = 1 standard drink

A3r. During the past 6 months, what is the average number of days per month you would binge drink?

Binge drinking = seven or more standard drinks for males and six standard drinks for females, over a 2 hour period

☐ (0). Never.
☐ (1). Sporadically -less than once a month.
☐ (2). Between 1 and 4 times.
☐ (3). Between 5 and 8 times.
☐ (4). Between 9 and 12 times.
☐ (5). 13 or more times.

CDI – Short Version Marie Kovacs, Ph.D.
Young people have different feelings and ideas.
This form lists the feelings and ideas in groups. From each group of three sentences, pick one sentence that describes you best for the past two weeks. After you pick a sentence from the first group, go on to the next group.
There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put the **X** mark in the box next to the sentence that you pick. Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you best.

Example:

- ☐ I read books all the time
- ☐ I read books once in a while
- ☐ I never read books

Remember, pick out the sentences that describe **YOU** best in the **PAST TWO WEEKS**.

Item 1.

- ☐ I am sad once in a while.
- ☐ I am sad many times.
- ☐ I am sad all the time.

Item 2

- ☐ Nothing will ever work out for me
- ☐ I am not sure if things will work out for me.
- ☐ Things will work out for me OK

Item 3

- ☐ I do most things OK
- ☐ I do many things wrong
- ☐ I do everything wrong

Item 4

- ☐ I hate myself
- ☐ I do not like myself
- ☐ I like myself

Item 5

- ☐ I feel like crying every day
- ☐ I feel like crying many days
- ☐ I feel like crying once in a while

Item 6

- ☐ Things bother me all the time
- ☐ Things bother me many times
- ☐ Things bother me once in a while

Item 7

- ☐ I look OK
- ☐ There are some bad things about my looks
- ☐ I look ugly

Item 8

- ☐ I do not feel alone
- ☐ I feel alone many times
- ☐ I feel alone all the time

Item 9

- ☐ I have plenty of friends
- ☐ I have some friends but I wish I had more
- ☐ do not have any friends

Item 10

- ☐ Nobody really loves me
- ☐ I not sure if anybody loves me
- ☐ I am sure that somebody loves me.

ESPAD 2015 SUB SECTIONS (Kraus & Nocier, 2016)

CO3 How often (if at all) do you do each of the following?
Please place an "**X**" in one box for each line.

Never	A Few Times a Year	Once or Twice a Month	At least once a Week	Almost every Day	
☐	☐	☐	☐	☐	(A) Play computer games
☐	☐	☐	☐	☐	(B) Actively participate in sports, athletics or exercising
☐	☐	☐	☐	☐	(C) Read books for enjoyment (do not count school books)
☐	☐	☐	☐	☐	(D) Go out in the evening (to a disco, café, party etc)
☐	☐	☐	☐	☐	(E) Other hobbies (play an instrument, sing, draw, write)
☐	☐	☐	☐	☐	(F) Go around with friends to shopping centres, streets, parks, etc for fun
☐	☐	☐	☐	☐	(G) Use the internet for leisure activities (chats, music, games, social networks, videos etc.)
☐	☐	☐	☐	☐	(H) Play on slot machines (the kind in which you may win money)

C46 The next questions ask about your parents.
If mostly foster parents, step-parents or others brought you up, answer for them.
If you have a stepfather and a natural father, answer for the one that is the most important in bringing you up.

In which country were you and your parents born?

		Ireland	Other
(a)	Yourself	☐	☐
(b)	Your mother	☐	☐
(c)	Your father	☐	☐

C47 What is the highest level of schooling your father completed?

- ☐ Completed primary school or less
- ☐ Some secondary schools
- ☐ Completed secondary school
- ☐ Some college or university
- ☐ Completed college or university
- ☐ Don't know
- ☐ Does not apply

C48 What is the highest level of schooling your mother completed?

- ☐ Completed primary school or less
- ☐ Some secondary schools
- ☐ Completed secondary school
- ☐ Some college or university
- ☐ Completed college or university
- ☐ Don't know
- ☐ Does not apply

C49 How well off is your family compared to other families in your country?

- ☐ Very much better off
- ☐ Much better off
- ☐ Better off
- ☐ About the same
- ☐ Less well off
- ☐ Much less well off
- ☐ Very much less well off

C51 How often do the following statements apply to you?

Almost Always	Often	Some times	Seldom	Almost Never	
☐	☐	☐	☐	☐	(a) My parent(s) set definite rules about what I can do at home.
☐	☐	☐	☐	☐	(b) My parent(s) set definite rules about what I can do outside the home.
☐	☐	☐	☐	☐	(c) My parent(s) know who I am with in the evenings
☐	☐	☐	☐	☐	(d) My parent(s) know where I am in the evenings
☐	☐	☐	☐	☐	(e) I can easily get warmth and caring from my mother and/or father
☐	☐	☐	☐	☐	(f) I can easily get emotional support from my mother and/or father
☐	☐	☐	☐	☐	(g) I can easily borrow money from my mother and/or father
☐	☐	☐	☐	☐	(h) I can easily get money from my mother and/or father
☐	☐	☐	☐	☐	(i) I can easily get warmth and caring from my best friend
☐	☐	☐	☐	☐	(j) I can easily get emotional support from my best friend

C52 Do your parents know where you spend Saturday nights?

- ☐ Know always
- ☐ Know quite often
- ☐ Know sometimes
- ☐ Usually don't know

008 The next question asks you about alcohol consumption during the LAST 7 DAYS
Please answer every question.
If you have not had a beverage, indicate "0"

(a) On how many days (if any) have you had any alcoholic drink?

In the last 7 days I have alcoholic drinks on ☐ *days.* (0 – none, 7 = every day)

(b) How many bottles or glasses of beer have you had?

In the last 7 days I have had ☐ *glasses or bottles of beer* (0= I have not had beer)

(c) How many glasses of wine or sparkling wine have you had?

In the last 7 days I have had ☐ *glasses of wine or sparkling wine.*
(0=have not had any wine or sparkling wine)

(d) How many glasses of spirits have you had?

In the last 7 days I have had ☐ *glasses of spirits.* (0= have not had any spirits)

(e) How many glasses of alcoholic mixed drinks have you had?

In the last 7 days I have had ☐ *glasses of alcoholic mixed drinks*
(0= have not had any alcoholic mixed drinks)

009 Think back over the LAST 30 DAYS. On how many occasions (if any) have you bought beer, cider, alcopops, wine or spirits in a shop (shop, kiosk, petrol station etc) for your own consumption (off-premises)?

		Number of occasions					
		0	1-2	3-5	6-9	10-19	20 or more
(a)	Beer	☐	☐	☐	☐	☐	☐
(b)	Cider	☐	☐	☐	☐	☐	☐
(c)	Alcopops	☐	☐	☐	☐	☐	☐
(d)	Wine	☐	☐	☐	☐	☐	☐
(e)	Spirits	☐	☐	☐	☐	☐	☐

10 Think back more over the LAST 30 DAYS . On how many occasions (if any) have you drunk beer, cider, alcopops, wine or spirits in a pub, bar, restaurant or disco (on-premises)

	Number of occasions					
	0	1-2	3-5	6-9	10-19	20 or more
(a) Beer	☐	☐	☐	☐	☐	☐
(b) Cider	☐	☐	☐	☐	☐	☐
(c) Alcopops	☐	☐	☐	☐	☐	☐
(d) Wine	☐	☐	☐	☐	☐	☐
(e) Spirits	☐	☐	☐	☐	☐	☐

011 Think of the last day on which you drank alcohol. Where were you when you drank?

Mark all that apply

- ☐ I never drank alcohol
- ☐ At home
- ☐ At someone else's home
- ☐ Out on the street, in a park, or other open area
- ☐ At a bar or pub
- ☐ In a disco/nightclub
- ☐ In a restaurant
- ☐ Other places (please describe) _____

012 In the LAST 12 MONTHS, how often did you drink. . . . .

Never	Seldom	Sometimes	Mostly	Always	
☐	☐	☐	☐	☐	(a) Because it helps you enjoy a party?
☐	☐	☐	☐	☐	(b) Because it helps you when you feel depressed or nervous?
☐	☐	☐	☐	☐	(c) To cheer up when you're in a bad mood?
☐	☐	☐	☐	☐	(d) Because you like the feeling?
☐	☐	☐	☐	☐	(e) To get high?
☐	☐	☐	☐	☐	(f) Because it makes social gatherings more fun
☐	☐	☐	☐	☐	(g) To fit in with a group you like?
☐	☐	☐	☐	☐	(h) Because it improves parties and celebrations?
☐	☐	☐	☐	☐	(i) To forget about your problems
☐	☐	☐	☐	☐	(j) Because it's fun?
☐	☐	☐	☐	☐	(k) To be liked?
☐	☐	☐	☐	☐	(l) So you won't feel left out?

Rutgers Alcohol Problem Index

Different things happen to people when they are drinking ALCOHOL, or as a result of their ALCOHOL use. Some of these things are listed below. Please indicate how many times each has happened to you while you were drinking alcohol or as a result of alcohol use.

Never	1-2	3-5 Times	6-10 Times	More than 10 times	
☐	☐	☐	☐	☐	Got into fights, acted badly, or did mean things.
☐	☐	☐	☐	☐	Went to school or work high or drunk.
☐	☐	☐	☐	☐	Caused shame or embarrassment to someone.
☐	☐	☐	☐	☐	Neglected your responsibilities.
☐	☐	☐	☐	☐	Relatives avoided you.
☐	☐	☐	☐	☐	Felt that you needed more alcohol than you used to use in order to get the same effect.
☐	☐	☐	☐	☐	Tried to control your drinking by trying to drink only at certain times of the day or certain places.
☐	☐	☐	☐	☐	Had withdrawal symptoms, that is felt sick because you stopped or cut down your drinking.
☐	☐	☐	☐	☐	Noticed a change in personality.
☐	☐	☐	☐	☐	Felt that you had a problem with school.
☐	☐	☐	☐	☐	Tried to cut down on drinking.
☐	☐	☐	☐	☐	Suddenly found yourself in a place that you could not remember getting to.
☐	☐	☐	☐	☐	Passed out or fainted suddenly.
☐	☐	☐	☐	☐	Had a fight, argument, or bad feelings with a friend.
☐	☐	☐	☐	☐	Kept drinking when you promised yourself not to.
☐	☐	☐	☐	☐	Felt you were going crazy.
☐	☐	☐	☐	☐	Felt physically dependent on alcohol.
☐	☐	☐	☐	☐	Was told by a friend or neighbour to stop or cut down drinking.

Reference: White HR; Labouvie EW. Towards the assessment of adolescent problem drinking. J Stud Alcohol 50:30-37, 1989.

EASE OF ACCESS

	YES	NO
1. Have you ever purchased alcohol without an ID?	☐	☐
2. Have you successfully used a fake ID to obtain alcohol?	☐	☐

3. How many times in the last two months has someone offered to give you, buy for you, or sell you alcohol?

- ☐ A = None
- ☐ B = Once
- ☐ C = 2-3 Times
- ☐ D = 4 or more times

Extracted from NHTSA Underage Drinking Questionnaire -2001

Appendix 10 – Field Research Protocol (Banka, 2018)

Alcohol use and alcohol-related harms; Exploring the risk and protective factors among young people living in urban disadvantage.

Field Researcher Protocol

This document provides guidelines for field researchers which should be adhered to when working in the field. Many of these guidelines are designed to ensure consistency of process and procedures while in the field, while others are directly related to child protection issues and GDPR regulations. In addition, this document sets out clear guidelines for identifying and referring onwards any concerns that field researchers have about individual students based on the feedback received from them during data collection in schools and Youthreach centres. Finally, the procedures in relation to handling and documenting complaints are also set out.

General Guidelines.

We would be grateful if all field researchers could give us as much notice as possible if they have to cancel a scheduled fieldwork slot. In order to provide a professional approach, avoid unnecessary delays and make the research experience a positive one for the student, it is important that we have a full team on the day.

All field researchers should meet outside the school and go into the school together. As relations with the schools are critical, the research team need to be sensitive in their interactions with the schools. A professional and planned approach is an important aspect of these interactions.

Prior to going into the school key tasks/responsibilities will be allocated across the team.

The research coordinator will report to the secretary to make them aware that they are in the school building. Then meet with the gatekeeper and await instructions on room allocation.

Survey Field Research

Once the survey questionnaires are handed out to the appropriate students, the research coordinator will go through the checklist and give the appropriate instructions. (Appendix 7). It is important the students (if willing) answer all questions, as honestly as possible. To ensure the study experience is a positive one for all students it is important to give support when needed and encouragement. If you are asked a question by a student and are uncertain about the most appropriate answer, ask the research coordinator.

If during the course of the session, if any student is upset or uncomfortable about completing the survey questionnaire, offer them help. If they continue to be upset ask would they like to withdraw. Offer assurances that it is perfectly ok to withdraw. They must remain at their desk until the session is completed.

If a student is distracting or misbehaving during the session, ask them to stop. If they continue to misbehave ask them if they want to continue with the survey? If possible a field researcher can work directly with them to assist them complete the survey.

If field researchers have any concerns about any student they should be brought to the attention of the research coordinator. Record the student ID number and pass this information onto the research coordinator, at the earliest opportunity.

Protocols on Screening Questionnaires for issues of concern

All questionnaires, including the Childhood Depression Inventory (CDI) and AUDIT and Revised AUDIT will be reviewed by the research coordinator. Each survey will be scored by hand by the research coordinator, to assess the overall level of responses. The CDI will identify those with higher depressive symptoms. The AUDIT and Revised AUDIT will identify if any students have scored 16 or above, indicating the student alcohol consumption is high risk and may require further interventions. Each survey questionnaire will be assessed as a whole before any referral process is engaged.

Procedures for Processing Concerns

Surveys which are deemed to raise concerns will be individually assessed by the Research coordinator (where necessary with input from the principal supervisor) and a decision will be made as to whether the concerns raised will be made known to the Principals or other relevant individuals. A Referral Form will be used in this process (see Appendix 11). A hard copy will be retained in the research records, if evoked.

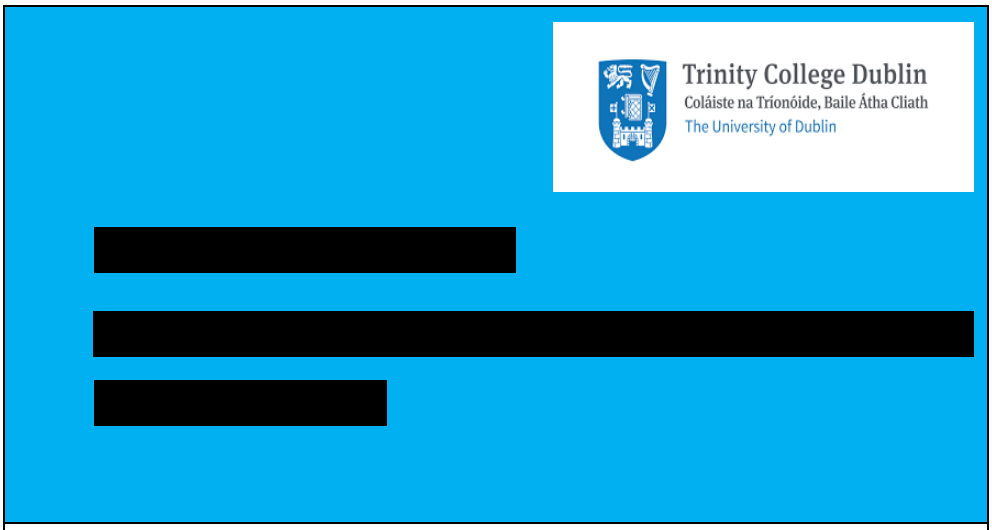
Complaints Procedure

If for any reason a teacher, student, parent/guardian is unhappy with any aspect of the research study and wishes to make a complaint, they can contact the research coordinator and discuss their concerns directly. If further recourse is required they can submit their complaint in writing. Any issues raised will be made known to the principal supervisor and dealt with immediately. Responses to complaints received will be issued within 14 days of receiving the complaint in writing (see Appendix I2).

GDPR Protocols

To comply with GDPR regulations careful consideration must be placed on consenting, collecting, processing, storage and destruction of personal data. All those involved in the field research that have access to personal data, while in the field, are bound by an ethical code to ensure that all arrangements to uphold the confidentiality of the participant's personal data is followed. Only the research coordinator and the principal supervisors are deemed data processors.

Appendix 11 – Research Referral Form (Banka, 2018)



[redacted]

This form should be used by researchers to detail a referral to the School Principal where there is concern that a student is at risk of significant physical or mental harm. This form must be presented to the Principal for him/her to proceed with the case. Research Coordinator - Marie Hyland

REFERRAL DETAILS

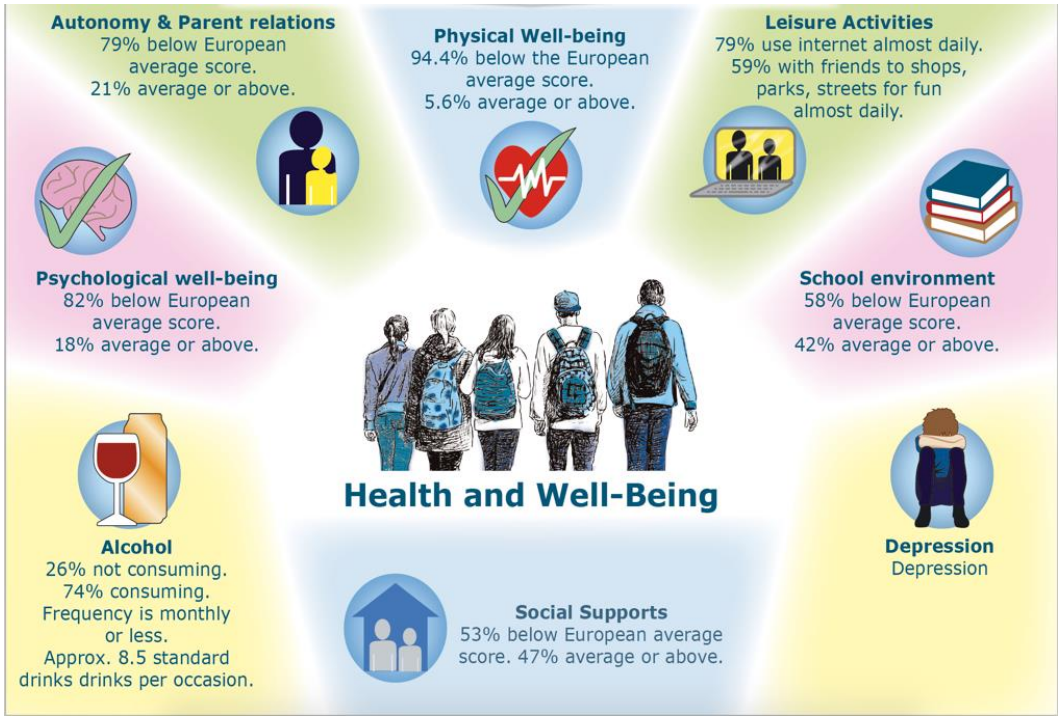
Name of referrer (please print):	**Role:**
Office address:	
Telephone:	**Fax:**
Date of Survey	

Name of School:			Name of Principal:		
DETAILS OF STUDENT					
Surname	**Forename**	**Gender**	**Age**	**Class**	
Is the student aware of the referral? Yes No					
NATURE OF THE PROBLEM					

Appendix 12 – Research Complaint Form (Banka, 2018)

Trinity College Dublin Coláiste na Tríonóide, Baile Átha Cliath The University of Dublin [redacted]	
This form should be used by any individual who wishes to make a complaint to the research team. Research Coordinator Marie Hyland.	
DETAILS	
Name of Complainant (please print):	
Address:	
Telephone Home:	**Mobile:**
NATURE OF THE Complaint	

Appendix 13 – Sample Poster



Appendix 14 – Letter from TUH/SJH Research Ethics Committee

Tallaght University Hospital | Ospidéal Ollscoile Thamhlachta

An Academic Partner of Trinity College Dublin

SJH/TUH Research Ethics Committee Secretariat
email: researchethics@tuh.ie

Ms Marie Hyland,
Trinity College Dublin
Dublin 2

10th June 2019

REF: Evaluation of Alcohol Services for Young People in Tallaght University Hospital

REC: 2019-06 Chairman's Action (12)
(Please quote reference on all correspondence)

Date of Valid Submission to REC: 23.05.2019
Date of Ethical Review: 05.06.2019
Research and Innovation Application Number: N/A

Dear Ms Hyland,

The REC is in receipt of your recent request to TUH/SJH Research Ethics Committee in which you queried ethical approval for the above named study.

The Chairman, Prof. Richard Dean, on behalf of the Research Ethics Committee, has reviewed your correspondence and classified the study as Service Evaluation. There is no ethical issue with proceeding.

Applicants must submit an annual report for ongoing projects and an end of project report upon completion of the study. It is the responsibility of the researcher/research team to ensure all aspects of the study are executed in compliance with the General Data Protection regulation (GDPR), Health Research Regulations and the Data Protection Act 2018. ***Additionally, please note for documents submitted for GDPR purposes that the REC and the Chair are not confirming that you're documents are GDPR compliant, they are approving the document from an ethical perspective.***

Yours sincerely,

Sadhbh O'Neill

REC Officer – Dr Sadhbh O'Neill
SJH/TUH Research Ethics Committee

The SJH/TUH Joint Research and Ethics Committee operates in compliance with and is constituted in accordance with the European Communities (Clinical Trials on Medicinal Products for Human Use) Regulations 2004 & ICH GCP guidelines.

Appendix 15 – Letter from School of Nursing and Midwifery Research Ethics Committee

Coláiste na Tríonóide, Baile Átha Cliath
Trinity College Dublin
Ollscoil Átha Cliath | The University of Dublin

Marie Hyland
School of Nursing and Midwifery
Trinity College Dublin
24 D'Olier Street
Dublin 2

3rd March 2020

Ethics Application Ref: COM_14_19.20

Study title: Alcohol use and alcohol-related harms: Exploring risk and protective factors among young people living in urban disadvantage.

Dear Marie,

I am pleased to inform you that your application has been approved.

Yours sincerely,

Prof Joan Lalor
Chair of SNMREC

Scoil an Altranais agus an Chnáimhseachais
Dámh na nEolaíochtaí Sláinte,
Coláiste na Tríonóide, Baile Átha Cliath,
Ollscoil Átha Cliath,
24 Sráid D'Olier,
Baile Átha Cliath 2, Éire.

School of Nursing and Midwifery
Faculty of Health Sciences,
Trinity College Dublin,
The University of Dublin,
24 D'Olier Street,
Dublin 2, Ireland.

+353 1 896 2692
nursing.midwifery@tcd.ie
www.nursing.midwifery.tcd.ie

Appendix 16 – Keys search words

Keywords used for hospital search in extracting data for TUH - January 2020

Alcohol

Alco*

C2H5OH

Drank

Cider

Intoxicate*

Vodka

Beer

Cans

Bottle

Wine

Beer

Bacardi

Spirits

Gin

Appendix 17 – Demographic information on young people

Demographic information of young people (N = 307)		
Gender		
Male	144	47%
Female	159	52%
Other	3	1%
Age in Years		
15	73	23.8%
16	173	56.4%
17	61	19.9%
Mean = 15.96, SD =.66		
Race/Ethnicity		
White	258	84.6%
Black	38	12.5%
Asian	5	1.6%
Bi-racial	3	1%
Other	1	.3%
Family Dynamic (living with)		
Mother	288	94%
Father	203	66.1%
Brother	211	68.7%
Sister	216	70.6%
Grandfather	8	2.6%
Grandmother	13	4.2%
Stepmother	7	2.3%
Stepfather	23	7.5%
Stepsister	8	2.6%
Stepbrother	7	2.3%
Other adult relative	9	2.9%
Foster parents	0%	0
Country of Birth		
Participants born in Ireland	285	93.1%
Participants born in other country	21	6.9%
Mother born in Ireland	233	76.1%
Mother born in other country	73	23.9%
Father born in Ireland	214	70.6%
Father born in other country	89	29.3%
Do you have a medical condition?		
Yes	74	24.1%
No	211	68.7%
Don't know	22	7.2%
Specific Medical condition		
Asthma	36	50%
Eczema	7	9.7%
Asthma and Eczema	5	6.9%
Various other conditions (19 conditions – see below)	26	33.3%

Diabetes, heart condition, hypothyroidism, hay fever, kidney problems, Crohn's disease, Durhings disease, anaemia, factor VII blood disorder, epilepsy, haemophilia C, psoriasis, celiac, ADHD & Asperger, scoliosis, sickle cell disease, prosthetic leg, gender dysphoria and anxiety, depression and anxiety.

Appendix 18 - Gender differences in Audit scores using a Mann-Whitney U test

Dimensions	***U***	***Z***	***p***	**Mean Rank**	
				Male	**Female**
Consumption	11289	-.106	.915	152.06	151.00
Dependence	10740.50	-1.155	.248	155.89	147.55
Alcohol-problems	10843.50	-.751	.453	155.17	148.20
Total Scores	11207	-.216	.829	152.63	150.48
No significant differences between males and females at p<0.05					

Appendix 19 – Mean t-scores for HRQoL dimensions of average low family affluence range and frequencies of young people within each Kidscreen-27 category by low family affluence.

Dimensions (n)	Mean	SD	Average
Physical well-being (n=302)	43.67	10.05	43.06 - 53.14
Psychological well-being (n= 302)	43.44	9.61	42.61 – 51.89
Autonomy and parent relations (n=304)	47.06	9.68	41.48 – 51.12
Social support and peer relations (n= 304)	47.83	11.17	42.72 – 53.17
School environment (n=306)	44.39	8.63	42.51 – 52.51

Dimensions (n)	Below Average n, %	Average n, %	Above Average n, %
Physical well-being (n=302)	171, 56.6%	89, 29.5%	42, 13.9%
Psychological well-being (n= 302)	140, 46.4%	133, 44%	29, 9.6%
Autonomy and parent relations (n=304)	87, 28.6%	122, 40.2%	95, 31.2%
Social support and peer relations (n= 304)	96, 31.6%	102, 33.5%	106, 34.9%
School environment (n=306)	120, 39.2%	145, 47.4%	41, 13.4%

Appendix 20 - Tests for Normality

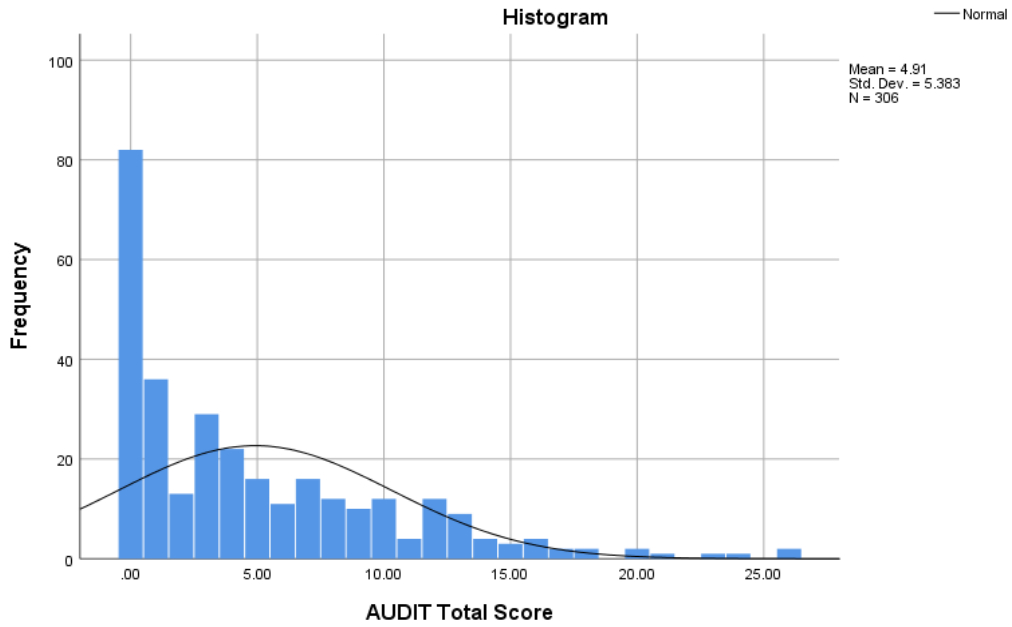


Figure 1: Histogram presenting AUDIT total score distribution.

The AUDIT data were positively skewed, with skewness reported at 1.327 (SE = .139) and kurtosis at 1.639 (SE= .278). The z scores exceeded the range of ±2.58 at 9.55 Z skewness and 5.90 Z kurtosis, exceeding significance at p <0.01. The Shapiro-Wilk test indicates normal distribution at *p-value* above 0.05 (Ghasemi et al, 2012) The AUDIT total score reported a Shapiro-Wilk *p-value* of .000. Therefore, violating all assumptions of normality.

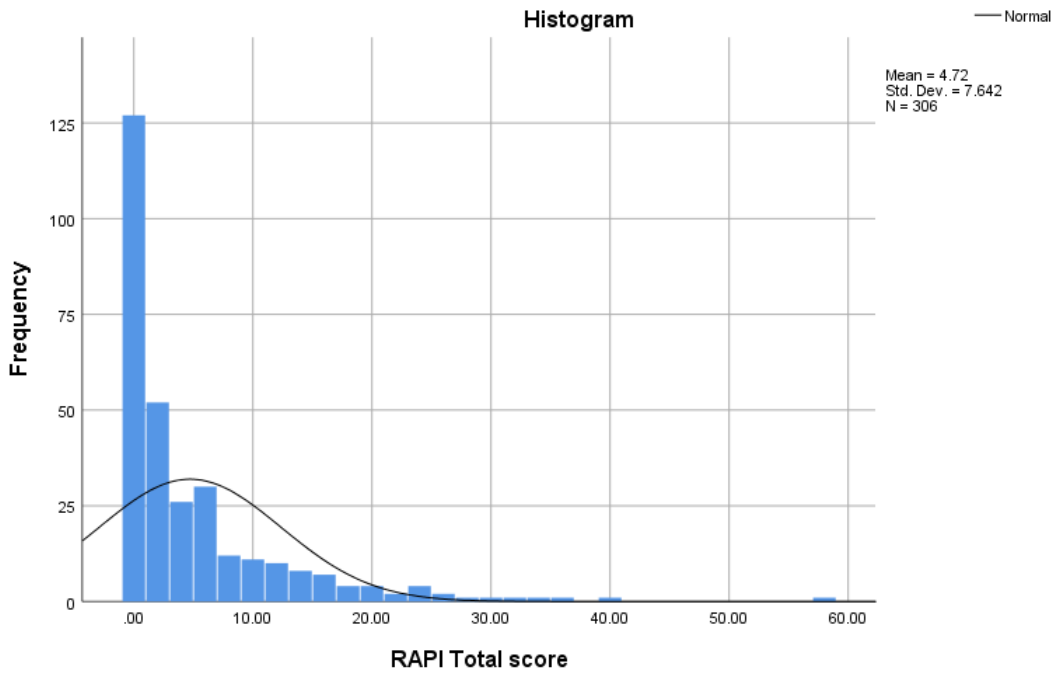


Figure 2: Histogram presenting RAPI Total score distribution

The histogram shown in Figure 2 indicates the RAPI data were positively skewed and not normally distributed. Skewness is reported at 2.737 (SE = .139) and kurtosis at 10.228 (SE =.278). Z scores were outside the range of ±2.58, reporting z skewness at 19.70 and z kurtosis at 9.95, which exceeded significance at $p<0.01$. The Shapiro-Wilk test violated the assumption of normality at .000.

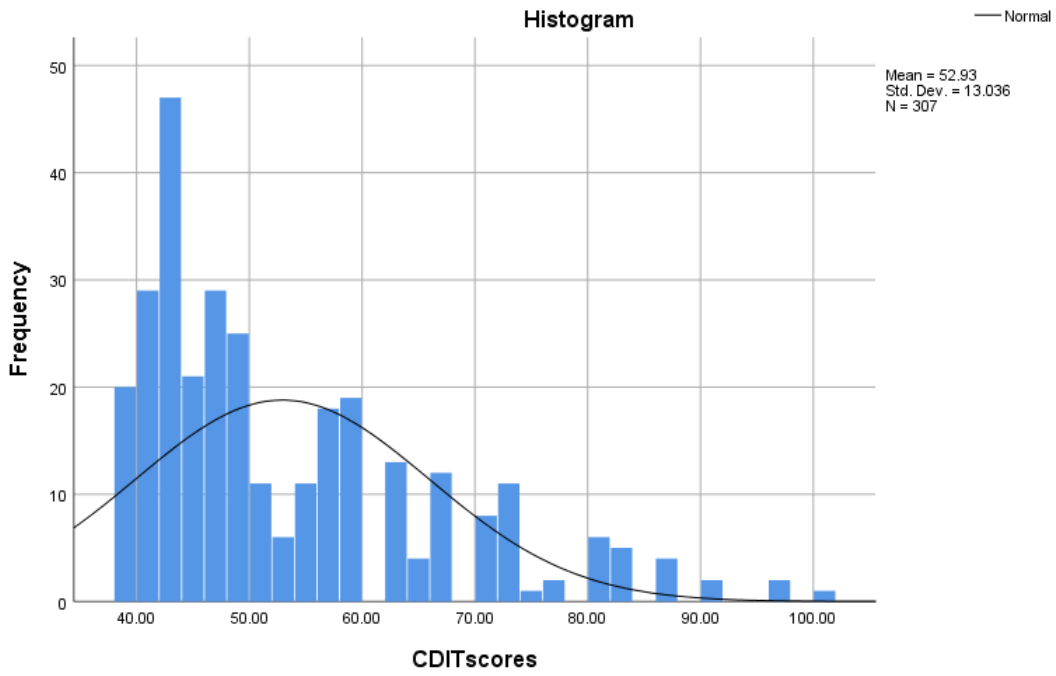


Figure 3: Histogram presenting CDI total score distribution

Figure 3 shows the graphical representation of CDI scores were positively skewed and not normally distributed. The CDI data reported skewness of 1.24 (SE = .139) and kurtosis of 1.030 (SE = .277) Representing z scores of 8.92 z skewness and 3.72 z kurtosis, which both exceeded the range of ±2.58, which exceeded significance at $p<0.01$. The Shapiro-Wilk test violated the assumption of normality at .000.

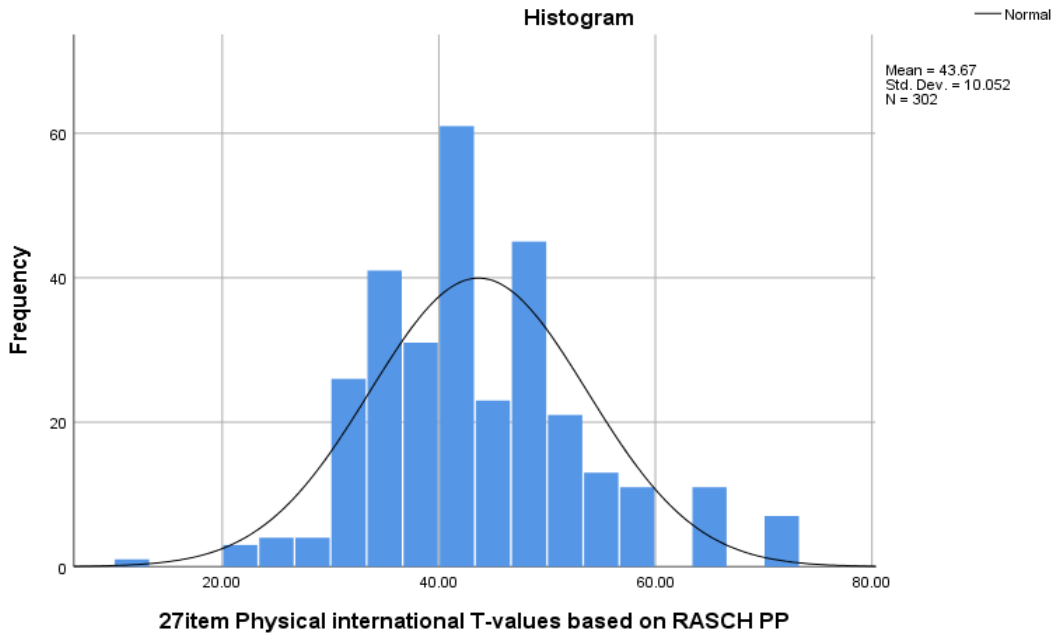


Figure 4: Histogram presenting Physical well-being score distribution

The histogram above, presenting physical well-being is not normally distributed. The skewness score of .589 (SE = .140) and kurtosis score of .851 (SE = .280) along with z skewness of 4.21 and z kurtosis of 3.04 exceeded the range of ±2.58, i.e. exceeded the significance of 0.01. Normality was also violated in the Shapiro-Wilk test with a *p*- value of .000.

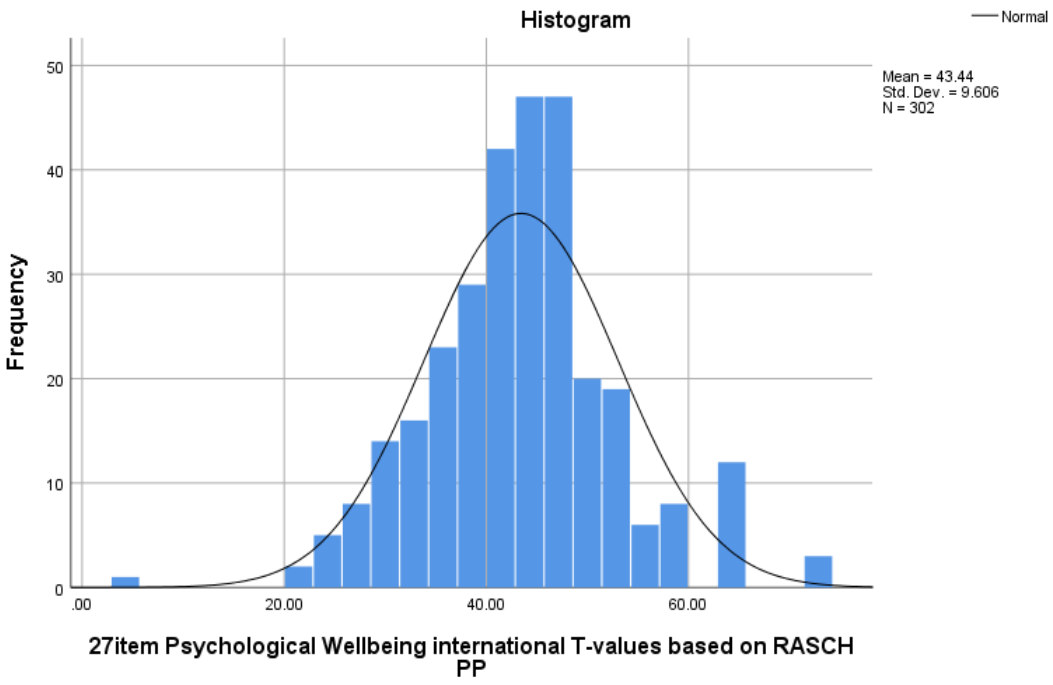


Figure 5: Histogram presenting Psychological well-being score distribution.

The psychological data in Figure 5 presents a slightly less skewed distribution, with skewness of .176 (SE = .140) and kurtosis of 1.136 (SE= .55513). The skewness and kurtosis z scores were within the range of ±2.58 at 1.26 and 2.05 respectively. Based on the Shapiro-Wilk test the reported p-value of .000 means the assumption of normality was violated.

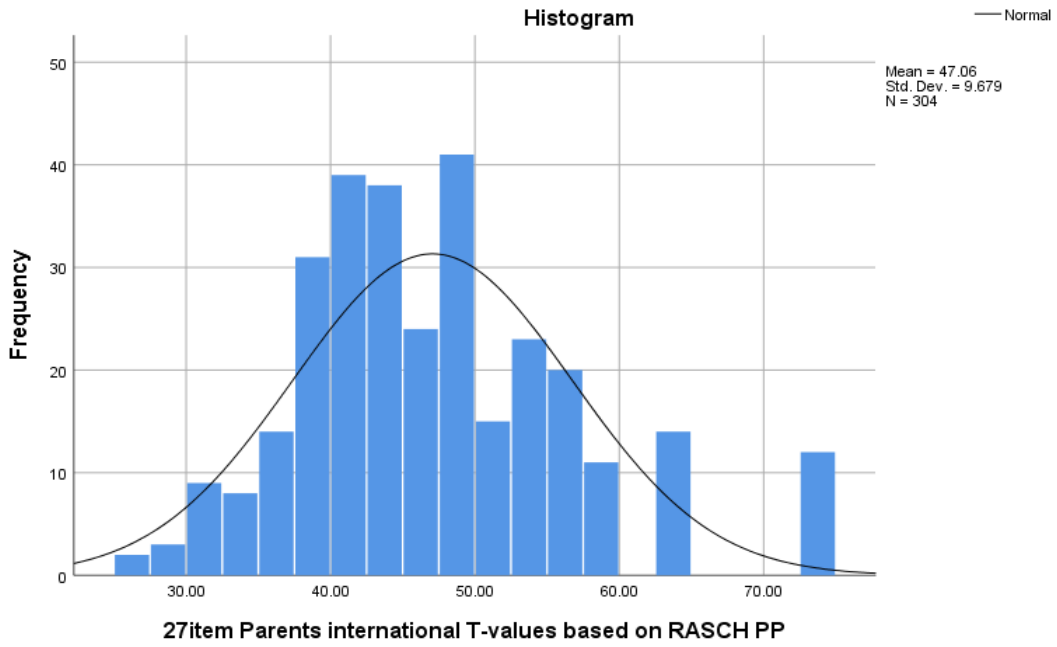


Figure 6: Histogram presenting parental relations score distribution.

The parental relations data presented in figure 6 were not normally distributed with skewness of .800 (SE = .140) and kurtosis of .847 (SE = .279). The skewness and kurtosis z scores exceeded the range of ±2.58 at 5.71 and 3.04 respectively and exceeded the significance of 0.01. Based on the Shapiro-Wilk test the reported p-value of .000 means the assumption of normality was violated.

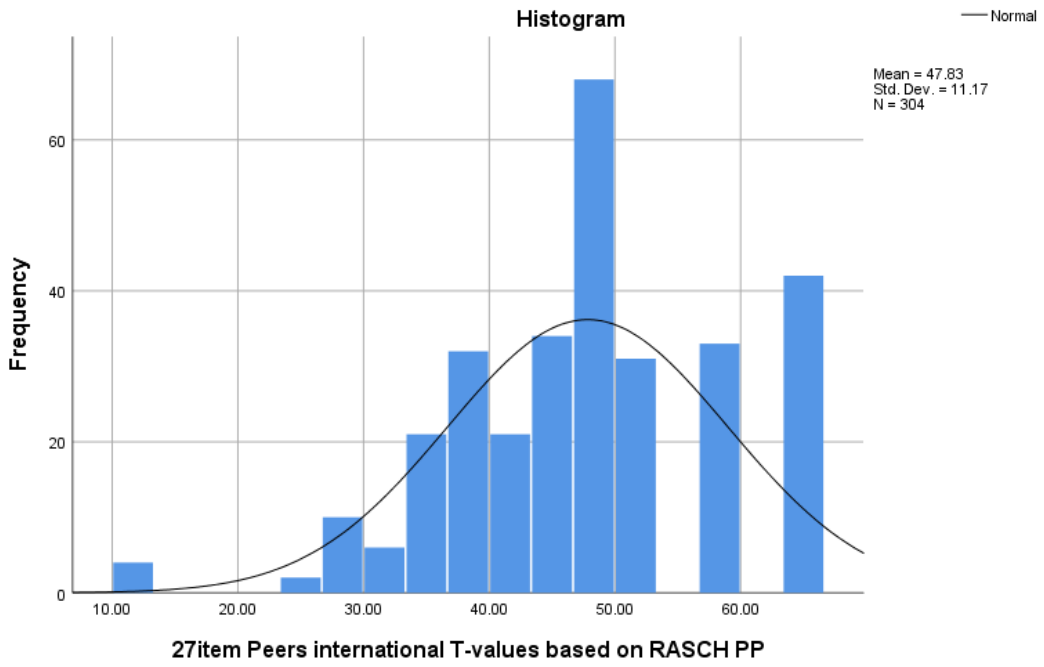


Figure 7: Histogram presenting peer relations score distribution.

The data presented in Figure 7 were not normally distributed. The peer relations data was negatively skewed with a reported skewness of -.220 (SE = .140) and kurtosis of .380 (SE = .279) The skewness and kurtosis z scores were within the range of ±2.58 at -1.57 and 1.36 respectively. However, based on the Shapiro-Wilk test the reported p-value of .000 means the assumption of normality was violated.

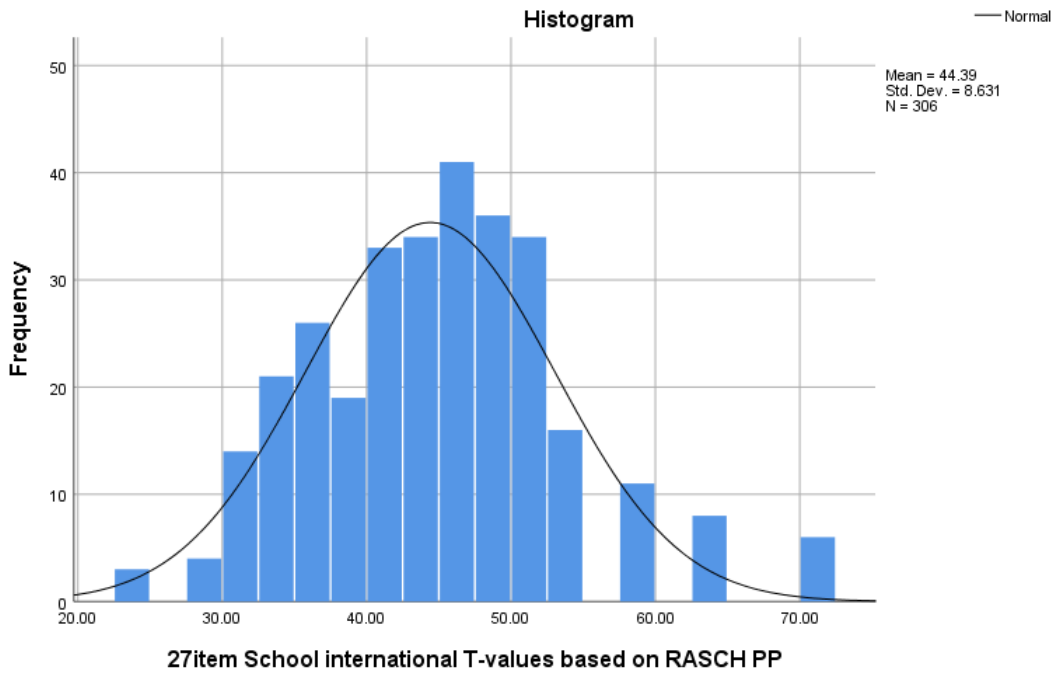


Figure 8: Histogram presenting school environment score distribution.

The histogram shown in Figure 8 indicates the school environment data were not normally distributed. Skewness is reported at .499 (SE = .139) and kurtosis at .758 (SE =.278). Z scores were outside the range of ±2.58, reporting z skewness at 3.59 and z kurtosis at 2.73, which exceeded significance at $p<0.01$. The Shapiro-Wilk test violated the assumption of normality at .000.

Appendix 21 - Test of Normality after excluding extreme outliers as identified by SPSS 26.

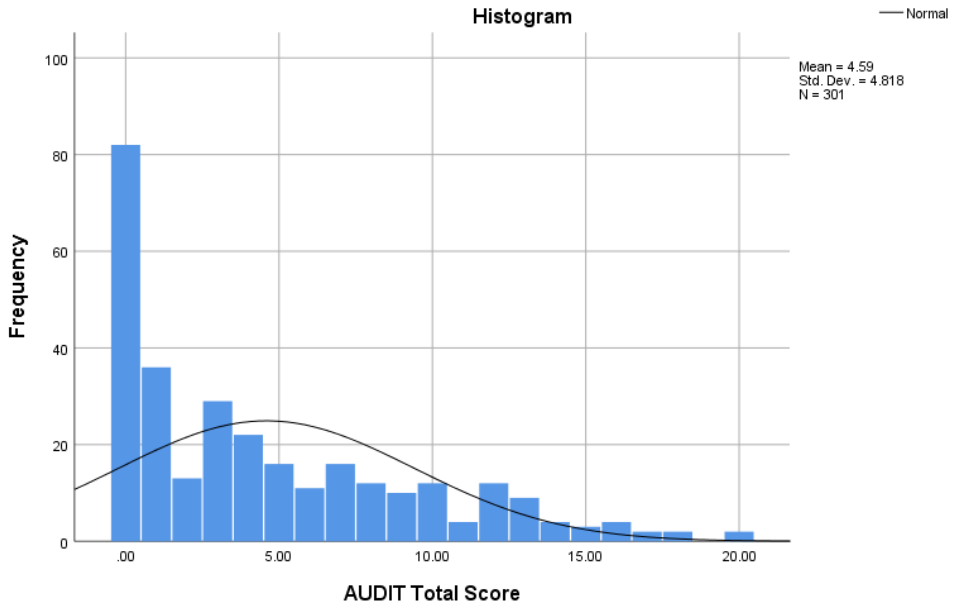


Figure 1: Skewness = 1.005 (SE = .140), Kurtosis = .168 (SE = .280), Shapiro-Wilk test .000

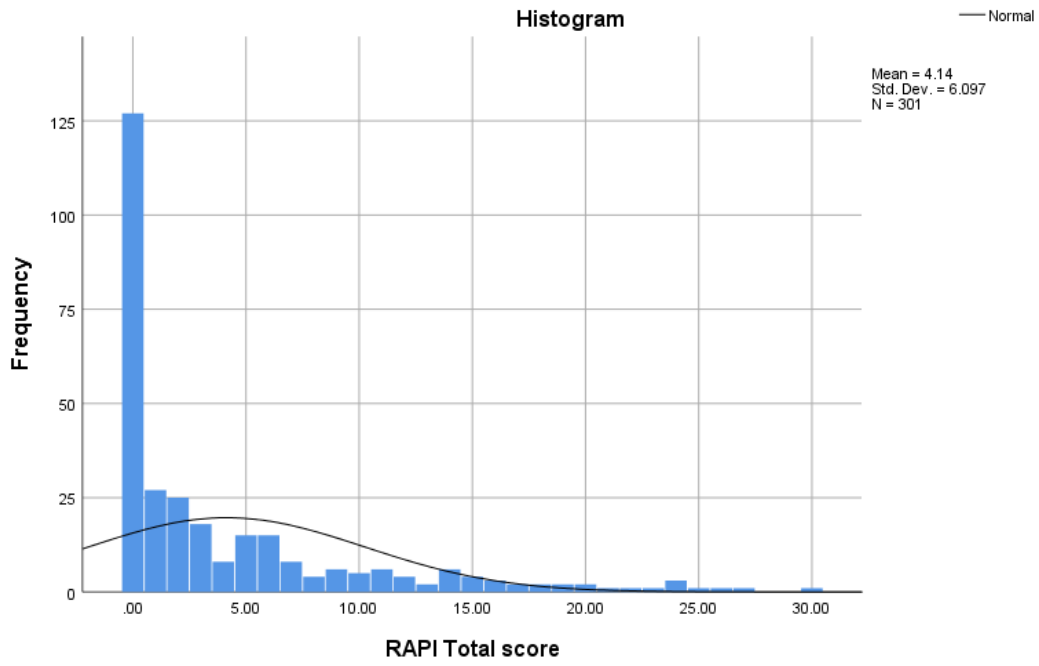


Figure 2: Skewness = 1.878 (SE = .140), Kurtosis = 3.197 (SE = .280), Shapiro-Wilk test = .000

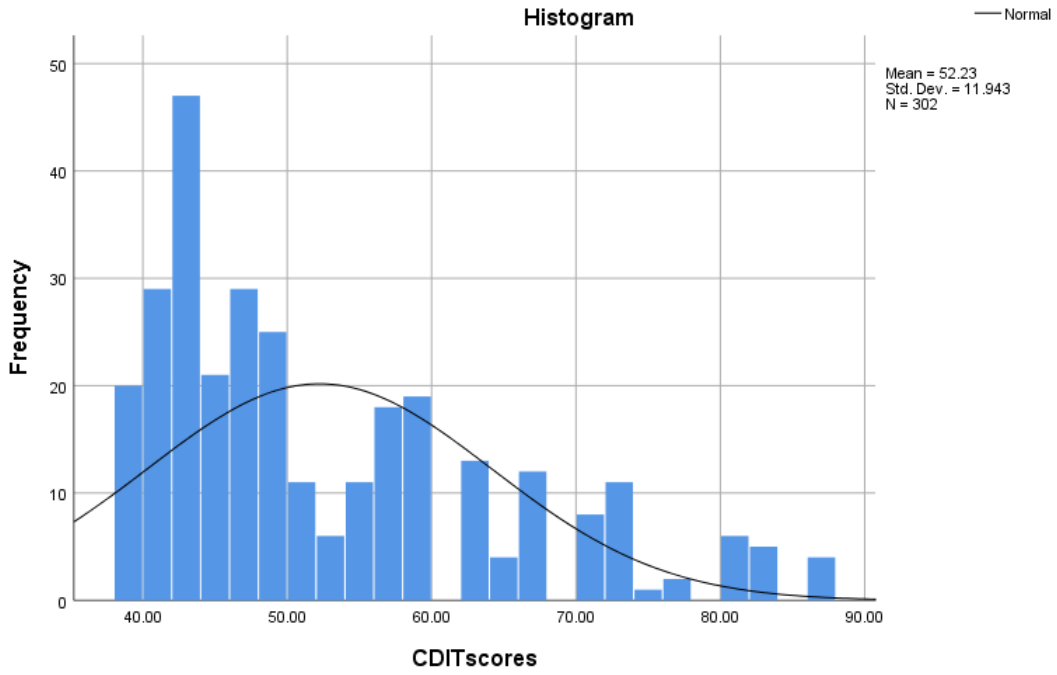


Figure 3: Skewness = 1.067 (SE = .140), Kurtosis = .322 (SE = .280), Shapiro-Wilk test = .000

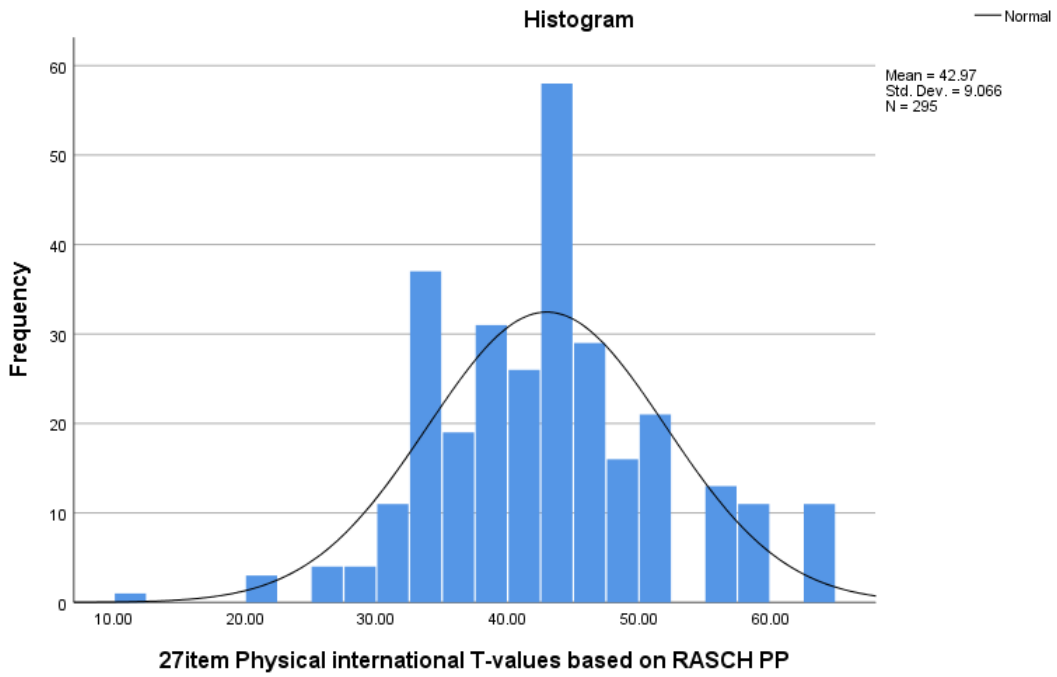


Figure 4: Skewness = .227 (SE = .142), Kurtosis = .276 (SE = .283), Shapiro-Wilk test = .000

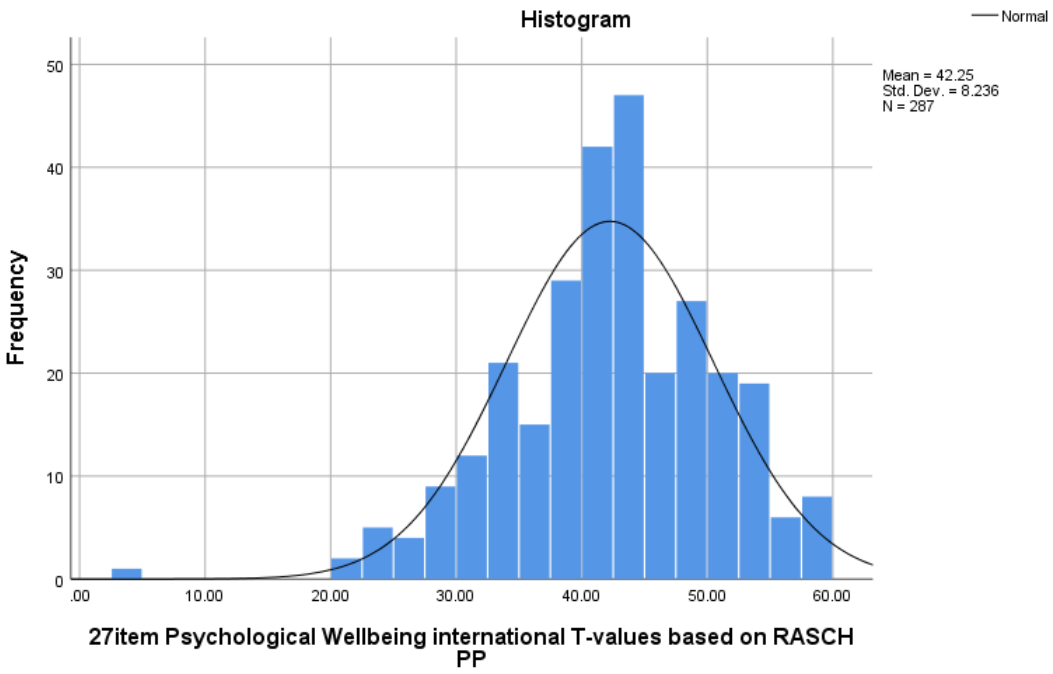


Figure 5: Skewness = -.474 (SE = .144), Kurtosis = .992 (SE = .287), Shapiro-Wilk test = .000

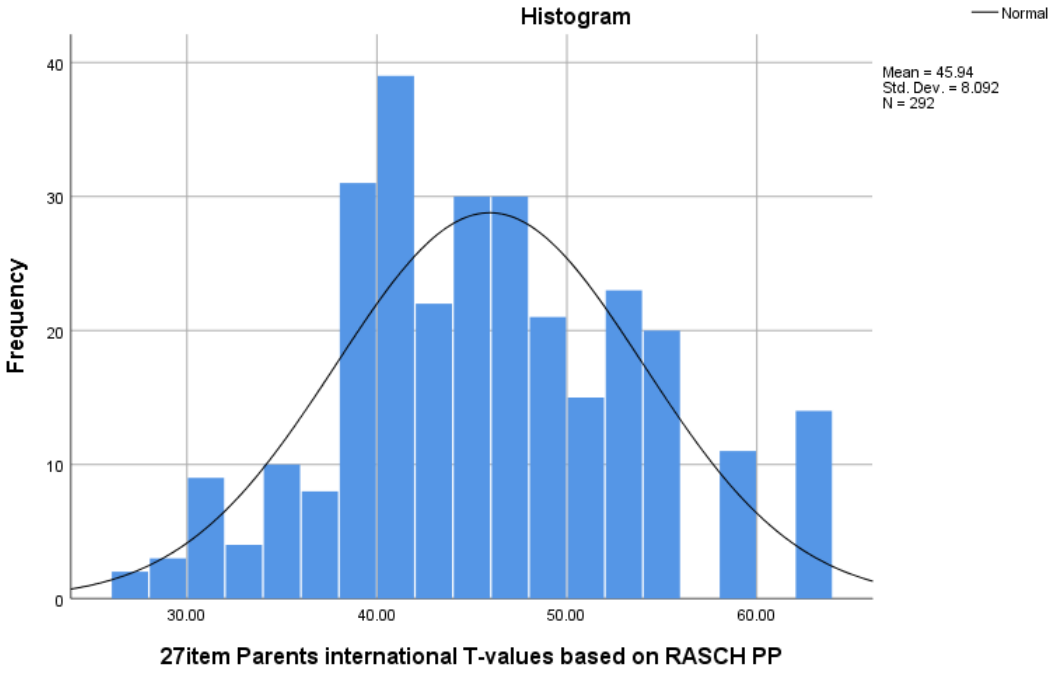


Figure 6: Skewness = .248 (SE = .143), Kurtosis = -.215 (SE= .284), Shapiro-Wilk test = .000

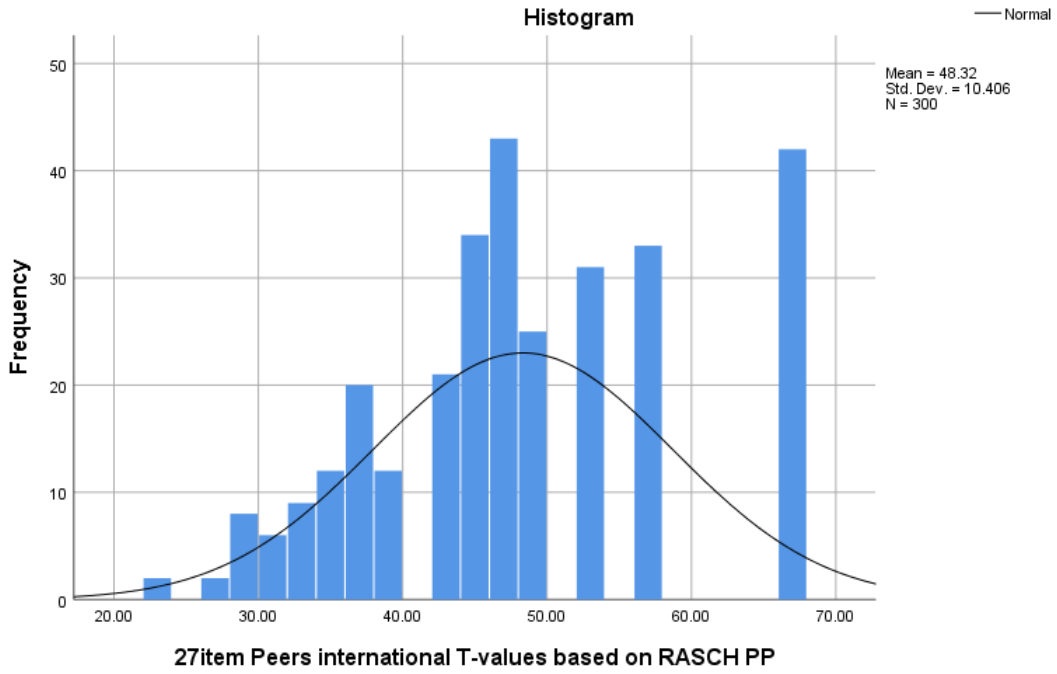


Figure 7: Skewness = .168 (SE = .141), Kurtosis = -.574 (SE = .281), Shapiro-Wilk test = .000

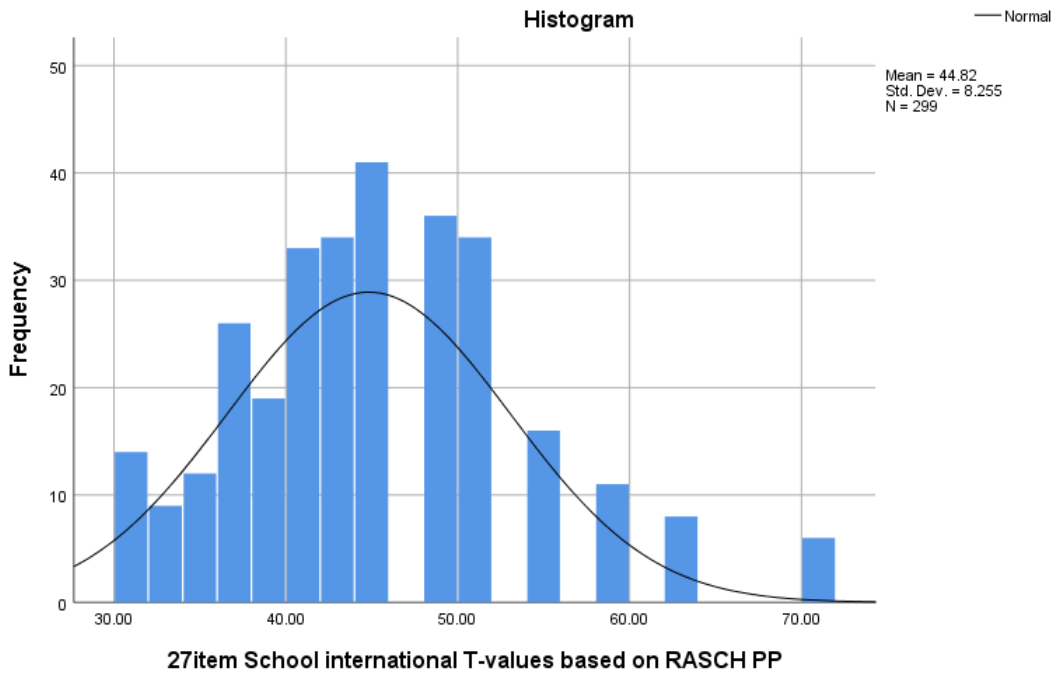


Figure 8: Skewness = .691 (SE = .141), Kurtosis = .831 (SE = .281), Shapiro-Wilk test = .000

Appendix 22 - Log 10 Transforming data

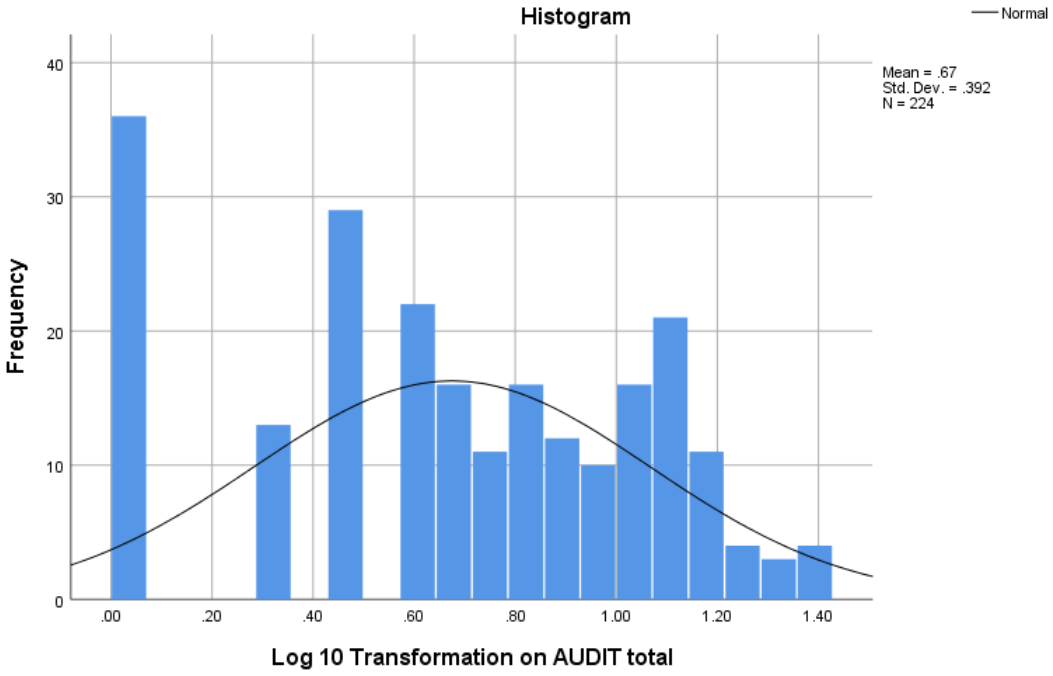


Figure 1: Skewness = -.375 (SE = .163), Kurtosis = -.817 (SE = .324), Shapiro-Wilk test = .000

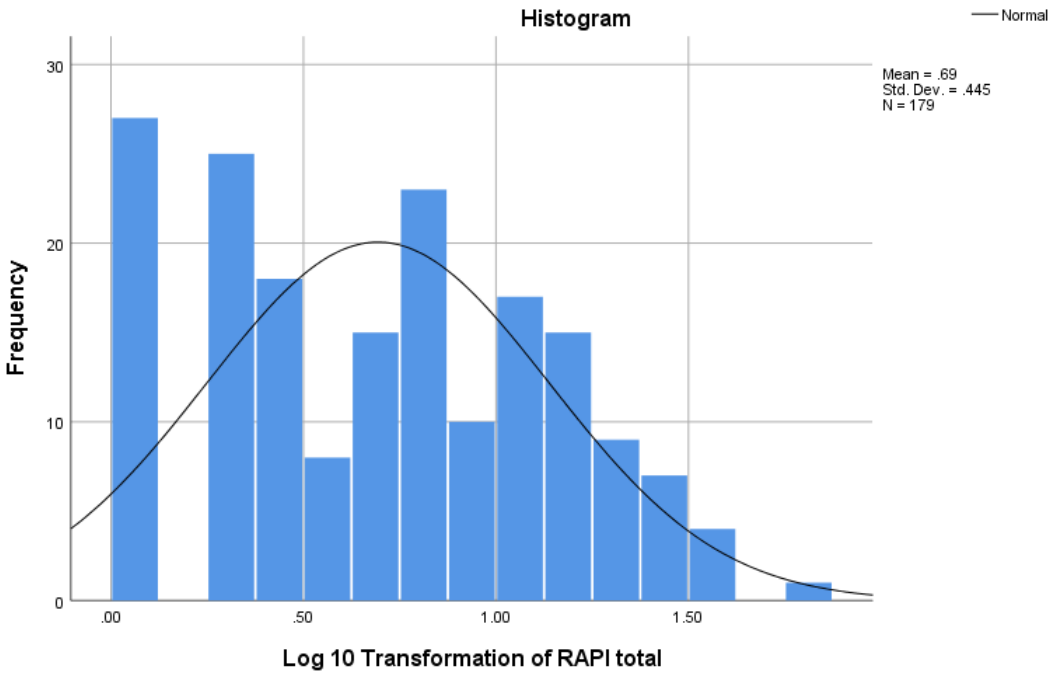


Figure 2: Skewness= .018 (SE = .182), Kurtosis = -.892 (SE = .361) Shapiro-Wilk test = .000

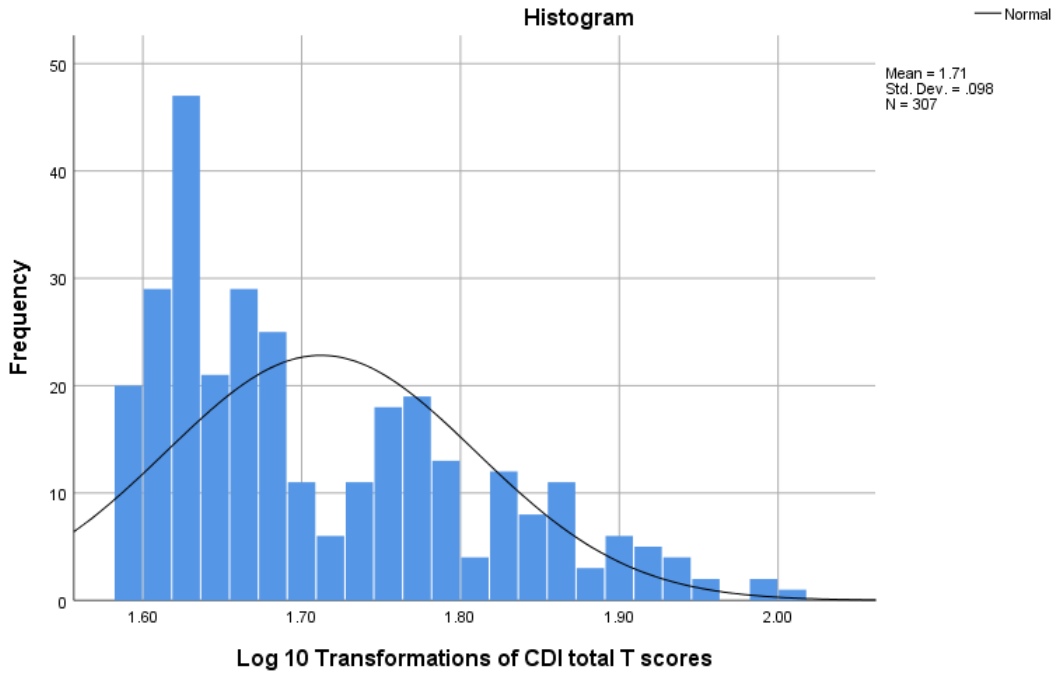


Figure 3: Skewness = .821 (SE = .139), Kurtosis = -.196 (SE = .277), Shapiro-Wilk test = .000

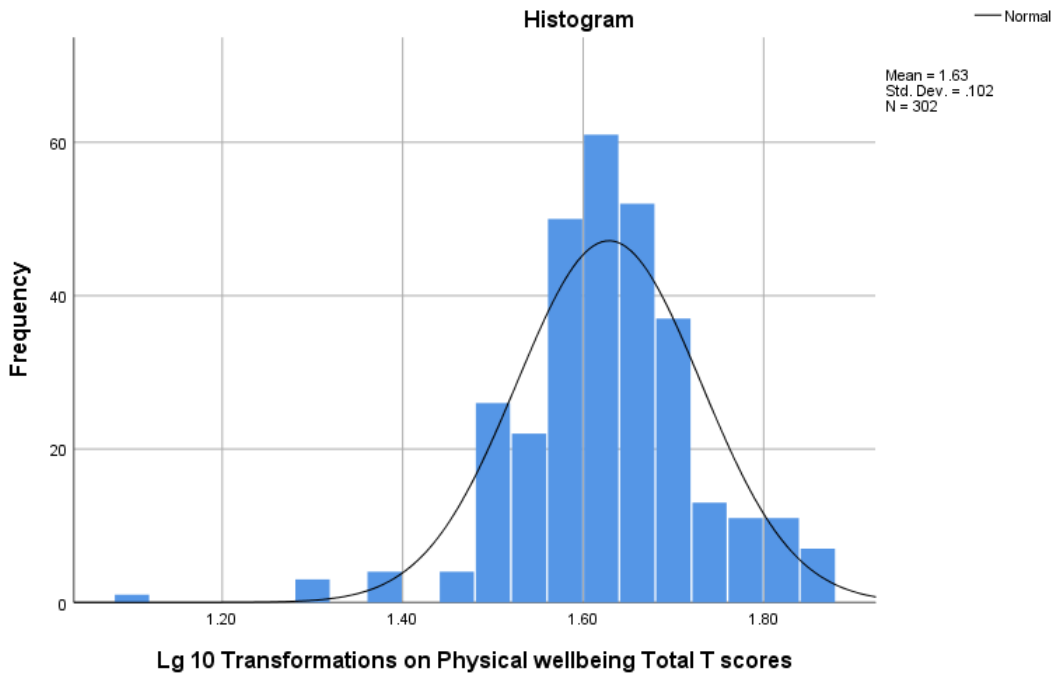


Figure 4: Skewness = -.533 (SE = .140), Kurtosis = 2.669 (SE = .280) Shapiro-Wilk test = .000

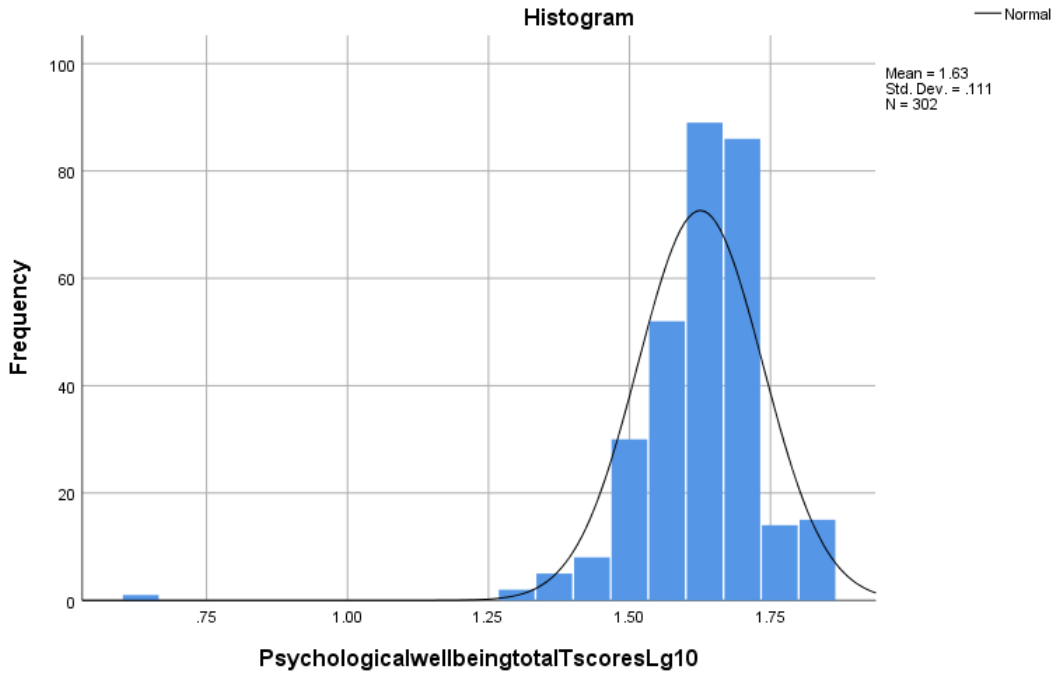


Figure 5: Skewness = -2.432 (SE = .140), Kurtosis = 18.956 (SE = .140), Shapiro-Wilk test =.000

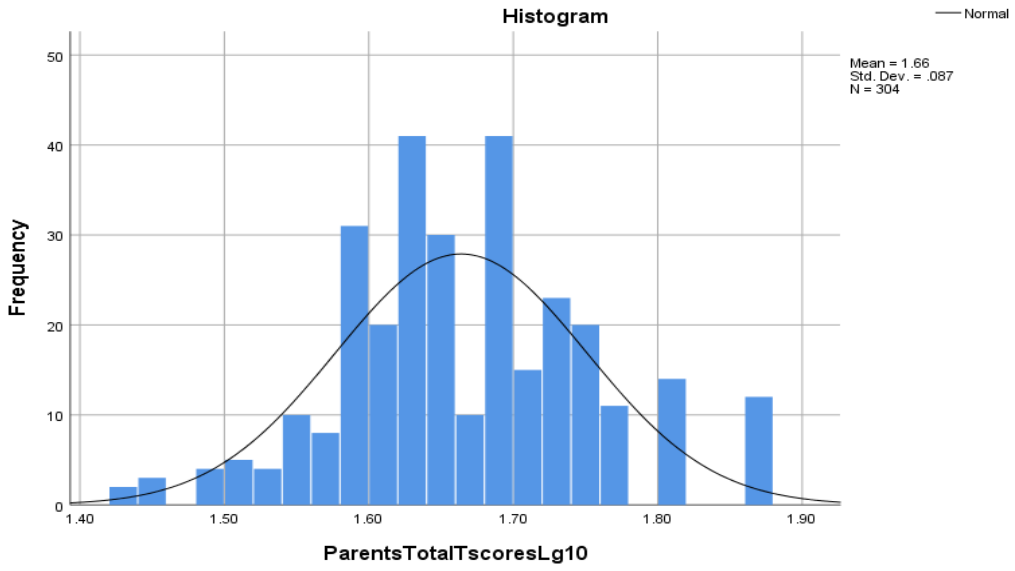


Figure 6: Skewness = .149 (SE = .140) Kurtosis = .263 (SE = .279), Shapiro-Wilk test = .001

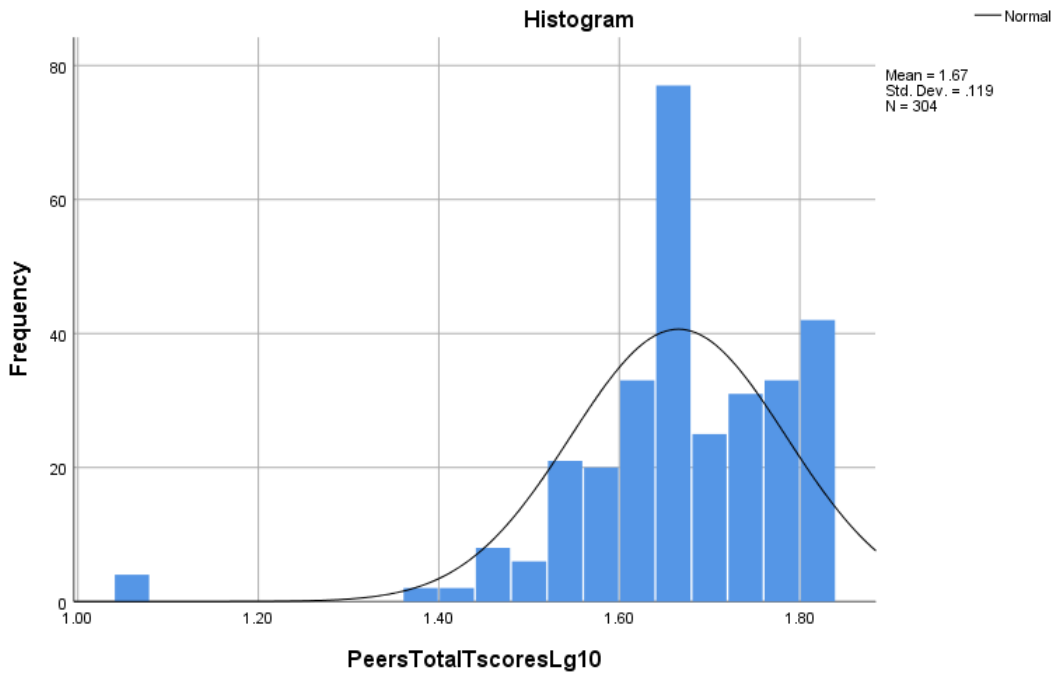


Figure 7: Skewness = -1.868 (SE = .140), Kurtosis = 7.651 (SE = .279), Shapiro-Wilk test = .000

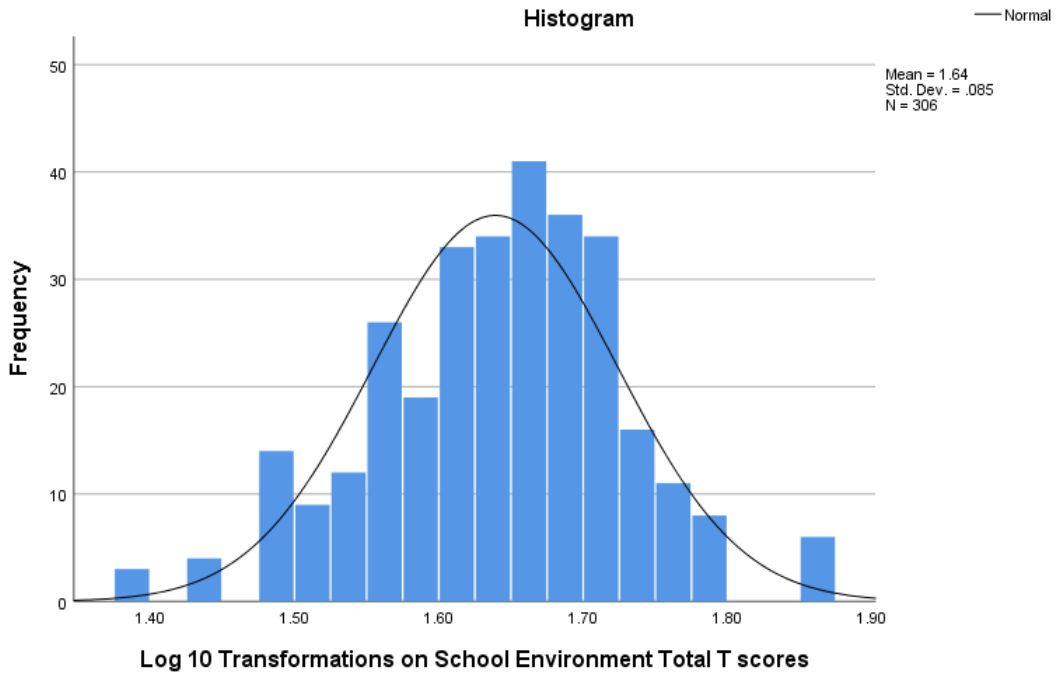


Figure 8: Skewness = -.194 (SE = .139), Kurtosis = .436 (SE = .278), Shapiro-Wilk test = .001

Appendix 23 - Sqrt Transforming data

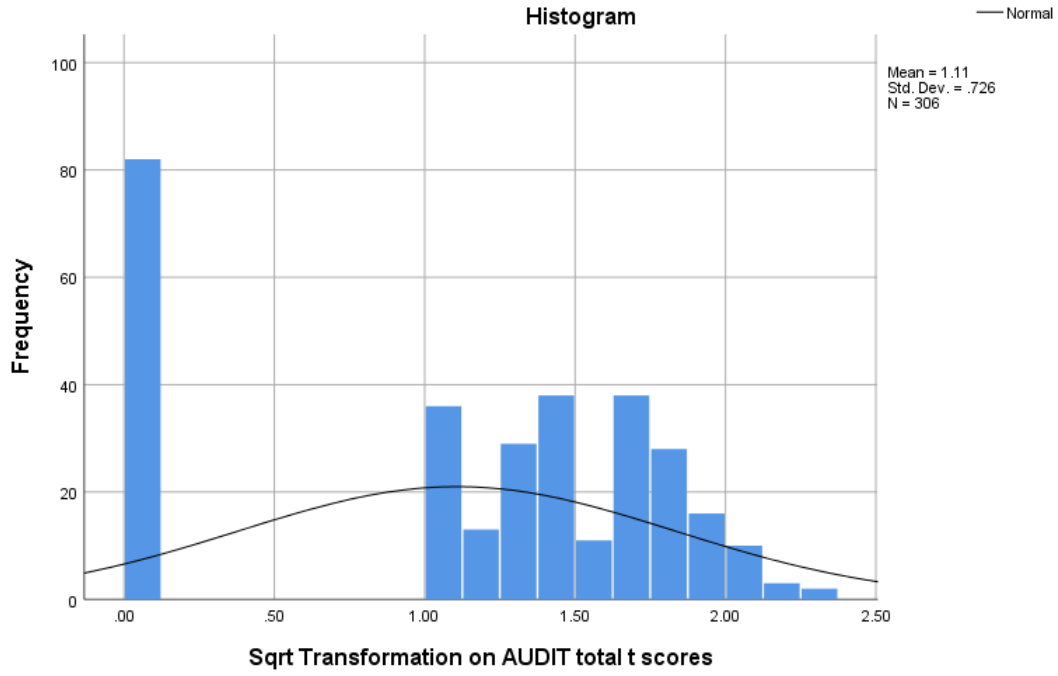


Figure 1: Skewness = -.579 (SE = .139), Kurtosis = -1.136 (SE = .278), Shapiro-Wilk test = .000

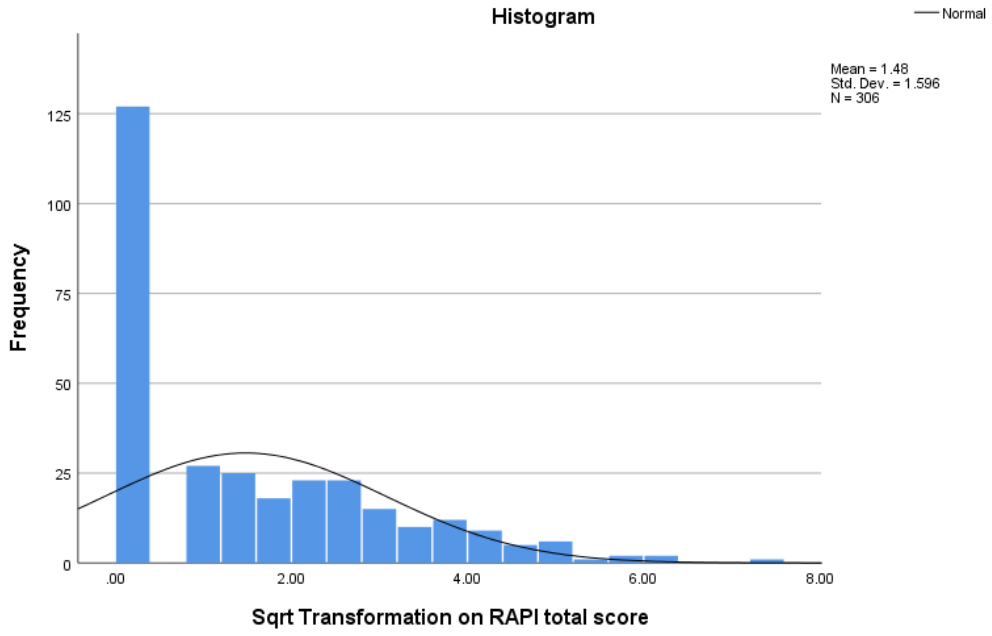


Figure 2: Skewness = .918 (SE = .139), Kurtosis = .231 (SE = .278), Shapiro-Wilk test = .000

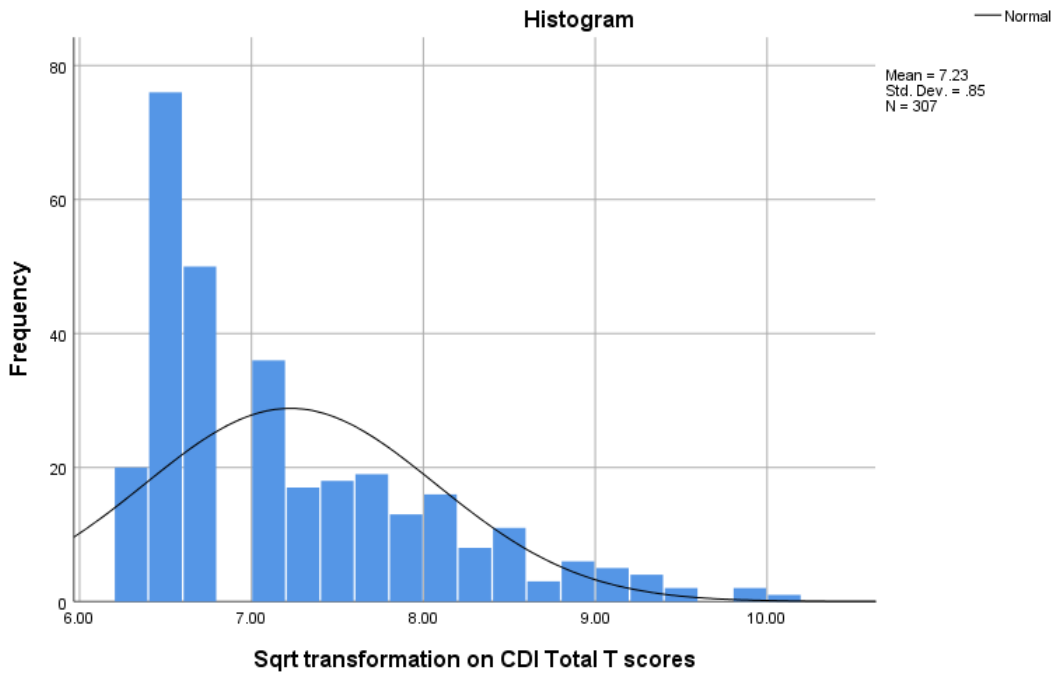


Figure 3: Skewness = .108 (SE = .140), Kurtosis = 1.009 (SE = .280), Shapiro-Wilk test = .000

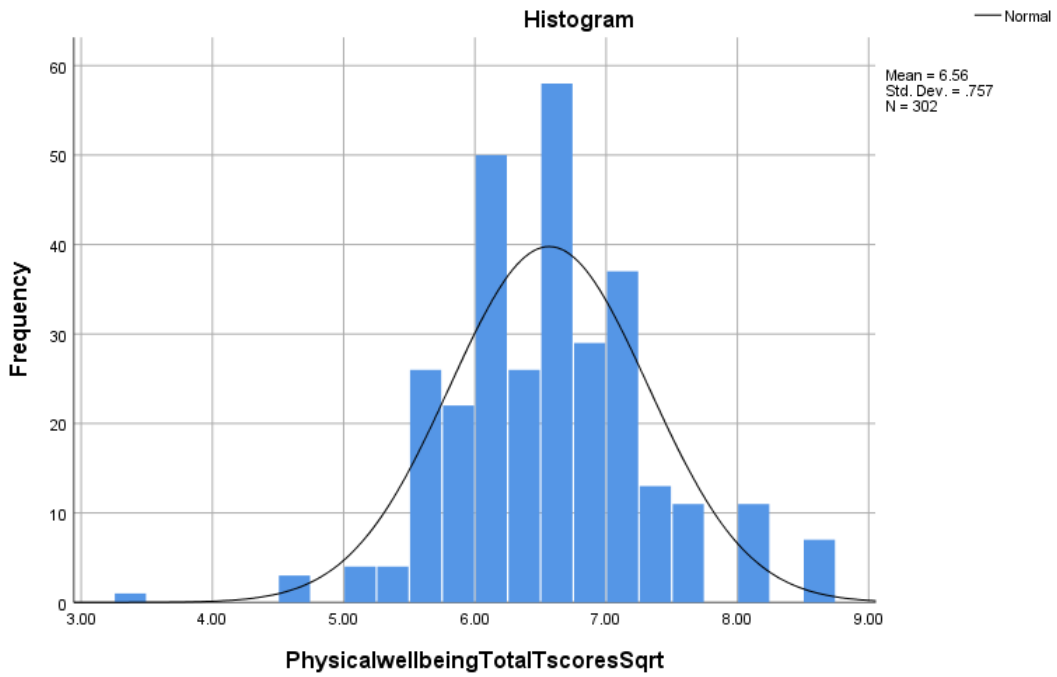


Figure 4: Skewness = .108 (SE = .140), Kurtosis = 1.009 (SE = .280), Shapiro-Wilk test = .000

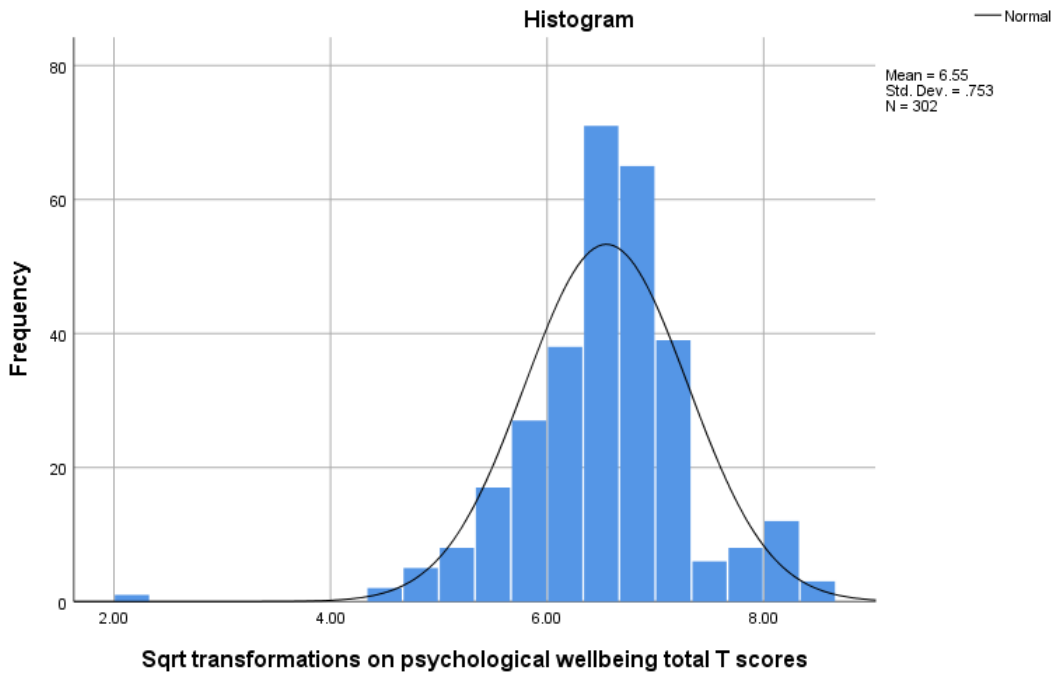


Figure 5: Skewness = -.614 (SE = .140), Kurtosis = 3.659 (SE = .280), Shapiro-Wilk test = .000

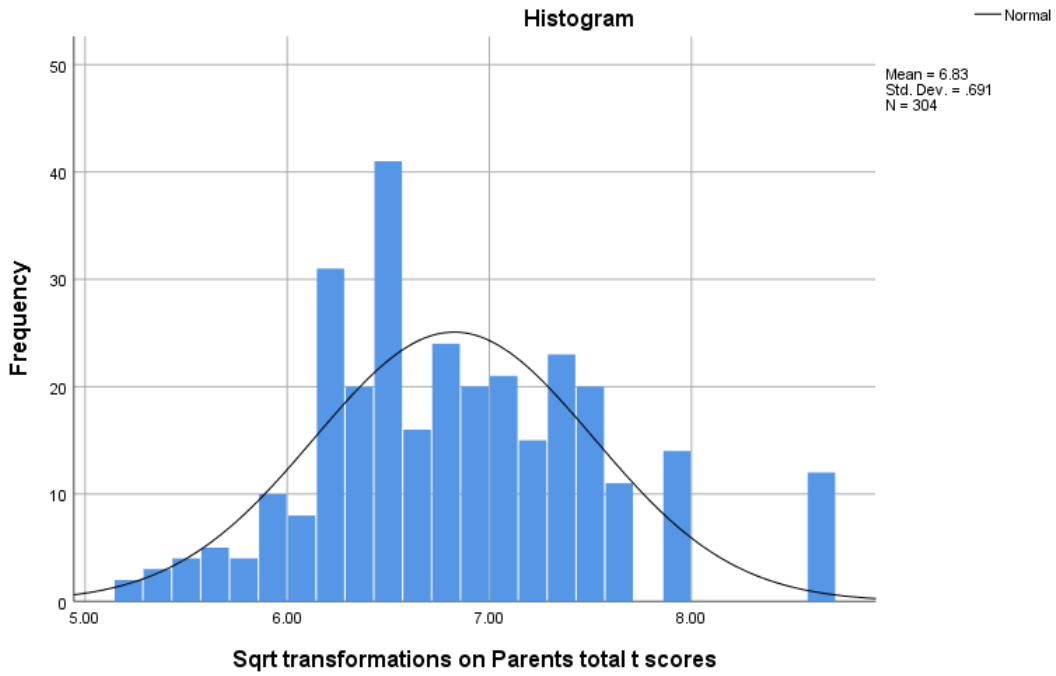


Figure 6: Skewness = .478 (SE = .140), Kurtosis = .421 (SE = .279), Shapiro-Wilk test = .000

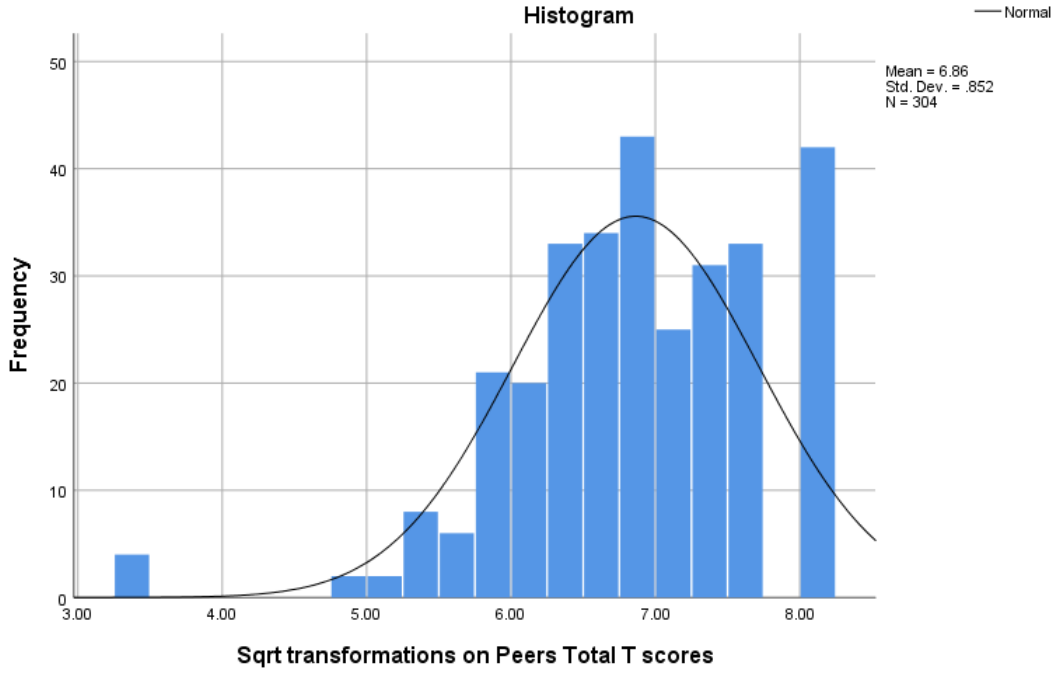


Figure 7: Skewness = -.855 (SE = 1.40), Kurtosis = 2.423 (SE = .279), Shapiro-Wilk test = .000

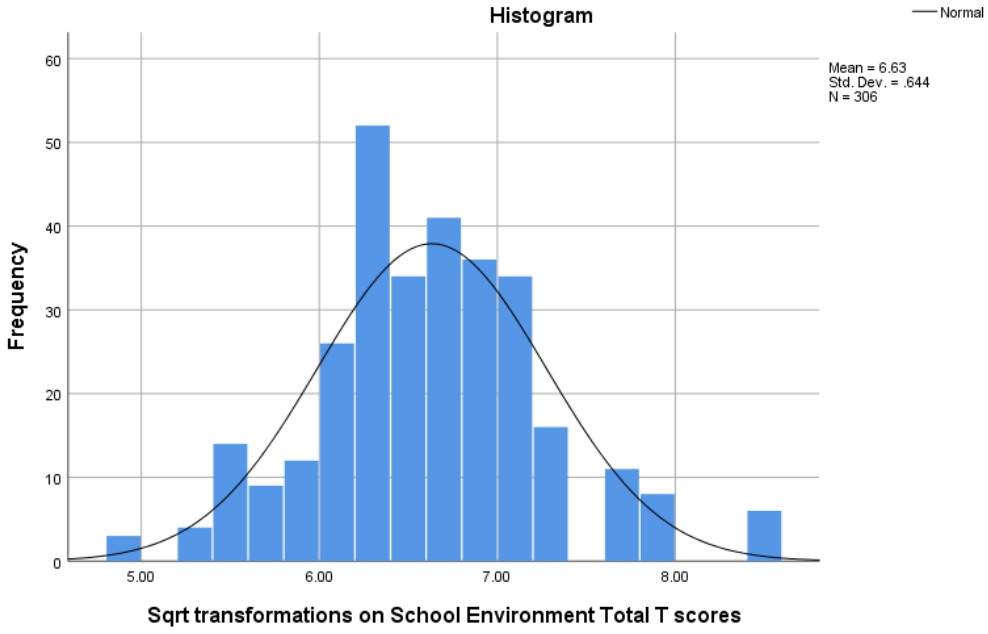


Figure 8: Skewness = .153 (SE = .139), Kurtosis = .425 (SE = .278), Shapiro-Wilk test = .001

Appendix 24 - Spearman's rho Correlations

Table 1: Spearman's Rho Correlations between study variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
r values	Alcohol Consump.	Alcohol Dep.	Alcohol Problem	Alcohol Total score	Std Drinks	Binge Drinking	Harmful Consequences	Physical Wellbeing	Psychological Wellbeing	Parental Relations	Peer Suppt	School Environ.	Depression
1. Alcohol consumption													
2 Alcohol dependence	**.419												
3 Alcohol problems	**.703	**.495											
4 Alcohol Total score	**.947	**.538	**.854										
5 Standard Drinks	**.816	**.301	**.515	**.759									
6 Binge drinking	**.706	**.477	**.552	**.703	**.504								
7 Harmful consequences	**.720	**.490	**.746	**.793	**.495	**.578							
8 Physical wellbeing	*-.132	0.006	*-.136	*-0.139	0.001	-0.048	**-.185						
9 Psychological wellbeing	-0.077	0.036	-0.05	-0.077	0.055	0.052	-0.075	**.454					
10 Parental relationship	-0.077	-0.108	*-.114	-0.099	-0.036	0.028	-0.093	**.341	**.516				
11 Peer Support	0.103	0.036	0.048	0.081	0.019	**.193	0.093	**.262	**.445	**.434			
12 School Environment	**-.344	-0.092	**-.228	**-.320	**-.238	**-.229	**-.217	**.292	**.487	**.342	**.230		
13 Depression	0.075	-0.014	0.098	0.092	-0.025	-0.05	0.109	**-.392	**-.746	**-.436	**-.389	**-.406	

** Correlation is significant at the 0.01 level (2 tailed)

* correlation is significant at the 0.05 level (2 tailed)

A correlation of ± 1 indicates a perfect relationship. A correlation of 0 indicates no relationship ± indicates the direction of relationship r= Strength of relationship

Small effect size r = ± .10 to ±.29

Medium effect size r= ± .30 to ± .49

large effect size r = ±.50 to ± 1.0

Cohen, J., 1988. Statistical power analysis for the behavioural sciences New York. *NY: Academic*.

Table 2: Percentage of shared variance between study variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Percentage of Shared Variance (r squared)	Alcohol Consumption	Alcohol Dependence	Alcohol Problems	Alcohol Total score	Standard Drinks	Binge Drinking	Harmful Consequences	Physical Wellbeing	Psychological Wellbeing	Parental Relationship	Peer Support	School Environment	Depression
1. Alcohol consumption													
2 Alcohol dependence	**17%												
3 Alcohol problems	**49%	**25%											
4 Alcohol Total score	**89%	**29%	**73%										
5 Standard Drinks	**66%	**9%	**27%	**58%									
6 Binge drinking	**50%	**23%	**30%	**49%	**25%								
7 Alcohol consequences	**52%	**24%	**56%	**63%	**25%	**33%							
8 Physical wellbeing	*1.74%	0%	*2%	*2%	0%	0.2%	**3%						
9 Psychological wellbeing	0.6%	0.1%	0.2%	0.6%	0.3%	0.3%	0.60%	**21%					
10 Parental relationship	0.6%	1%	*2%	1%	0.1%	0.1%	0.90%	**12%	**27%				
11 Peer Support	1%	0.1%	0.2%	0.7%	0%	**4%	0.90%	**7%	**20%	**19%			
12 School Environment	**12%	0.8%	**5%	**10%	**8%	**5%	**5%	**9%	**24%	**12%	**5%		
13 Depression	0.60%	0%	0.9%	0.8%	0%	0.2%	1%	**15%	**56%	**19%	**15%	**16%	

Table 3: Spearman's Rho Correlations between study variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
r values	Alcohol Consumption	Alcohol Dependence	Alcohol Problems	Alcohol Total score	Standard Drinks	Binge Drinking	Harmful Consequences	Physical Wellbeing	Psychological Wellbeing	Parental Relationship	Peer Support	School Environment	Depression
Leisure time activities													
A Play computer games	-0.05	0.063	-0.039	-0.038	-0.028	-0.084	-0.005	0.081	-0.026	-0.006	**-.177	-0.077	0.062
B Sports and exercising	-0.089	-0.045	**-.176	*-.120	-0.056	-0.059	**-.151	**.655	**.229	**.221	*.145	**.189	**-.236
C Read Books	**-.220	*-.134	**-.159	**-.230	-0.075	**-.198	*-.113	0.008	*-.137	-0.058	-0.085	0.082	*.137
D Go out in the evening	**.263	0.110	**.175	**.243	*.137	**.203	**.240	*.129	**.184	**.182	**.304	0.085	**-.163
E Hobbies	*-.144	-0.092	-0.061	*-.134	-0.087	*-.147	-0.058	0.011	-0.086	-0.065	-0.112	0.1	**.158
F Friends to shop, parks	**.398	*.138	**.316	**.378	**.259	**.352	**.320	*.123	**.161	*.124	**.435	-0.04	**-.161
G Internet for social, music	-0.021	-0.059	0.009	-0.005	-0.019	0.045	-0.063	0.002	-0.108	0.015	0.008	-0.028	0.092
H Play slot machines	**.152	0.104	*.134	**.158	0.059	0.107	0.095	0.078	0.086	0.061	0.069	-0.11	-0.088

Table 4: Percentage of shared variance between study variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Percentage of Shared Variance (r squared)	Alcohol Consumption	Alcohol Dependence	Alcohol Problems	Alcohol Total score	Standard Drinks	Binge Drinking	Harmful Consequences	Physical Wellbeing	Psychological Wellbeing	Parental Relationship	Peer Support	School Environment	Depression
Leisure time activities													
A Play computer games	0.25%	0.40%	0.15%	0.10%	0.07%	0.70%	0%	0.65%	0.06%	0%	**3%	0.60%	0.40%
B Sports and exercising	0.79%	0.20%	**3%	*1.4%	0.30%	0.35%	**2%	**43%	**5%	**5%	*2%	**3.6%	**5.5%
C Read Books	**5%	*2%	**2.5%	**5%	0.60%	**4%	*1%	0%	*2%	0.30%	0.70%	0.67%	*2%
D Go out in the evening	**7%	1%	**3%	**6%	*2%	**4%	**6%	*1.7%	**3.4%	**3.3%	**9%	0.70%	**2.6%
E Hobbies	*2%	0.80%	0.40%	*2%	0.70%	*2%	0.30%	0%	0.70%	0.40%	1%	1%	**2.5%
F Friends to shop, parks	**16%	*2%	**10%	**14%	**7%	**12%	**10%	*1.5%	**2.6%	*1.5%	**19%	0.20%	**2.6%
G Internet for social, music	0.04%	0.30%	0%	0%	0.03%	0.20%	0.40%	0%	1%	0.02%	0%	0.08%	0.80%
H Play slot machines	**2.3%	1%	*2%	**2.5%	0.30%	1%	0.90%	0.60%	0.70%	0.40%	0.50%	1.20%	0.80%

r squared = Coefficient of determination. The proportion of the variance in the dependent variable that is predictable from the independent variable

Table 5: Spearman's Rho Correlations between study variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
r values	Alcohol Consumption	Alcohol Dependence	Alcohol Problems	Alcohol Total score	Standard Drinks	Binge Drinking	Harmful Consequences	Physical Wellbeing	Psychological Wellbeing	Parental Relationship	Peer Support	School Environment	Depression
Motivations													
1 It helps you enjoy a party	**.756	**.399	**.668	**.774	**.514	**.592	**.690	-0.064	-0.028	-0.005	**.149	**-.221	0.012
2 Depressed or nervous	**.408	**.293	**.464	**.460	**.254	**.248	**.474	*-.140	**-.266	**-.243	*-.147	**-.205	**.268
3 Cheer up when in bad mood	**.470	**.323	**.503	**.512	**.260	**.381	**.517	*-.142	**-.169	**-.161	-0.001	*-.145	**.181
4 You like the feeling	**.643	**.462	**.602	**.693	**.409	**.458	**.649	*-.136	*-.143	*-.127	-0.013	**-.224	**.188
5 To get high	**.430	**.421	**.456	**.478	**.358	**.337	**.500	-0.04	-0.069	*-.139	-0.085	**-.151	0.107
6 Make social gatherings fun	**.713	**.369	**.623	**.735	**.469	**.509	**.666	-0.079	*-.124	-0.107	0.091	**-.255	*.121
7 Fit in with a group you like	**.271	**.245	**.291	**.287	0.108	**.195	**.268	-0.022	**-.152	**-.175	-0.049	-0.088	*.146
8 Improves parties	**.703	**.397	**.640	**.731	**.457	**.552	**.678	-0.033	-0.027	0.001	0.092	**-.210	0.042
9 To forget your problems	**.438	**.356	**.524	**.500	**.298	**.347	**.541	**-.161	**-.203	**-.227	-0.09	*-.145	**.251
10 Because it's fun	**.761	**.403	**.645	**.786	**.485	**.553	**.684	*-.115	-0.102	-0.031	0.083	**-.244	*.133
11 To be liked	**.194	**.172	**.256	**.222	0.118	*.124	**.239	-0.017	**-.177	*-.130	*-.129	*-.137	*.132
12 So you won't feel left out	**.269	**.209	**.291	**.331	0.089	**.278	**.326	-0.022	*-.126	-0.105	-0.048	*-.120	**.162
Parental Monitoring													
13 Know who I am with in evenings	0.111	*.141	**.208	**.163	**.194	0.048	**.185	-0.074	-0.088	**-.203	*-.140	*-.125	0.071
14 Know where I am in evenings	*.121	*.131	**.176	**.171	0.099	0.051	**.183	-0.031	*-.133	**-.246	-0.087	**-.159	0.095
15 Where you spend Sat nights	*.140	*.119	**.205	**.175	**.215	0.095	**.218	-0.025	-0.068	**-.216	-0.04	-0.107	0.098
16 Set definite rules at home	-0.034	-0.029	-0.033	-0.019	-0.088	-0.04	0.041	**-.203	-0.021	0.004	-0.044	-0.102	0.074
17 Set definite rules outside	-0.004	0.027	0.034	-0.002	0.08	0.00	-0.025	-0.043	0.031	-0.01	-0.053	-0.063	-0.01
18 How well off is your family	0.05	0.016	0.034	0.079	-0.02	-0.062	0.107	**-.190	**-.159	**-.240	**-.206	-0.079	**.180

Table 6: Percentage of shared variance between study variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Percentage of Shared Variance (r squared)	Alcohol Consumption	Alcohol Dependence	Alcohol Problems	Alcohol Total score	Standard Drinks	Binge Drinking	Harmful Consequence	Physical Wellbeing	Psych Wellbeing	Parental Relations	Peer Suppt	School Environ.	Depress.
Motivations													
1 It helps you enjoy a party	**57.15%	**15.92%	**44.62%	**59.90%	**26.41%	**35.04%	**47.61%	0.41%	0.08%	0.00%	**2.22%	**4.88%	0.01%
2 Depressed or nervous	**16.64%	**8.58%	**21.52%	**21.16%	**6.45%	**6.15%	**22.46%	*1.96%	**7.07%	**5.90%	*2.16%	**4.20%	**7.18%
3 Cheer up when in bad mood	**22.09%	**10.43%	**25.30%	**26.21%	**6.76%	**14.51%	**26.72%	*2.01%	**2.85%	**2.59%	0.00%	*2.10%	**3.27%
4 You like the feeling	**41.34%	**21.34%	**36.24%	**48.02%	**16.72%	**20.97%	**42.12%	*1.84%	*2.04%	*1.61%	0.02%	**5.01%	**3.53%
5 To get high	**18.49%	**17.72%	**20.79%	**22.84%	**12.81%	**11.35%	**25%	0.16%	0.48%	*1.93%	0.72%	**2.28%	1.14%
6 Make social gatherings fun	**50.83%	**13.61%	**38.81%	**54.02%	**21.99%	**25.90%	**44.35%	0.62%	*1.53%	1.14%	0.83%	**6.50%	*1.46%
7 Fit in with a group you like	**7.34%	**6.00%	**8.46%	**8.23%	1.17%	**3.80%	**7.18%	0.05%	**2.31%	**3.06%	0.24%	0.77%	*2.13%
8 Improves parties	**49.42%	**15.76%	**40.96%	**53.43%	**20.88%	**30.47%	**45.96%	0.11%	0.07%	0.00%	0.85%	**4.41%	0.18%
9 To forget your problems	**19.18%	**12.67%	**27.45%	**25%	**8.88%	**12.04%	**29.26%	**2.59%	**4.12%	**5.15%	0.81%	*2.10%	**6.30%
10 Because it's fun	**57.91%	**16.24%	**41.60%	**61.77%	**23.52%	**30.58%	**46.78%	*1.32%	1.04%	0.10%	0.69%	**5.95%	*1.76%
11 To be liked	**3.76%	**2.95%	**6.55%	**4.92%	1.39%	*1.53%	**5.71%	0.03%	**3.13%	*1.69%	*1.66%	*1.87%	*1.74%
12 So you won't feel left out	**7.23%	**4.36%	**8.46%	**10.95%	0.79%	**7.72%	**10.62%	0.05%	*1.58%	1.10%	0.23%	*1.44%	**2.62%
Parental Monitoring													
13 Know who I am with in evening	1.23%	*1.98%	**4.32%	**2.65%	**3.76%	0.23%	**3.42%	0.55%	0.77%	**4.12%	*1.96%	*1.56%	0.50%
14 Know where I am in evenings	*1.46%	*1.71%	**3.09%	**2.92%	0.98%	0.26%	**3.34%	0.10%	*1.76%	**6.05%	0.76%	**2.52%	0.90%
15 Where you spend Sat nights	*1.96%	*1.41%	**4.20%	**3.06%	**4.62%	0.90%	**4.75%	0.06%	0.46%	**4.66%	0.16%	1.14%	0.96%
16 Set definite rules at home	0.12%	0.08%	0.11%	0.04%	0.77%	0.16%	0.17%	**4.12%	0.04%	0.00%	0.19%	1.04%	0.55%
17 Set definite rules outside	0.00%	0.07%	0.12%	0.00%	0.64%	0.00%	0.06%	0.18%	0.10%	0.01%	0.28%	0.40%	0.01%
18 How well off is your family	0.25%	0.03%	0.12%	0.62%	0.04%	0.38%	1.14%	**3.61%	**2.52%	5.76%	**4.24%	0.62%	**3.24%

r squared = Coefficient of determination. The proportion of the variance in the dependent variable that is predictable from the independent variable

Appendix 25 – Results of Box-Tidwell (1962) procedure test for linearity

Table 1: Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with alcohol use as the dependent variable. New alpha value $p \leq .00833$

Dependent variable - alcohol	β	S.E.	Wald	*df*	*P* value
Physical well-being by LN Physical well-being	-.160	.080	3.995	1	**.046**
Psychological well-being by LN Psychological well-being	.166	.132	1.593	1	**.207**
Parental relations by LN Parental relations	-.152	.114	1.779	1	**.182**
Peer Relations by LN Peer Relations	-.169	.080	4.410	1	**.036**
School Environment by LN School Environment	.066	.137	.233	1	**.629**
CDI Depression by LN CDI Depression	-.029	.120	.058	1	**.810**

Appendix 26 – Collinearity Statistics

Table 1 - Collinearity Statistics

Dependent Variable – Alcohol	**Tolerance**	**VIF**
Physical well-being	.761	1.313
Psychological well-being	.362	2.765
Parental relations	.657	1.522
Peer Relations	.756	1.323
School Environment	.745	1.341
Depression	.486	2.060

Appendix 27 – Model 1: Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Alcohol		***P* value**
Step 1	Physical Well-being	.203
	Psychological Well-being	.990
	Parental Relations	.198
	Peer Support	.001
	School Environment	.008
	CDI Depression	.162
Step 2	Physical Well-being	.200
	Parental Relations	.182
	Peer Support	.000
	School Environment	.006
	CDI Depression	.104
Step 3	Parental Relations	.119
	Peer Support	.001
	School Environment	.003
	CDI Depression	.059
Step 4	Peer Support	**.002****
	School Environment	**.001****
	CDI Depression	**.023***

Significant value $p \leq .05$* P ≤ .01**

Appendix 28 - Model 2 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	Categories	Type of Data
Alcohol	0 Not using alcohol	Nominal
	1 Using Alcohol	Nominal
Predictor Variables – Length of time spent on each activity		**Type of Data**
Play computer games?		Scale
Actively participate in sports, athletics or exercising?		Scale
Read books for enjoyment		Scale
Go out in the evening (to a disco, café, party etc.)		Scale
Hobbies - play an instrument, sing, draw, write		Scale
Go with friends to shopping centres, streets, parks, etc for fun		Scale
Use the internet for leisure activities		Scale
Play slot machines		Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 17 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .00294$ (Tabachnick & Fidell, 2014). Based on the new accepted *p*- value, all interaction terms

were not statistically significant and therefore were linearly related to the logit of the dependent variable. (See Table below).

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with alcohol use as the dependent variable. New alpha value $p \leq .00294$.

Dependent variable - alcohol Natural log transformation	**β**	**S.E.**	**Wald**	***df***	***P* value**
Play computer games	.178	.532	.112	1	.738
Actively participate in sports, athletics or exercising	.413	.634	.423	1	.515
Read books for enjoyment	.867	.525	2.730	1	.098
Go out in the evening (to a disco, café, party etc.)	.347	.742	.218	1	.640
Hobbies - play an instrument, sing, draw, write	-.848	.573	2.191	1	.139
Friends to shopping centres, streets, parks, etc for fun	-.884	.853	1.075	1	.300
Use the internet for leisure activities	3.606	4.684	.593	1	.441
Play slot machines	-2.561	1.240	4.270	1	.039

Assumption 6 tested multicollinearity (See table below). As tolerance values are above 0.1 and VIF values are lower than 10, no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – Alcohol	**Tolerance**	**VIF**
Play computer games	.903	1.108
Actively participate in sports, athletics or exercising	.938	1.066
Read books for enjoyment	.808	1.237
Go out in the evening (to a disco, café, party etc.)	.708	1.412
Hobbies - play an instrument, sing, draw, write	.793	1.261
Friends to shopping centres, streets, parks, etc for fun	.675	1.482
Use the internet for leisure activities	.987	1.013
Play slot machines	.917	1.091

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable alcohol use.

Appendix 29 – Model 2 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Alcohol	*P* value
Step 1	
Play computer games	.490
Actively participate in sports, athletics or exercising	.161
Read books for enjoyment	.029
Go out in the evening (to a disco, café, party etc.)	.434
Hobbies - play an instrument, sing, draw, write	.686
Go with friends to shopping centres, streets, parks, etc for fun	.000
Use the internet for leisure activities	.882
Play slot machines	.439
Step 2	
Play computer games	.490
Actively participate in sports, athletics or exercising	.159
Read books for enjoyment	.029
Go out in the evening (to a disco, café, party etc.)	.437
Hobbies - play an instrument, sing, draw, write	.689
Go with friends to shopping centres, streets, parks, etc for fun	.000
Play slot machines	.429
Step 3	
Play computer games	.511
Actively participate in sports, athletics or exercising	.169
Read books for enjoyment	.010
Go out in the evening (to a disco, café, party etc.)	.470
Go with friends to shopping centres, streets, parks, etc for fun	.000
Play slot machines	.419

Step 4	.
Actively participate in sports, athletics or exercising	.202
Read books for enjoyment	.010
Go out in the evening (to a disco, café, party etc.)	.457
Go with friends to shopping centres, streets, parks, etc for fun	.000
Play slot machines	.359
Step 5	
Actively participate in sports, athletics or exercising	.218
Read books for enjoyment	.009
Go with friends to shopping centres, streets, parks, etc for fun	.000
Play slot machines	.342
Step 6	
Actively participate in sports, athletics or exercising	.244
Read books for enjoyment	.010
Go with friends to shopping centres, streets, parks, etc for fun	.000
Step 7	
Read books for enjoyment	**.008****
Go with friends to shopping centres, streets, parks, etc for fun	**.000****

Significant value *p* ≤ .05* P ≤ .01**

Appendix 30 - Model 3 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study. See Table below.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	**Categories**	**Type of Data**
Binge Drinking	0 Not binge drinking	Nominal
	1 binge drinking	Nominal
Predictor Variables		**Type of Data**
CDI depression score	n/a	Scale
Physical wellbeing	n/a	Scale
Psychological wellbeing	n/a	Scale
Parental relations	n/a	Scale
Peer Relations	n/a	Scale
School Environment	n/a	Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 13 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .003846$ (Tabachnick & Fidell, 2014) Based on the new accepted *p*- value, all interaction terms were not statistically significant and therefore were linearly related to the logit of the dependent variable. See Table below.

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with binge drinking as the dependent variable. New alpha value $p \leq .003846$

Dependent variable – binge drinking	β	S.E.	Wald	*df*	*P* value
Physical wellbeing by LN Physical wellbeing	-.125	.080	2.433	1	**.119**
Psychological wellbeing by LN Psychological wellbeing	.014	.069	.042	1	**.838**
Parental relations by LN Parental relations	-.153	.107	2.068	1	**.150**
Peer Relations by LN Peer Relations	.052	.058	.798	1	**.372**
School Environment by LN School Environment	.112	.124	.808	1	**.369**
CDI Depression by LN CDI Depression	.008	.083	.010	1	**.922**

Assumption 6 tested multicollinearity (see Table below). As tolerance values are above 0.1 and VIF values are lower than 10 no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – Binge drinking	**Tolerance**	**VIF**
Physical wellbeing	.766	1.306
Psychological wellbeing	.363	2.755
Parental relations	.653	1.531
Peer Relations	.753	1.327
School Environment	.754	1.327
Depression	.484	2.067

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable binge drinking.

Appendix 31 - Model 3 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Binge Drinking		***P* value**
Step 1	Physical Wellbeing	.580
	Psychological Wellbeing	.094
	Parental Relations	.553
	Peer Support	.006
	School Environment	.000
	CDI Depression	.917
Step 2	Physical Wellbeing	.584
	Psychological Wellbeing	.040
	Parental Relations	.556
	Peer Support	.006
	School Environment	.000
Step 3	Psychological Wellbeing	.048
	Parental Relations	.511
	Peer Support	.006
	School Environment	.000
Step 4	Psychological Wellbeing	.060
	Peer Support	**.008****
	School Environment	**.000****

Significant value *p* ≤ .05* P ≤ .01**

Appendix 32 - Model 4 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	**Categories**	**Type of Data**
Binge drinking	0 Not binge drinking	Nominal
	1 Binge drinking	Nominal
Predictor Variables – Length of time spent on each activity		**Type of Data**
Play computer games		Scale
Actively participate in sports, athletics or exercising		Scale
Read books for enjoyment		Scale
Go out in the evening (to a disco, café, party etc.)		Scale
Hobbies - play an instrument, sing, draw, write		Scale
Go with friends to shopping centres, streets, parks, etc for fun		Scale
Use the internet for leisure activities		Scale
Play slot machines		Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 17 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .00294$ (Tabachnick & Fidell, 2014). Based on the new accepted *p*- value, all interaction terms

were not statistically significant and therefore were linearly related to the logit of the dependent variable. See Table below.

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with binge drinking as the dependent variable. New alpha value $p \leq .00294$.

Dependent variable – binge drinking Natural log transformation	**β**	**S.E.**	**Wald**	***df***	***P* value**
Play computer games	.190	.469	.164	1	.685
Actively participate in sports, athletics or exercising	.789	.528	2.234	1	.135
Read books for enjoyment	.770	.488	2.487	1	.115
Go out in the evening (to a disco, café, party etc.)	-1.313	.681	3.715	1	.054
Hobbies - play an instrument, sing, draw, write	-.553	.478	1.341	1	.247
Friends to shopping centres, streets, parks, etc for fun	1.185	.802	2.182	1	.140
Use the internet for leisure activities	1.320	1.239	1.135	1	.287
Play slot machines	-1.085	1.022	1.126	1	.289

Assumption 6 tested multicollinearity (see table below). As tolerance values are above 0.1 and VIF values are lower than 10 no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – Binge drinking	**Tolerance**	**VIF**
Play computer games	.900	1.112
Actively participate in sports, athletics or exercising	.937	1.067
Read books for enjoyment	.807	1.239
Go out in the evening (to a disco, café, party etc.)	.716	1.396
Hobbies - play an instrument, sing, draw, write	.791	1.264
Go with friends to shopping centres, streets, parks, etc for fun	.678	1.474
Use the internet for leisure activities	.987	1.013
Play slot machines	.917	1.090

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable binge drinking.

Appendix 33 - Model 4 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Binge Drinking	***P* value**
Step 1	
Play computer games	.902
Actively participate in sports, athletics or exercising	.079
Read books for enjoyment	.118
Go out in the evening (to a disco, café, party etc.)	.129
Hobbies - play an instrument, sing, draw, write	.183
Go with friends to shopping centres, streets, parks, etc for fun	.000
Use the internet for leisure activities	.770
Play slot machines	.714
Step 2	
Actively participate in sports, athletics or exercising	.077
Read books for enjoyment	.118
Go out in the evening (to a disco, café, party etc.)	.128
Hobbies - play an instrument, sing, draw, write	.184
Go with friends to shopping centres, streets, parks, etc for fun	.000
Use the internet for leisure activities	.771
Play slot machines	.693
Step 3	
Actively participate in sports, athletics or exercising	.077
Read books for enjoyment	.116
Go out in the evening (to a disco, café, party etc.)	.128
Hobbies - play an instrument, sing, draw, write	.188
Go with friends to shopping centres, streets, parks, etc for fun	.000
Play slot machines	.674

Step 4	
Actively participate in sports, athletics or exercising	.081
Read books for enjoyment	.116
Go out in the evening (to a disco, café, party etc.)	.126
Hobbies - play an instrument, sing, draw, write	.184
Go with friends to shopping centres, streets, parks, etc for fun	.000
Step 5	
Actively participate in sports, athletics or exercising	.094
Read books for enjoyment	.022
Go out in the evening (to a disco, café, party etc.)	.193
Go with friends to shopping centres, streets, parks, etc for fun	.000
Step 6	
Actively participate in sports, athletics or exercising	.114
Read books for enjoyment	.021
Go with friends to shopping centres, streets, parks, etc for fun	.000
Step 7	
Read books for enjoyment	**.015***
Go with friends to shopping centres, streets, parks, etc for fun	**.000****

Significant value $p \leq .05$* P ≤ .01**

Appendix 34: Model 5 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	**Categories**	**Type of Data**
Binge drinking	0 Not binge drinking	Nominal
	1 Binge drinking	Nominal
Predictor Variables –		**Type of Data**
Motivations/Expectations (How often did you drink…)		
Because it helps you enjoy a party		Scale
Because it helps when you feel depressed or nervous		Scale
To cheer you up when you're in a bad mood		Scale
Because you like the feeling		Scale
To get high		Scale
Because it makes social gatherings more fun		Scale
To fit in with the group you like		Scale
Because it improves parties and celebrations		Scale
To forget about your problems		Scale
Because it's fun		Scale
To be liked		Scale
So you won't feel left out		Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met

when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 25 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .002$ (Tabachnick & Fidell, 2014) Based on the new accepted *p*- value, all interaction terms were not statistically significant and therefore were linearly related to the logit of the dependent variable.

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with binge drinking as the dependent variable. New alpha value $p \leq .002$

Dependent variable – binge drinking Natural log transformation	**β**	**S.E.**	**Wald**	***df***	***P* value**
Because it helps you enjoy a party	-1.135	1.108	1.049	1	.306
It helps when you feel depressed or nervous	-1.374	1.173	1.373	1	.241
To cheer you up when you're in a bad mood	.772	1.228	.395	1	.530
Because you like the feeling	-.367	.996	.136	1	.712
To get high	-2.217	1.196	3.437	1	.064
Because it makes social gatherings more fun	.553	1.163	.226	1	.634
To fit in with the group you like	3.056	1.399	4.773	1	.029
Because it improves parties and celebrations	1.624	1.019	2.540	1	.111
To forget about your problems	.228	1.036	.048	1	.826
Because it's fun	-1.187	.986	1.449	1	.229
To be liked	-1.188	1.731	.471	1	.493
So you won't feel left out	-.345	1.358	.064	1	.800

Assumption 6 tested multicollinearity. As tolerance values are above 0.1 and VIF values are lower than 10 no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – Binge drinking	**Tolerance**	**VIF**
Because it helps you enjoy a party	.223	4.493
It helps when you feel depressed or nervous	.481	2.080
To cheer you up when you're in a bad mood	.369	2.713
Because you like the feeling	.282	3.548
To get high	.582	1.718
Because it makes social gatherings more fun	.211	4.739
To fit in with the group you like	.418	2.393
Because it improves parties and celebrations	.173	5.788
To forget about your problems	.389	2.569
Because it's fun	.233	4.293
To be liked	.475	2.107
So you won't feel left out	.440	2.272

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable binge drinking.

Appendix 35 - Model 5 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Binge Drinking	***P* value**
Step 1	
Because it helps you enjoy a party	.000
It helps when you feel depressed or nervous	.047
To cheer you up when you're in a bad mood	.184
Because you like the feeling	.062
To get high	.955
Because it makes social gatherings more fun	.596
To fit in with the group you like	.086
Because it improves parties and celebrations	.266
To forget about your problems	.151
Because it's fun	.000
To be liked	.595
So you won't feel left out	.179
Step 8	
Because it helps you enjoy a party	**.000****
It helps when you feel depressed or nervous	**.050***
To cheer you up when you're in a bad mood	**.036***
Because you like the feeling	.097
Because it's fun	**.000****

Significant value *p* ≤ .05* P ≤ .01**

Appendix 36: Model 6 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	Categories	Type of Data
RAPI	0 No harmful consequences	Nominal
	1 harmful consequences	Nominal

Predictor Variables –	Type of Data
Because it helps you enjoy a party	Scale
It helps when you feel depressed or nervous	Scale
To cheer you up when you're in a bad mood	Scale
Because you like the feeling	Scale
To get high	Scale
Because it makes social gatherings more fun	Scale
To fit in with the group you like	Scale
Because it improves parties and celebrations	Scale
To forget about your problems	Scale
Because it's fun	Scale
To be liked	Scale
So you won't feel left out	Scale
Physical wellbeing	Scale
Psychological wellbeing	Scale
Parental relations	Scale
Peer Relations	Scale

School Environment	Scale
CDI depression score	Scale
Total AUDIT scores	Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 39 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .00128$ (Tabachnick & Fidell, 2014). Based on the new accepted *p*- value, all interaction terms were not statistically significant and therefore were linearly related to the logit of the dependent variable.

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with harmful consequences as the dependent variable. New alpha value $p \leq .00128$

Dependent variable – harmful consequences Natural log transformation	**β**	**S.E.**	**Wald**	***df***	***P* value**	By
Because it helps you enjoy a party	-1.624	1.897	.733	1	.392	
It helps when you feel depressed or nervous	-2.861	1.610	3.159	1	.075	
To cheer you up when you're in a bad mood	4.537	2.290	3.925	1	.048	
Because you like the feeling	3.250	1.645	3.903	1	.048	
To get high	-4.399	1.914	5.281	1	.022	
Because it makes social gatherings more fun	1.129	1.803	.392	1	.531	
To fit in with the group you like	-6.070	2.947	4.242	1	.039	
Because it improves parties and celebrations	1.100	1.423	.597	1	.440	
To forget about your problems	1.165	1.852	.396	1	.529	
Because it's fun	-1.133	1.558	.529	1	.467	
To be liked	5.789	3.467	2.789	1	.095	
So you won't feel left out	3.438	2.862	1.444	1	.230	
Physical wellbeing	.327	.197	2.755	1	.097	
Psychological wellbeing	-.418	.300	1.945	1	.163	
Parental relations	.516	.336	2.350	1	.125	
Peer Relations	-.194	.175	1.231	1	.267	
School Environment	-.429	.310	1.914	1	.167	
CDI depression score	.026	.230	.013	1	.911	
Total AUDIT scores	-.438	.248	3.134	1	.077	

Assumption 6 tested multicollinearity. As tolerance values are above 0.1 and VIF values are lower than 10 no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – RAPI harmful consequences	**Tolerance**	**VIF**
Because it helps you enjoy a party	.218	4.595
It helps when you feel depressed or nervous	.451	2.200
To cheer you up when you're in a bad mood	.372	2.687
Because you like the feeling	.285	3.503
To get high	.589	1.696
Because it makes social gatherings more fun	.212	4.723
To fit in with the group you like	.409	2.446
Because it improves parties and celebrations	.169	5.934
To forget about your problems	.389	2.571
Because it's fun	.223	4.494
To be liked	.495	2.020
So you won't feel left out	.454	2.204
Physical wellbeing	.712	1.405
Psychological wellbeing	.326	3.070
Parental relations	.606	1.650
Peer Relations	.667	1.498
School Environment	.651	1.536
CDI depression score	.443	2.256
Total AUDIT scores	.373	2.684

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable binge drinking.

Appendix 37: Model 6 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – RAPI – harmful consequences	***P* value**
Step 1	
Because it helps you enjoy a party	.075
It helps when you feel depressed or nervous	.928
To cheer you up when you're in a bad mood	.908
Because you like the feeling	.860
To get high	.001
Because it makes social gatherings more fun	.463
To fit in with the group you like	.052
Because it improves parties and celebrations	.144
To forget about your problems	.202
Because it's fun	.230
To be liked	.035
So you won't feel left out	.133
Physical wellbeing	.059
Psychological wellbeing	.170
Parental relations	.897
Peer Relations	.205
School Environment	.050
CDI depression score	.289
Total AUDIT scores	.000
Step 12	
To get high	**.000****
To fit in with the group you like	**.019***
To forget about your problems	**.038***
Because it's fun	.053
Physical wellbeing	.083
Peer Relations	**.037***
School Environment	**.025***
Total AUDIT scores	**.000****
Significant value *p* ≤ .05* P ≤ .01**	

Appendix 38: Model 7 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	**Categories**	**Type of Data**
Depression	0 No depression	Nominal
	1 levels of depression	Nominal
Predictor Variables		**Type of Data**
Physical well-being	n/a	Scale
Psychological well-being	n/a	Scale
Parental relations	n/a	Scale
Peer Relations	n/a	Scale
School Environment	n/a	Scale
Perceived Wealth	n/a	Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 13 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .00385$ (Tabachnick & Fidell, 2014) Based on the new accepted *p*- value, all interaction terms were not statistically significant and therefore were linearly related to the logit of the dependent variable.

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with depression as the dependent variable. New alpha value $p \leq .00385$

Dependent variable – depression By Natural log transformation	**β**	**S.E.**	**Wald**	***df***	***P* value**
Physical wellbeing	.004	.178	.000	1	.983
Psychological wellbeing	.509	.324	2.466	1	.116
Parental relations	.298	.207	2.065	1	.151
Peer Relations	.013	.219	.003	1	.953
School Environment	-.094	.186	.253	1	.615
Perceived Wealth	2.659	1.173	5.135	1	.023

Assumption 6 tested multicollinearity. As tolerance values are above 0.1 and VIF values are lower than 10 no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – Depression	**Tolerance**	**VIF**
Physical wellbeing	.725	1.380
Psychological wellbeing	.477	2.096
Parental relations	.600	1.666
Peer Relations	.711	1.407
School Environment	.718	1.392
Perceived Wealth	.864	1.157

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable binge drinking.

Appendix 39 - Model 7 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Depression	***P* value**
Step 1 to Step 6	
Psychological wellbeing	**.000****

Significant value *p* ≤ .05* P ≤ .01**

Appendix 40 - Model 8 Binary Logistic Regression Assumptions

The first four assumptions of a binomial logistic regression were met by using a dichotomous dependent variable, one or more continuous independent variables, adhering to independence of observations and enough cases per independent variable. The assumption of sample size was met at 307 cases in this study.

Dichotomous Dependent Variables and continuous Predictor Variables.

Dependent variable	**Categories**	**Type of Data**
Depression	0 No depression	Nominal
	1 levels of depression	Nominal
Predictor Variables – Length of time spent on each activity		**Type of Data**
Play computer games		Scale
Actively participate in sports, athletics or exercising		Scale
Read books for enjoyment		Scale
Go out in the evening (to a disco, café, party etc.)		Scale
Hobbies - play an instrument, sing, draw, write		Scale
Go with friends to shopping centres, streets, parks, etc for fun		Scale
Use the internet for leisure activities		Scale
Play slot machines		Scale

Assumption 5 assessed for linearity using the Box-Tidwell procedure (Box and Tidwell, 1962). The linear relationship between the continuous independent variables and the transformed logit of the dependent variable was assessed. The assumption was met when the continuous independent variables (natural log transformations) are linearly related to the dependent variable. A Bonferroni correction was adapted using all 17 terms in the model, with a new adjusted alpha value being statistically significant at $p \leq .00294$ (Tabachnick & Fidell, 2014) Based on the new accepted *p*- value, all interaction terms

were not statistically significant and therefore were linearly related to the logit of the dependent variable.

Results of Box-Tidwell (1962) procedure test for linearity. Interactions between continuous predictor variables and logit transformed predictors, with depression as the dependent variable. New alpha value $p \leq .00294$.

Dependent variable – Depression Natural log transformation	**β**	**S.E.**	**Wald**	***df***	***P* value**
Play computer games	.018	.598	.001	1	.976
Actively participate in sports, athletics or exercising	.177	.901	.039	1	.844
Read books for enjoyment	.628	.706	.791	1	.374
Go out in the evening (to a disco, café, party etc.)	-.315	.890	.125	1	.723
Hobbies - play an instrument, sing, draw, write	.444	.620	.514	1	.474
Friends to shopping centres, streets, parks, etc for fun	.625	1.177	.282	1	.596
Use the internet for leisure activities	2.030	2.395	.719	1	.397
Play slot machines	.966	1.187	.663	1	.416

Assumption 6 tested multicollinearity. As tolerance values are above 0.1 and VIF values are lower than 10 no issue of collinearity was detected between the predictor variables (Menard, 1995 & Myers 1990 as cited in Field, 2018).

Collinearity Statistics

Dependent Variable – Depression	**Tolerance**	**VIF**
Play computer games	.903	1.108
Actively participate in sports, athletics or exercising	.940	1.063
Read books for enjoyment	.807	1.239
Go out in the evening (to a disco, café, party etc.)	.709	1.411
Hobbies - play an instrument, sing, draw, write	.792	1.262
Go with friends to shopping centres, streets, parks, etc for fun	.674	1.484
Use the internet for leisure activities	.987	1.013
Play slot machines	.916	1.091

Assumption 7 was assessed for cases with standardised residual values greater than ±3 (Tabachnick & Fidel, 2014). There were no standardised residuals with values above ±3 standard deviations, in the model using the dependent variable depression.

Appendix 41 - Model 8 Backward Elimination process

Backward Elimination process. Entry .05 and Removal .10

Dependent Variable – Depression	***P* value**
Step 1	
Play computer games	.665
Actively participate in sports, athletics or exercising	.002
Read books for enjoyment	.202
Go out in the evening (to a disco, café, party etc.)	.070
Hobbies - play an instrument, sing, draw, write	.602
Go with friends to shopping centres, streets, parks, etc for fun	.846
Use the internet for leisure activities	.862
Play slot machines	.372
Step 2	
Play computer games	.662
Actively participate in sports, athletics or exercising	.002
Read books for enjoyment	.205
Go out in the evening (to a disco, café, party etc.)	.070
Hobbies - play an instrument, sing, draw, write	.597
Go with friends to shopping centres, streets, parks, etc for fun	.839
Play slot machines	.378
Step 3	
Play computer games	.633
Actively participate in sports, athletics or exercising	.002
Read books for enjoyment	.201
Go out in the evening (to a disco, café, party etc.)	.030
Hobbies - play an instrument, sing, draw, write	.579
Play slot machines	.345
Step 4	
Actively participate in sports, athletics or exercising	.002
Read books for enjoyment	.203
Go out in the evening (to a disco, café, party etc.)	.029
Hobbies - play an instrument, sing, draw, write	.557
Play slot machines	.379
Step 5	
Actively participate in sports, athletics or exercising	.002
Read books for enjoyment	.107
Go out in the evening (to a disco, café, party etc.)	.034
Play slot machines	.357
Step 6	
Actively participate in sports, athletics or exercising	**.002****
Read books for enjoyment	.107
Go out in the evening (to a disco, café, party etc.)	**.024***

Significant value *p* ≤ .05* P ≤ .01**

Appendix 42: Mediation analysis

Using the PROCESS tool by A.F. Hayes in SPSS, non-parametric mediation analysis was conducted using a bootstrapping procedure. According to Hayes (2012) bootstrapping reduces the number of inaccurate assumptions, offering more accurate confidence intervals over other tests, for example, Sobel test. The specification of boot was 1,000 (Field, 2018) which re-estimated the sample distribution from the sample data and generated bias-corrected confidence intervals.

Results of Model 4

The results of mediation analysis using alcohol use as the predictor variable (X) harmful consequences as the dependent variable (Y) and depression as the mediator (M), indicated the following results.

There was a non-significant effect of alcohol use on depression, *b* = .198, 95% BCa CI [-.444, .841], *t* = .608, p = .543. The direct effect of alcohol use on harmful consequences (when depression is in the model) had a significant effect, *b* = 1.80, BCa CI [1.48, .2.11], *t* = 11.24, *p* <.001. The indirect effect of alcohol use on harmful consequences, through depression was not statistically significant, *b* = -.009, 95% BCa CI [-.024, .059]. As zero is included in the 95% CI range, it does not sustain the hypothesis that depression mediates the relationship between alcohol use and harmful consequences (as shown in diagram 6.2). The results also indicate that alcohol use does have a significant total effect on alcohol harmful consequences (when depression is not in the model) *b* = 1.807, 95% BCa CI [1.49, 2.12], t = 11.27. *p* = <.001. In conclusion, depression did not mediate the relationship between alcohol use and harmful consequences. The strength of the

relationship between alcohol use and harmful consequences was not reduced by including the mediator (Field, 2018).

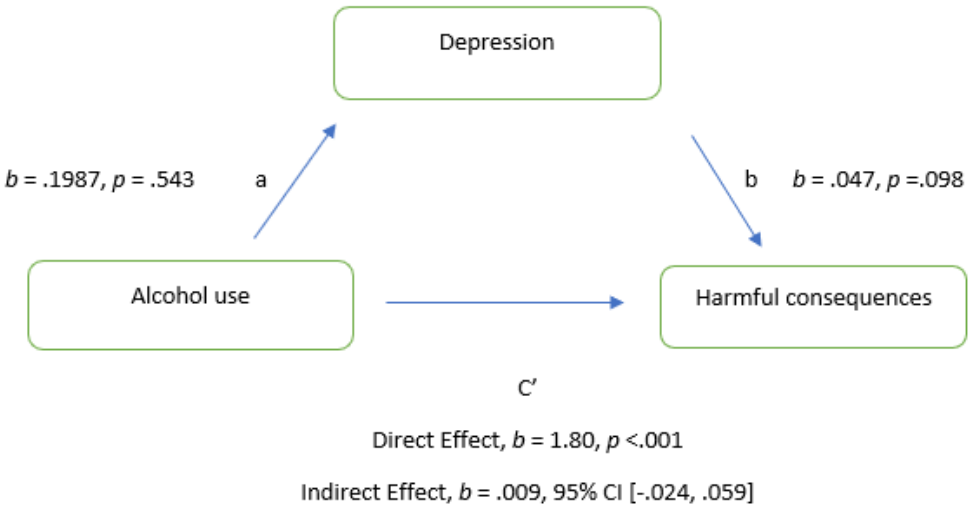


Figure 1. Mediation model of alcohol use and harmful consequences with depression as the mediating variable.

Appendix 43 – Full Descriptive and basic inferential findings from emergency department presentations

Frequencies by PED, AED and Totals

Frequencies of yearly presentations, by PED, AED and total.

Yearly presentations	PED	AED	Total
	n, %	n, %	n, %
2009	52, 9.8%	97, 12.2%	149, 11.2%
2010	50, 9.4%	90, 11.3%	140, 10.6%
2011	34, 6.4%	86, 10.8%	120, 9.1%
2012	36, 6.8%	38, 4.8%	74, 5.6%
2013	45, 8.5	56, 7.0%	101, 7.6%
2014	40, 7.5%	62, 7.8%	102, 7.7%
2015	55, 10.4%	66, 8.3%	121, 9.1%
2016	48, 9.1%	70, 8.8%	118, 8.9%
2017	54, 10.2%	81, 10.2%	135, 10.2%
2018	58, 10.9%	77, 9.7%	135, 10.2%
2019	58, 10.9%	72, 9.1%	130, 9.8%
Total	530, 100%	795, 100%	1325, 100%

Number of repeat visits in a 30-day period, by PED, AED and total.

Number of repeat presentations	PED	AED	Total
	n, %	n, %	n, %
1 visit	526, 99.2%	765, 96.2%	1291, 97.4%
2 visits	3, .6%	21, 2.6%	24, 1.8%
3 visits	1, .2%	5, .6%	6, .5%
4 visits	0, 00%	3, .4%	3, .2%
5 visits	0, 00%	1, .1%	1, .1%
Total	530, 100%	795, 100%	1325, 100%

Frequencies of mode of transport to the hospital, by PED, AED and total.

Mode of transport	PED	AED	Total	Fisher's exact
	n, %	n, %	n, %	
Ambulance	342, 64.5%	493, 62%	835, 63%	
Car	176, 33.2%	260, 32.7%	436, 32.9%	
Taxi	2, .4%	12, 1.5%	14, 1.1%	
Gardai	6, 1.1%	5, .6%	11, .8%	
Public Transport	1, .2%	11, 1.4%	12, .9%	
Walk	0, 00%	14, 1.8%	14, 1.1%	
Other	2, .4%	0, 00%	2, .2%	
Total	529, 99.8%	795, 100%	1324, 99.9%	p=.001

A Chi-Square test for independence assumption of lowest expected frequency of 5 or more in any cell was violated. 4 cells (28.6%) have expected count less than 5. So alternatively, multiple Fisher's exact tests (2 x 2 contingency) were analysed, by each pairwise comparison. Showing the differences between the proportions of the two emergency department groups in terms of one category of the dependent variable (mode of transport). (Fishers exact allows the probability of the chi-square within small samples where the expected frequency in any cell is below 5). Observed frequencies and percentages are presented above.

Fisher's exact tests were conducted due to an inadequate sample size for the chi-square test of homogeneity. The multinominal probability distributions were equal in the population for other mode of transport, ambulance, car, taxi and An Garda Síochána, $p >$ .05. A Fisher exact test found the two multinominal probability distributions were not equal in the population, in relation to the mode of transport by public transport, $p = .034$ and walked, $p = .001$.

Frequencies of gender by PED, AED and total.

Sex	**PED**	**AED**	**Total**	**Chi- square**
	n, %	**n, %**	**n, %**	
Female	279, 52.6%	308, 38.7%	587, 44.3%	
Male	251, 47.4%	487, 61.3%	738, 55.7%	
Total	530, 100%	795, 100%	1325, 100%	$p \leq .001$

A Chi-Square test for independence (with Yates Continuity Correction) indicated a significant association χ^2 (1, n=1325) = 24.34, $p \leq .001$, *phi* = .14. Therefore, the proportion

of male/females presentations in the PED were significantly different from the proportion of male/females presentations in the AED.

Frequencies of age, by PED, AED and total.

Age	PED	AED	Total
	n, %	n, %	n, %
12 years	17, 3.2%	0, 00%	17, 1.3%
13 years	70,13.2%	1, .1%	71, 5.4%
14 years	182, 34.3%	1, .1%	183, 13.8%
15 years	251, 47.4%	15, 1.9%	266, 20.1%
16 years	9, 1.7%	185, 23.3%	194, 14.6%
17 years	1, .2%	243, 30.6%	244, 18.4%
18 years	0, 00%	350, 44%	350, 26.4%
Total	530, 100%	795, 100%	1325, 100%

Frequencies of referral source, by PED, AED and total.

Referral Source	PED	AED	Total	Chi-square
	n, %	n, %	n, %	
Self	478, 90.2%	744, 93.6%	1222, 92.2%	
Gardai	16, 3%	2, .3%	18, 1.4%	
Hospital/Clinic	6, 1.1%	4, .5%	10, .8%	
GP	23, 4.3%	17, 2.1%	40, 3%	
Other	7, 1.3%	28, 3.5%	35, 2.6%	
Total	530, 100%	795, 100%	1325, 100%	$p \leq .001$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (4) = 30.93, $p \leq .001$. Observed frequencies and percentages of referral sources for each emergency department are presented above. There was a statistically significant difference in the multinomial probability distributions between the two groups ($p \leq .001$).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on five pairwise comparisons, statistical significance was accepted at $p < .01$. There was a statistically significant difference in the proportion of PED and AED presentations who were referred by An Garda Síochána (n

=16, 3% versus n = 2, .03%). There were no statistically significant differences in the proportion of PED and AED presentations who were self referred (n = 478, 90.2% versus 744, 93.6%) or the proportion of PED presentations referred by hospital/clinics, than AED (n = 6, 1.1% versus n = 4, .05%) or the proportion of PED presentations referred by a GP, than AED (n = 23, 4.3%, versus n = 17, 2.1%) or the proportion of PED presentations referred by other sources than AED (n = 7, 1.3% versus n = 28, 3.5%), *p =.01.*

Frequencies of Triage category, by PED, AED and total.

Triage Category	**PED**	**AED**	**Total**	**Chi-square**
	n, %	**n, %**	**n, %**	
Category 1 (Immediate Attention)	33, 6.2%	11, 1.4%	44, 3.3%	
Category 2 (Very urgent attention)	258, 48.7%	213, 26.8%	471, 35.5%	
Category 3 (Urgent)	200, 37.7%	468, 58.9%	668, 50.4%	
Category 4 (Non-urgent)	38, 7.2%	96, 12.1%	134, 10.1%	
Category 5	1, .2%	7, .9%	8, .6%	
Total	530, 100%	795, 100%	1325, 100%	$p \leq .001$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (4) = 103.57, $p \leq .001$. Observed frequencies and percentages for the PED and AED, are presented above. There was a statistically significant difference in the multinomial probability distributions between the two groups ($p \leq .001$).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on five pairwise comparisons, statistical significance was accepted at $p < .01$. The results indicated statistically significant differences in the proportion of PED and AED presentations who were assigned triage category 1 (n = 33, 6.2% versus n = 11, .1.4%) as well as the proportion of PED presentations who were assigned triage category 2 (n= 258, 51.3% versus n = 213, 73.2%),

category 3 (n = 200, 62.3% versus n= 468, 41.1%) and category 4 (n= 38, 7.2% versus n = 96, 12.1%), than AED presentations. There were no statistically significant differences in the proportion of PED and AED presentations who were assigned triage category 5 (n = 1, .2% versus 7, .9%), p >.01.

Frequencies of Presenting complaint, by PED, AED and total.

Presenting complaint	PED n, %	AED n, %	Total n, %	Chi-square
Collapse	8, 1.5%	144, 18.1%	152, 11.5%	
Laceration/Wound/Injury	93, 17.5%	264, 33.2%	357, 26.9%	
Ingestion	206, 38.9%	37, 4.7%	243, 18.3%	
Intoxication/Overdose	162, 30.6%	87, 10.9%	249, 18.8%	
Pain	14, 2.6%	158, 19.9%	172, 13%	
Convulsions/Seizures	8, 1.5%	6, .8%	14, 1.1%	
Respiratory/Heart	0, 00%	15, 1.9%	15, 1.1%	
Psychosocial	23, 4.3%	43, 5.4%	66, 5%	
Other	16, 3%	31, 3.9%	47, 3.5%	
Did not wait	0, 00%	10, 1.3%	10, .8%	
Total	530, 100%	795, 100%	1325, 100%	$p \leq .001$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (9) = 466.05, $p \leq .001$. Observed frequencies and percentages for the PED and AED, are presented above. There was a statistically significant difference in the multinomial probability distributions between the two groups ($p \leq .001$).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on ten pairwise comparisons, statistical significance was accepted at $p < .005$. The results indicated statistically significant differences in the proportion of PED presentations due to collapse; laceration/wound/injury; ingestion; pain; intoxication and respiratory/heart, than AED presentations. There were no statistically significant differences in the proportion of PED

presentation due to convulsions/seizures; psychosocial issues, did not wait and other complaints, than AED presentations ($p > .005$).

Frequencies of Doctor's diagnosis, by PED, AED and total.

Doctor's diagnosis	PED n, %	AED n, %	Total n, %	Fishers Exact
Alcohol excess/Intoxication	309, 58.3%	185, 23.3%	494, 37.3%	
Ingestion	93, 17.5%	45, 5.7%	138, 10.4%	
Laceration/Wound/Injury	70, 13.2%	170, 21.45%	240, 18.1%	
Collapse	0, 00%	8, 1%	8, .6%	
Respiratory/heart	0, 00%	2, .3%	2, .2%	
Convulsions/seizures	3, .6%	7, .9%	10, .8%	
Psychosocial	16, 3%	30, 3.8%	46, 3.5%	
Other	9, 1.7%	27, 3.4%	36, 2.7%	
Normal Clinical examination	5, .9%	60, 7.5%	65, 4.9%	
No diagnosis available	4, .8%	54, 6.8%	58, 4.4%	
Did not wait	13, 2.5%	197, 24.8%	210, 15.8%	
Total	522, 98.5%	785, 98.7%	1307, 98.6%	$p \leq .001$

A Chi-Square test for independence assumption of lowest expected frequency of 5 or more in any cell was violated. 5 cells (22.7%) have expected count less than 5. So alternatively, multiple Fisher's exact tests (2 x 2 contingency) were analysed, by each pairwise comparison. Showing the differences between the proportions of the two emergency department groups in terms of one category of the dependent variable (Doctor's diagnosis). (Fishers exact allows the probability of the chi-square within small samples where the expected frequency of in any cell is below 5). Observed frequencies and percentages are presented above.

Fisher's exact tests were conducted due to an inadequate sample size for the chi-square test of homogeneity. The multinominal probability distributions were equal in the population for respiratory/heart, convulsions/seizures, other diagnosis and psychosocial, $p > .05$. Fisher exact tests found the two multinominal probability distributions were not equal in the population, in relation to alcohol excess/intoxication ($p = <.001$),

laceration/wound/injury (p = <.001) , did not wait (p = <.001), no diagnosis available (p = <.001), collapse (p = .025), normal clinical exam (p = <.001) and ingestion (p = <.001). There are significant differences in the proportion of presentations between the PED and AED for the following doctor's diagnosis: alcohol excess/intoxication; laceration/wound/injury; did not wait; no diagnosis available; collapse; normal clinical exam and ingestion.

Frequencies of Discharge outcome, by PED, AED and total.

Discharge outcome	**PED**	**AED**	**Total**	**Chi-square**
	n, %	**n, %**	**n, %**	
Admitted to hospital	328, 61.9%	68, 8.6%	396, 29.9%	
Discharged	103, 19.4%	147, 18.5%	250, 18.9%	
Referred to other hospital/Clinic/Day care	18, 3.4%	74, 9.3%	92, 6.9%	
Referred to GP	32, 6%	297, 37.4%	329, 24.8%	
Referred to social worker	31, 5.8%	0, 00%	31, 2.3%	
Refused Treatment/No follow-up	7, 1.3%	17, 2.1%	24, 1.8%	
Did not wait	11, 2.1%	192, 24.2%	203, 15.3%	
Total	530, 100%	795, 100%	1325, 100%	$p \leq .001$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (6) = 593.27, p ≤.001. Observed frequencies and percentages for the PED and AED, are presented above. There was a statistically significant differences in the multinomial probability distributions between the two groups (p ≤.001).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on seven pairwise comparisons, statistical significance was accepted at p < .007. The results indicated statistically significant differences in the proportion of PED discharge outcomes: admitted to hospital; did not wait; referred to other hospital/clinic/day care; referred to GP; referred to social

worker; than AED presentations. There were no statistically significant differences in the proportion of PED discharge outcomes: discharged; refused treatment/no follow-up, than AED presentations ($p > .007$).

Frequencies of Discharge destination, by PED, AED and total.

Discharge destination	PED	AED	Total	Chi-square
	n, %	n, %	n, %	
Hospital/Clinic	202, 38.1%	73, 9.2%	275, 20.8%	
Home	318, 60%	629, 79.1%	947, 71.5%	
Other	6, 1.1%	74, 9.3%	80, 6%	
Total	526, 99.2%	776, 97.6	1302, 98.3%	$p \leq .001$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (2) = 179.05, $p \leq .001$. Observed frequencies and percentages for the PED and AED, are presented above. There was a statistically significant difference in the multinomial probability distributions between the two groups ($p \leq .001$).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on three pairwise comparisons, statistical significance was accepted at $p < .017$. The results indicated statistically significant differences in the proportion of PED discharge destinations to hospital/clinic (n = 202, 38.1% versus n= 73, 9.2%), discharged to home (n = 318, 60% versus n = 629, 79.1%) and discharged to other (n = 6, 1.1% versus n = 74, 9.3%) than AED presentations. ($p > .017$).

Frequencies by gender and totals

Frequencies of yearly presentations, by gender and total.

Yearly presentations and total (n=1,325)	Female n, %	Male n, %	Total n, %
2009	63, 10.7%	86, 11.7%	149, 11.2%
2010	54, 9.2%	86, 11.7%	140, 10.6%
2011	41, 7%	79, 10.7%	120, 9.1%
2012	30, 5.1%	44, 6%	74, 5.6%
2013	39, 6.6%	62, 8.4%	101, 7.6%
2014	44, 7.5%	58, 7.9%	102, 7.7%
2015	51, 8.7%	70, 9.5%	121, 9.1%
2016	57, 9.7%	61, 8.3%	118, 8.9%
2017	69, 11.8%	66, 8.9%	135, 10.2%
2018	72, 12.3%	63, 8.5%	135, 10.2%
2019	67, 11.4%	63, 8.5%	130, 9.8%
Total	587, 100%	738, 100%	1325, 100%

Frequencies of repeat presentations within a 30-day period, by gender and total.

Repeat presentations	Female n, %	Male n, %	Total n, %	Chi-Square
Did not repeat presentation	577, 98.3%	714, 96.7%	1291, 97.4%	
Repeat presentation	10, 1.7%	24, 3.3%	34, 2.6%	
Total	587, 100%	738, 100%	1325, 100%	p = .11

A Chi-Square test for independence (with Yates Continuity Correction) indicated no significant association χ^2 (1, n=1325) = 2.55, p= .11, *phi* = .05. Therefore, the proportion of males that had repeat presentations was not significantly different from the proportion of females who had repeat presentations. Indicating that there was no association between repeat presentations and gender.

Number of repeat visits in a 30-day period, by gender and total.

Number of repeat presentations	Female n, %	Male n, %	Total n, %
1 visit	577, 98.3%	714, 96.7%	1291, 97.4%
2 visits	7, 1.2%	17, 2.3%	24, 1.8%
3 visits	2, .3%	4, .5%	6, .5%
4 visits	1, .2%	2, .3%	3, .2%
5 visits	0, 00%	1, .1%	1, .1%
Total	587, 100%	738, 100%	1325, 100%

Frequencies of mode of transport to the hospital, by gender and total.

Mode of transport	Female n, %	Male n, %	Total n, %	Fisher's Exact
Ambulance	355, 60.5%	480,65%	835, 63%	
Car	213, 36.3%	223, 30.2%	436, 32.9%	
Taxi	7, 1.2%	7, .9%	14, 1.1%	
Gardai	4, .7%	7, .9%	11, .8%	
Public Transport	4, .7%	8, 1.1%	12, .9%	
Walk	2, .3%	12, 1.6%	14, 1.1%	
Other	0, 00%	1, .1%	1, .1%	
Total	586, 99.8%	738, 100%	1324, 99.9%	$p = .02$

A Chi-Square test for independence assumption of lowest expected frequency of 5 or more in any cell was violated. 3 cells (21.4%) have expected count less than 5. So alternatively, multiple Fisher's exact tests (2 x 2 contingency) were analysed, by each pairwise comparison. Showing the differences between the proportions of the two gender groups in terms of one category of the dependent variable (mode of transport). (Fishers exact allows the probability of the chi-square within small samples where the expected frequency of in any cell is below 5). Observed frequencies and percentages are presented above.

Fisher's exact tests were conducted due to an inadequate sample size for the chi-square test of homogeneity. The multinominal probability distributions were equal in the population for other mode of transport, ambulance, taxi, An Garda Síochána and public transport, $p > .05$. Fisher exact tests found the two multinominal probability distributions

were not equal in the population, p = .02, in relation to the mode of transport by car. Therefore, the proportion of females that arrived by car is significantly different to the proportion of males that arrived by car.

Frequencies of age, by gender and total.

Age	Female	Male	Total
	n, %	n, %	n, %
12 years	8, 1.4%	9, 1.2%	17, 1.3%
13 years	41, 7%	30, 4.1%	71, 5.4%
14 years	98, 16.7%	85, 11.5%	183, 13.8%
15 years	134, 22.8%	132, 17.9%	266, 20.1%
16 years	84, 14.3%	110, 14.9%	194, 14.6%
17 years	111, 18.9%	133, 18.0%	244, 18.4%
18 years	111, 18.9%	239, 32.4%	350, 26.4%
Total	587, 100%	738, 100%	1325, 100%

Frequencies of referral source, by gender and total.

Referral Source	Female	Male	Total	Chi-Square
	n, %	n, %	n, %	
Self	544, 92.7%	678, 91.9%	1222, 92.2%	
Gardai	6, 1%	12, 1.6%	18, 1.4%	
Hospital/Clinic	3, .5%	7, .9%	10, .8%	
GP	21%, 3.6%	19, 2.6%	40, 3%	
Other	13, 2.2%	22, 3%	35, 2.6%	
Total	587, 100%	738, 100%	1325, 100%	p = .471

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were equal in the population, χ^2 (4) = 3.55, p = .471. Observed frequencies and percentages of referral sources for each emergency department are presented above. Therefore, the proportion of females across the referral sources was not significantly different from the proportion of males across the referral sources. There was no statistically significant difference in the multinomial probability distributions between the two groups (p>.05).

Frequencies of Triage category, by gender and total.

Triage Category	Female n, %	Male n, %	Total n, %	Chi-Square
Category 1 (Immediate Attention)	23, 3.9%	21, 2.8%	44, 3.3%	
Category 2 (Very urgent attention)	219, 37.3%	252, 34.1%	471, 35.5%	
Category 3 (Urgent)	280, 47.7%	388, 52.6%	668, 50.4%	
Category 4 (Non-urgent)	59, 10.1%	75, 10.2%	134, 10.1%	
Category 5	6, 1%	2, .3%	8, .6%	
Total	587, 100%	738, 100%	1325, 100%	$p = .16$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (4) = 6.65, p = .16. Observed frequencies and percentages of females and males are presented in table ?? above. There was no statistically significant difference in the multinomial probability distributions between the two groups (p>.05).

Frequencies of Presenting complaint, by gender and total.

Presenting complaint	Female n, %	Male n, %	Total n, %	Chi-Square
Collapse	64, 10.9%	88, 11.9%	152, 11.5%	
Laceration/Wound/Injury	99, 16.9%	258, 35%	357, 26.9%	
Ingestion	126, 21.5%	117, 15.9%	243, 18.3%	
Intoxication/Overdose	139, 23.7%	110, 14.9%	249, 18.8%	
Pain	78, 13.3%	94, 12.7%	172, 13%	
Convulsions/Seizures	5, .9%	9, 1.2%	14, 1.1%	
Respiratory/Heart	9, 1.5%	6, .8%	15, 1.1%	
Psychosocial	41, 7%	25, 3.4%	66, 5%	
Other	23, 3.9%	24, 3.3%	47, 3.5%	
Did not wait	3, .5%	7, .9%	10, .8%	
Total	587, 100%	738, 100%	1325, 100%	$p \leq .001$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (9) = 70.8, $p \leq .001$. Observed frequencies and percentages of females and males, are presented above. There was a statistically significant difference in the multinomial probability distributions between the two groups ($p \leq .001$).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on ten pairwise comparisons, statistical significance was accepted at $p < .005$. The results indicated statistically significant differences in the proportion of females presenting due to laceration/wound/injury; intoxication/overdose and psychosocial issues, than the proportion on male presentations. There were no statistically significant differences in the proportion of female presentation due to collapse, ingestion, other complaints, pain, convulsions/seizures; respiratory/heart and did not wait, than the proportions of male presentations ($p > .005$).

Frequencies of Doctor's diagnosis, by gender and total.

Doctor's diagnosis	**Female**	**Male**	**Total**	**Fisher's Exact**
	n, %	**n, %**	**n, %**	
Alcohol excess/Intoxication	245, 41.7%	249, 33.7%	494, 37.3%	$p = .005$
Ingestion	95, 16.2%	43, 5.8%	138, 10.4%	$p \leq .001$
Laceration/Wound/Injury	63, 10.7%	177, 24%	240, 18.1%	$p \leq .001$
Collapse	2, .3%	6, .8%	8, .6%	
Respiratory/heart	1, .2%	1, .1%	2, .2%	
Convulsions/seizures	3, .5%	7, .9%	10, .8%	
Psychosocial	25, 4.3%	21, 2.8%	46, 3.5%	
Other	16, 2.7%	20, 2.7%	36, 2.7%	
Normal Clinical examination	27, 4.6%	38, 5.1%	65, 4.9%	
No diagnosis available	25, 4.3%	33, 4.5%	58, 4.4%	
Did not wait	81, 13.8%	129, 17.5%	210, 15.8%	
Total	583, 99.3%	724, 98.1%	1307, 98.6%	

A Chi-Square test for independence assumption of lowest expected frequency of 5 or more in any cell was violated. 5 cells (22.7%) have expected count less than 5. So alternatively, multiple Fisher's exact tests (2 x 2 contingency) were analysed, by each pairwise comparison. Showing the differences between the proportions of the two gender groups in terms of one category of the dependent variable (doctor's diagnosis). (Fishers exact allows the probability of the chi-square within small samples where the

expected frequency of in any cell is below 5). Observed frequencies and percentages are presented above.

Fisher's exact tests was conducted due to an inadequate sample size for the chi-square test of homogeneity. The multinominal probability distributions were equal in the population for doctor's diagnosis categories: did not wait; no diagnosis available, collapse, respiratory/heart; normal clinical examination; convulsions/seizures; other diagnosis and psychosocial, $p > .05$. Fisher exact tests found the two multinominal probability distributions were not equal in the population in relation to the doctor's diagnosis of alcohol excess/intoxication ($p = .005$); laceration/wound/injury ($p = <.001$), and ingestion ($p = <.001$). Therefore, the proportion of females diagnosed by a doctor as presenting with alcohol excess/intoxication, laceration/wound/injury or ingestion was significantly different to the proportion of males with the same diagnosis.

Frequencies of Discharge outcome, by gender and total.

Discharge outcome	Female n, %	Male n, %	Total n, %	Chi-Square
Admitted to hospital	197, 33.6%	199, 27%	396, 29.9%	
Discharged	119, 20.3%	131, 17.8%	250, 18.9%	
Referred to another hospital/Clinic/Day care	36, 6.1%	56, 7.6%	92, 6.9%	
Referred to GP	132, 22.5%	197, 26.7%	329, 24.8%	
Referred to social worker	19, 3.2%	12, 1.6%	31, 2.3%	
Refused Treatment/No follow-up	6, 1%	18, 2.4%	24, 1.8%	
Did not wait	78, 13.3%	125, 16.9%	203, 15.3%	
Total	587, 100%	738, 100%	1325, 100%	$p = .004$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (6) = 19.3, $p = .004$. Observed frequencies and percentages of females and males, are presented above. There was a

statistically significant difference in the multinomial probability distributions between the two groups (*p <.05*).

Post hoc analysis involved pairwise comparisons using multiple z-tests of two proportions with a Bonferroni correction. Based on seven pairwise comparisons, statistical significance was accepted at $p < .007$. The results indicated no statistically significant differences in the proportion of female discharge outcomes, than the proportion of males discharge outcomes ($p > .007$).

Frequencies of Discharge destination, by gender and total.

Discharge destination	Female n, %	Male n, %	Total n, %	Chi-Square
Hospital/Clinic	128, 21.8%	147, 19%	275, 20.8%	
Home	412, 70.2%	535, 72.5%	947, 71.5%	
Other	35, 6%	45, 6.1%	80, 6%	
Total	575, 98%	727, 98.5%	1302, 98.3%	$p = .670$

A Chi-Square test of homogeneity indicated the two multinomial probability distributions were not equal in the population, χ^2 (2) = .804, $p = .67$. Observed frequencies and percentages of females and males are presented above. There was no statistically significant difference in the multinomial probability distributions between the two groups ($p >.05$).

Appendix 44- Glossary of medical terms used in the free text comment box

c2h5oh = alcohol

LOC = loss of consciousness

pt =- patient

Pearl = Pupils equal and reacting to light.

biba = brought in by ambulance

gcs = Glasgow coma scale (objectively describes the extent of impaired consciousness)

bsl = blood sugar level

ed = emergency department

o/a = on arrival

lacs = lacerations

S/B = seen by

c/o = complaining of

resp = respiratory

P on AVPU = (patient's level of consciousness alert, verbal, pain, unresponsive)

Pain on AVPU scale.

amt = amount

ecg = electrocardiography

DSH = deliberate self-harm

hx = history

abdo = abdomen

SOB = shortness of breath

palp = palpitations

tachy = tachycardia

syncope= fainting or passing out

acc = according to

tox = toxicology

H.I = head injury

OD = overdose

nok = next of kin

MDMA = commonly known as ecstasy or molly

CAMHS = children and adolescent mental health services

incon= incontinence

a&e = accident and emergency

Garda = police

Appendix 45: Training Courses Completed

The following training courses were undertaken during the course of my study:

Alcohol and Cancer Workshop (Tallaght Drug and Alcohol Taskforce)

Children First Training Certificate (Tusla)

Research Integrity and Impact in an Open Scholarship era Module (TCD)

GDPR Training (TCD)

Endnote Training (TCD)

Literary searching, Retrieval, Covidence and Endnote Training (TCD)

Developing arguments in your writing (TCD)

Literature review processes (TCD)

Critical thinking (TCD)

Statistics Workshops (TCD)

SAOR Screening and Brief Intervention Training (HSE)

Statistics lectures (TDC)

Children First Training Certificate (Tusla) (Refresher course)

Appendix 46: Reflections

The researcher recorded reflections, decisions and observations in a PhD diary. This was mainly for recording all empirical decisions around the research design, methodology, statistical tests, as well as observations and reflections around the data collection phase.

Between the age of 6 - 15 years the researcher had lived in the same disadvantaged region, where the data were now being collecting, among young people living in urban disadvantage. The region had changed beyond all recognition from a small village with two new housing estate surrounded by fields, into a sprawling mass of housing estates overnight, with little facilities and infrastructure to support the rapid influx of new families. Now, 40 years on, the researched hoped this fact might secure common ground with the students, to share with them exactly where the researcher grew up, at their age. The researcher felt a common affinity with these young people.

The researcher was very aware and concerned that the nature of the survey questions around physical and psychological well-being, parental relationships, depression levels, alcohol use, harmful consequences etc. may trigger negative or adverse emotions among young people living in urban disadvantage. Furthermore, it was apparent that some transition year students were suffering survey fatigue, due to a number of previous research surveys conducted in their school. These were very real ethical concerns.

While completing the initial review of the survey data for potential vulnerable students which scored extremely high on the AUDIT, Revised AUDIT and the Children's Depression Inventory, the researcher was struck by the number of young people reporting "feeling alone, not having any friends, feeling sad" or reporting " nobody loves them". In

addition, a certain number of cases reported high risk drinking patterns and negative/harmful consequences. These findings reflected adverse childhood experiences among a proportion of disadvantage young people. The extraction and analysis of the secondary hospital data on AR emergency department presentations equally reflected the considerable trauma that young people had experienced while consuming alcohol, including intoxication, physical assault, sexual assault, psychosocial issues, directly impacting them and their families.

The researcher was immersed in the data over a prolonged period of time and on occasions found it hard not to be personally affected. This was especially true during the COVID-19 Pandemic when all personal contact with PhD colleagues and supervisors was abruptly stopped and working from home felt more isolated. The researcher's background in psychology, along with supportive supervisors and family members ensured the researcher was able to keep a balanced perspective and engaged in self-care practices like meditation and regular exercise. This allowed the researcher to report the findings impartially and accurately. The researchers passion for their topic help guide the study in a positive manner.

References

Akers, R. L., & Jennings, W. G. (2019). The social learning theory of crime and deviance. In *Handbook on crime and deviance* (pp. 113-129). Springer.

Akers, R. L., & Jensen, G. F. (2017). The empirical status of social learning theory of crime and deviance: The past, present, and future. *Taking stock*, 37-76.

Akers, R. L., Krohn, M. D., Lanza-Kaduce, L., & Radosevich, M. (1995). Social learning and deviant behavior: A specific test of a general theory. *Contemporary masters in criminology*, 187-214.

Alcohol Concern. (2011). Reducing underage alcohol harm in accident and emergency settings. Alcohol Concern.

Aliiaskarov, B., & Bakiev, E. (2014). The social learning and social control determinants of alcohol use among youth in Kyrgyzstan. *Drugs: education, prevention and policy*, *21*(3), 205-210.

Anderson, J. F., & Kras, K. (2005). Revisiting Albert Bandura's social learning theory to better understand and assist victims of intimate personal violence. *Women & Criminal Justice*, *17*(1), 99-124.

Antai, D., Lopez, G., Antai, J., & Anthony, D. (2014). Alcohol drinking patterns and differences in alcohol-related harm: a population-based study of the United States. *BioMed research international*, *2014*.

Artino Jr, A. R. (2007). Bandura, Ross, and Ross: Observational Learning and the Bobo Doll. *Online submission*.

Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). *The alcohol use disorders identification test*. World Health Organization Geneva.

Bahn, D. (2001). Social learning theory: its application in the context of nurse education. *Nurse Education Today*, *21*(2), 110-117.

Bandura, A. (1971). *Social learning theory*. NJ: General Learning Press.

Bandura, A. (1973). Aggression: A social learning analysis. prentice-hall.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Prentice-Hall, Inc.

Bandura, A. (2017). Social learning theory of aggression. In *The control of aggression* (pp. 201-252). Routledge.

Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *The Journal of Abnormal and Social Psychology*, *63*(3), 575.

Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1). Prentice Hall.

Banka, P. (2018). The Relationship Between Childhood Depression, Obesity and Poor School Performance Among Urban Disadvantaged Children Trinity College Dublin].

Barnett, N. P., Monti, P. M., Spirito, A., Colby, S. M., Rohsenow, D. J., Ruffolo, L., & Woolard, R. (2003). Alcohol use and related harm among older adolescents treated in an emergency department: the importance of alcohol status and college status. *Journal of Studies on Alcohol*, *64*(3), 342-349.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Bellis, M. A., Hughes, K., Morleo, M., Tocque, K., Hughes, S., Allen, T., Harrison, D., & Fe-Rodriguez, E. (2007). Predictors of risky alcohol consumption in schoolchildren and their implications for preventing alcohol-related harm. *Substance abuse treatment, prevention, and policy*, *2*(1), 1-10.

Bellis, M. A., Hughes, K., Nicholls, J., Sheron, N., Gilmore, I., & Jones, L. (2016). The alcohol harm paradox: using a national survey to explore how alcohol may disproportionately impact health in deprived individuals. *BMC public health*, *16*(1), 1-10.

Bertalanffy, L. v. (1968). General system theory: Foundations, development, applications. G. Braziller.

Bhattachaijee, R., & Khound, A. (2020). Assessment of reading habits among teenagers. *International Journal of Education and Management Studies*, *10*(4), 420-423.

Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., & Patton, G. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of adolescent health*, *40*(4), 357. e359-357. e318.

Boniface, S., Kneale, J., & Shelton, N. (2013). Actual and Perceived Units of Alcohol in a Self-Defined "Usual Glass" of Alcoholic Drinks in E ngland. *Alcoholism: Clinical and Experimental Research*, *37*(6), 978-983.

Bonomo, Y. A., Bowes, G., Coffey, C., Carlin, J. B., & Patton, G. C. (2004). Teenage drinking and the onset of alcohol dependence: a cohort study over seven years. *Addiction*, *99*(12), 1520-1528.

Borsari, B., & Carey, K. B. (2006). How the quality of peer relationships influences college alcohol use. *Drug and alcohol review*, *25*(4), 361-370.

Box, G. E., & Tidwell, P. W. (1962). Transformation of the independent variables. *Technometrics*, *4*(4), 531-550.

Breslin, P. (2015). Challenging the Stigma of Youthreach: Recognition, Interpersonal Relations and Narrative Stories National University of Ireland, Maynooth (Ireland)].

Bryman, A. (1984). The debate about quantitative and qualitative research: a question of method or epistemology? *British journal of Sociology*, 75-92.

Bryman, A., & Bell, E. (2007). *Business Research Methods* (Vol. 2nd Edition). Oxford University Press.

Burke, R. S., & Stephens, R. S. (1999). Social anxiety and drinking in college students: A social cognitive theory analysis. *Clinical psychology review*, *19*(5), 513-530.

Burla, L., Knierim, B., Barth, J., Liewald, K., Duetz, M., & Abel, T. (2008). From text to codings: intercoder reliability assessment in qualitative content analysis. *Nursing research*, *57*(2), 113-117.

Caldwell, T. M., Rodgers, B., Jorm, A. F., Christensen, H., Jacomb, P. A., Korten, A. E., & Lynskey, M. T. (2002). Patterns of association between alcohol consumption and symptoms of depression and anxiety in young adults. *Addiction*, *97*(5), 583-594.

Cambron, C., Kosterman, R., Catalano, R. F., Guttmannova, K., & Hawkins, J. D. (2018). Neighborhood, family, and peer factors associated with early adolescent smoking and alcohol use. *Journal of youth and adolescence*, *47*(2), 369-382.

Carlson, M. D., & Morrison, R. S. (2009). Study design, precision, and validity in observational studies. *Journal of palliative medicine*, *12*(1), 77-82.

Catalano, R. F., Haggerty, K. P., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of school health*, *74*, 252-261.

Chen, S. Y. (2008). Who is the avid adolescent reader in Taiwan? The role of gender, family, and teacher. *Journal of Adolescent & Adult Literacy*, *52*(3), 214-223.

Cheng, T. C., & Lo, C. C. (2017). Social risk and protective factors in adolescents' reduction and cessation of alcohol use. *Substance Use & Misuse*, *52*(7), 916-928.

Cherpitel, C. J., Ye, Y., & Kerr, W. C. (2018). Risk of past year injury related to hours of exposure to an elevated blood alcohol concentration and average monthly alcohol volume: data from 4 national alcohol surveys (2000 to 2015). *Alcoholism: Clinical and Experimental Research*, *42*(2), 360-368.

Chowdhury, M. Z. I., & Turin, T. C. (2020). Variable selection strategies and its importance in clinical prediction modelling. *Family medicine and community health*, *8*(1).

Chung, S. S., & Joung, K. H. (2019). Risk factors related to binge drinking: A comparative study of American and South Korean adolescents. *The Journal of School Nursing*, *35*(5), 367-377.

Clark, A. M. (1998). The qualitative-quantitative debate: moving from positivism and confrontation to post-positivism and reconciliation. *Journal of advanced nursing*, *27*(6), 1242-1249.

Clark, T. C., Robinson, E., Crengle, S., Sheridan, J., Jackson, N., & Ameratunga, S. (2013). Binge drinking among Maori secondary school students in New Zealand: associations with source, exposure and perceptions of alcohol use. *The New Zealand Medical Journal (Online)*, *126*(1370).

Cohen, J. (1988). Statistical power analysis for the behavioural sciences. Academic.

Cohen, J. (1992). Quantitative methods in psychology: A power primer. Psychological bulletin,

Comiskey, C., Banka, P., Hyland, J., & Hyland, P. (2018). Leadership, sustainability and extending the learning from the Healthy Schools programme to other national and international contexts. *Childrens Research Digest,* , *5*(209), 6-13.

Comiskey, C., Galligan, K., & E., M. (2017). Scoping exercise to provide the necessary evidence to inform the continuation of the Tallaght Drug & Alcohol Task Force (TDATF) Community Action on Alcohol Strategy.

Cortés-Tomás, M.-T., Giménez-Costa, J.-A., Motos-Sellés, P., & Sancerni-Beitia, M.-D. (2017). Revision of AUDIT consumption items to improve the screening of youth Binge Drinking. *Frontiers in psychology*, *8*, 910.

Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative* (Vol. 7). Prentice Hall Upper Saddle River, NJ.

Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

Crossan, F. (2003). Research philosophy: towards an understanding. *Nurse Researcher (through 2013)*, *11*(1), 46.

Crotty, M. J. (1998). The foundations of social research: Meaning and perspective in the research process. *The foundations of social research*, 1-256.

Danielsson, A.-K., Romelsjö, A., & Tengström, A. (2011). Heavy episodic drinking in early adolescence: gender-specific risk and protective factors. *Substance Use & Misuse*, *46*(5), 633-643.

Danielsson, A. K., Wennberg, P., Hibell, B., & Romelsjö, A. (2012). Alcohol use, heavy episodic drinking and subsequent problems among adolescents in 23 European countries: does the prevention paradox apply? *Addiction*, *107*(1), 71-80.

Davies, E. L., Conroy, D., Winstock, A. R., & Ferris, J. (2017). Motivations for reducing alcohol consumption: An international survey exploring experiences that may lead to a change in drinking habits. *Addictive Behaviors*, *75*, 40-46.

Degenhardt, L., Stockings, E., Patton, G., Hall, W. D., & Lynskey, M. (2016). The increasing global health priority of substance use in young people. *The Lancet Psychiatry*, *3*(3), 251-264.

Delaney, L. (2009). Inferential analysis: Powerful storytelling. *British Journal of Cardiac Nursing*, *4*(9), 430-434.

DeMartino, C. H., Rice, R. E., & Saltz, R. (2015). An applied test of the social learning theory of deviance to college alcohol use. *Journal of health communication*, *20*(4), 479-490.

Department of Children and Youth Affairs. (2014). *Better outcomes, brighter futures: the national policy framework for children & young people 2014 - 2020* (ISSN: 9781406428186). S. O. Department of Children and Youth Affairs. https://www.gov.ie/en/publication/775847-better-outcomes-brighter-futures/

Department of Children, E., Disability, Integration and Youth. (2022). *Welcome to your place your space: UBU Your Place Your Space*. Government of Ireland. Retrieved September 26, 2022 from https://ubu.gov.ie/

Department of Education. (2022). *DEIS Delivering Equality of Opportunity In Schools*. Department of Education Retrieved from https://www.gov.ie/en/policy-information/4018ea-deis-delivering-equality-of-opportunity-in-schools/#

Department of Health. (2020). *Sharing the vision: a mental health policy for everyone*. Dublin, Ireland: Government of Ireland

Dieronitou, I. (2014). The ontological and epistemological foundations of qualitative and quantitative approaches to research. *International Journal of Economics*, *2*(10), 1-17.

Dillon, L. (2017). New National Drug and Alcohol Strategy launched. *Drugnet Ireland*(63), 1-7.

Donovan, J. E., Leech, S. L., Zucker, R. A., Loveland-Cherry, C. J., Jester, J. M., Fitzgerald, H. E., Puttler, L. I., Wong, M. M., & Looman, W. S. (2004). Really underage drinkers: Alcohol use among elementary students. *Alcoholism: Clinical and Experimental Research*, *28*(2), 341-349.

Doyle, A., Sunday, S., Galvin, B., & Mongan, D. (2022). Alcohol and other drug use among children and young people in Ireland: prevalence, risk and protective factors, consequences, responses, and policies. In: HRB Overview Series.

Duggan, E. M., Sturley, J., Fitzgerald, A. P., Perry, I. J., & Hourihane, J. O. B. (2012). The 2002–2007 trends of prevalence of asthma, allergic rhinitis and eczema in Irish schoolchildren. *Pediatric allergy and immunology*, *23*(5), 464-471.

Durkin, K. F., Wolfe, T. W., & Clark, G. A. (2005). College students and binge drinking: An evaluation of social learning theory. *Sociological Spectrum*, *25*(3), 255-272.

Egerton-Warburton, D., Gosbell, A., Wadsworth, A., Fatovich, D. M., & Richardson, D. B. (2014). Survey of alcohol-related presentations to Australasian emergency departments. *Medical Journal of Australia*, *201*(10), 584-587.

Ellingson, J. M., Corley, R., Hewitt, J. K., & Friedman, N. P. (2018). A prospective study of alcohol involvement and the dual-systems model of adolescent risk-taking during

late adolescence and emerging adulthood. *Addiction*. https://doi.org/10.1111/add.14489

Ellingson, J. M., Corley, R., Hewitt, J. K., & Friedman, N. P. (2019). A prospective study of alcohol involvement and the dual-systems model of adolescent risk-taking during late adolescence and emerging adulthood. *Addiction*, *114*(4), 653-661.

Elton, A., Allen, J. H., Yorke, M., Khan, F., Lin, Q., & Boettiger, C. A. (2021). High Trait Attention Promotes Resilience and Reduces Binge Drinking Among College Students With a Family History of Alcohol Use Disorder. *Frontiers in psychiatry*, *12*, 672863.

Eriksson, C. P., Von der Pahlen, B., Sarkola, T., & Seppä, K. (2003). Oestradiol and human male alcohol-related aggression. *Alcohol and alcoholism*, *38*(6), 589-596.

Erol, A., & Karpyak, V. M. (2015). Sex and gender-related differences in alcohol use and its consequences: Contemporary knowledge and future research considerations. *Drug and alcohol dependence*, *156*, 1-13.

Esch, P., Bocquet, V., Pull, C., Couffignal, S., Lehnert, T., Graas, M., Fond-Harmant, L., & Ansseau, M. (2014). The downward spiral of mental disorders and educational attainment: a systematic review on early school leaving. *BMC psychiatry*, *14*(1), 1-13.

Evans, M., Lester, L., Midford, R., Cahill, H. W., Foxcroft, D., Waghorne, R., & Venning, L. (2019). The impact of gender, socioeconomic status and locality on the development of student patterns of alcohol consumption and harm. *Health Education*, *119*(4), 309-318.

Ferrari, R. (2015). Writing narrative style literature reviews. *Medical writing*, *24*(4), 230-235.

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs—principles and practices. *Health services research*, *48*(6pt2), 2134-2156.

Field, A. (2018). Discovering statistics using IBM SPSS statistics. Sage.

Fox, N. J. (2008). Post-positivism. The SAGE encyclopedia of qualitative research methods, 2, 659-664.

Freeney, Y., & O'Connell, M. (2012). The predictors of the intention to leave school early among a representative sample of Irish second-level students. *British educational research journal*, *38*(4), 557-574.

Galvin, B. (2006). GAA initiative on alcohol and substance abuse. *Drugnet Ireland, Issue 18, Summer 2006, p. 5*(18).

Gavin, A., Keane, E., Callaghan, M., Molcho, M., Kelly, C., & Nic Gabhainn, S. (2015). The Irish health behaviour in school-aged children (HBSC) study 2014.

Getz, J. G., & Bray, J. H. (2005). Predicting heavy alcohol use among adolescents. *American Journal of Orthopsychiatry*, *75*(1), 102-116.

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, *10*(2), 486.

Giddings, L. S., & Grant, B. M. (2007). A Trojan horse for positivism?: A critique of mixed methods research. *Advances in nursing science*, *30*(1), 52-60.

Gill, J. S., & Donaghy, M. (2004). Variation in the alcohol content of a 'drink'of wine and spirit poured by a sample of the Scottish population. *Health Education Research*, *19*(5), 485-491.

Glencorse, M., Wilson, G., & Birch, D. N. (2014). Paramedic perceptions and attitudes to working with patients with alcohol-related injury or illness. *Journal of Paramedic Practice*, *6*(6), 310-318.

Gomm, R. (2008). Social research methodology: A critical introduction. Bloomsbury Publishing.

Government of Ireland. (1998). *Education Act, 1998*. (Number 51 of 1998). Retrieved from https://www-irishstatutebook-ie.elib.tcd.ie/eli/1998/act/51/enacted/en/print

Graham, K., Massak, A., Demers, A., & Rehm, J. (2007). Does the association between alcohol consumption and depression depend on how they are measured? *Alcoholism: Clinical and Experimental Research*, *31*(1), 78-88.

Graham, K., Wilsnack, R., Dawson, D., & Vogeltanz, N. (1998). Should alcohol consumption measures be adjusted for gender differences? *Addiction*, *93*(8), 1137-1147.

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, *24*(2), 105-112.

Grant, B. F., & Dawson, D. A. (1997). Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: results from the National Longitudinal Alcohol Epidemiologic Survey. *Journal of substance abuse*, *9*, 103-110.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105.

Guetterman, T. C., Fetters, M. D., & Creswell, J. W. (2015). Integrating quantitative and qualitative results in health science mixed methods research through joint displays. *The Annals of Family Medicine*, *13*(6), 554-561.

Halcomb, E., Hickman, L. . (2015). Mixed methods research. *Nursing Standard: promoting excellence in nursing care*, *29*(32), 41-47.

Hanson, M. D., & Chen, E. (2007). Socioeconomic Status and Health Behaviors in Adolescence: A Review of the Literature. *Journal of Behavioral Medicine*, *30*(3), 263-285. https://doi.org/10.1007/s10865-007-9098-3

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling [White paper]. http://www.afhayes.com/public/process2012.pdf

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis second edition: A regression-based approach. The Guildford Press.

Healey, C., Rahman, A., Faizal, M., & Kinderman, P. (2014). Underage drinking in the UK: changing trends, impact and interventions. A rapid evidence synthesis. International Journal of Drug Policy. *25*(1), 124-132.

Hermens, D. F., Lagopoulos, J., Tobias-Webb, J., De Regt, T., Dore, G., Juckes, L., Latt, N., & Hickie, I. B. (2013). Pathways to alcohol-induced brain impairment in young people: a review. *Cortex*, *49*(1), 3-17.

Hetrick, S. E., Bailey, A. P., Smith, K. E., Malla, A., Mathias, S., Singh, S. P., O'Reilly, A., Verma, S. K., Benoit, L., & Fleming, T. M. (2017). Integrated (one-stop shop) youth health care: Best available evidence and future directions. *Medical Journal of Australia*, *207*(S10), S5-S18.

Hibell, B., Guttormsson, U., Ahlström, S., Balakireva, O., Bjarnason, T., Kokkevi, A., & Kraus, L. (2009). The 2007 ESPAD Report. Substance Use Among Students in 35 European Countries. The Swedish Council for Information on Alcohol and Other Drugs. *Stockholm,, Sweden*.

Hingson, R. W., Heeren, T., & Winter, M. R. (2006). Age at drinking onset and alcohol dependence: age at onset, duration, and severity. *Archives of pediatrics & adolescent medicine*, *160*(7), 739-746.

Hogben, M., & Byrne, D. (1998). Using social learning theory to explain individual differences in human sexuality. *Journal of Sex Research*, *35*(1), 58-71.

Hope, A. (2009). A standard drink in Ireland: what strength? In: Health Service Executive (HSE).

Hope, A., Gill, A., Costello, G., Sheehan, J., Brazil, E., & Reid, V. (2005). Alcohol and injuries in the accident and emergency department: a national perspective. *Dublin: Health Promotion Unit, Department of Health and Children*.

Howell, K. E. (2013). Empiricism, positivism and post-positivism. *Howell, KE An introduction to the philosophy of methodology*, 32-54.

Howitt, D., & Cramer, D. (2017). *Understanding statistics in psychology with SPSS* (print and electronic ed.). Pearson London, UK:.

Hoy, A. R. (2017). Which young people in England are most at risk of an alcohol-related revolving-door readmission career? *BMC public health*, *17*(1), 1-16.

HSE. (2021). *Irish children's Triage System (2nd Edition January 2021)*. Dublin: Ireland,: Health Services Executive Retrieved from https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/emp-irish-childrens-triage-system.pdf

Huang, C. Y., Nishioka, S. A., Zane, N. W., & Uchigakiuchi, P. (2022). Examining risk and protective predictors of substance use among low-income Native Hawaiian and Pacific Islander adolescents. *American Journal of Orthopsychiatry*, *92*(1), 18.

IBM Corp. (2016). *IBM SPSS Statistics for Windows*. In (Version 24.0)

Inchley, J., & Currie, D. (2016). Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. World Health Organization.

Johansen, A., Rasmussen, S., & Madsen, M. (2006). Health behaviour among adolescents in Denmark: influence of school class and individual risk factors. *Scandinavian journal of public health*, *34*(1), 32-40.

Jones, B. T., Corbin, W., & Fromme, K. (2001). A review of expectancy theory and alcohol consumption. *Addiction*, *96*(1), 57-72.

Kelleher, S., & Cotter, P. (2009). A descriptive study on emergency department doctors' and nurses' knowledge and attitudes concerning substance use and substance users. *International Emergency Nursing*, *17*(1), 3-14.

Kelly, A. B., Chan, G. C., Mason, W. A., & Williams, J. W. (2015). The relationship between psychological distress and adolescent polydrug use. *Psychology of Addictive Behaviors*, *29*(3), 787.

Kennedy, E., & Shiel, G. (2010). Raising literacy levels with collaborative on-site professional development in an urban disadvantaged school. *The Reading Teacher*, *63*(5), 372-383.

Kesmodel, U. S. (2018). Cross-sectional studies–what are they good for? *Acta obstetricia et gynecologica Scandinavica*, *97*(4), 388-393.

KIDSCREEN Group Europe. (2006). *The KIDSCREEN Questionnaires Handbook*. Pabst Science Publishers.

Kihlstrom, J. F. (2021). Ecological validity and "ecological validity". *Perspectives on Psychological Science*, *16*(2), 466-471.

Kitchin, R. (2015). Positivistic geography. *Approaches in human geography*, 23-34.

Költő, A., Gavin, A., Molcho, M., Kelly, C., Walker, L., & Nic Gabhainn, S. (2020). *The Irish Health Behaviour in School-aged Children (HBSC) Study 201*. N. U. o. I. Department of Health & Galway: Health Promotion Research Centre, Galway.

Kovacs, M. (2003). Children's Depression Inventory (CDI). Technical manual update. Multi-Health Systems.

Kraus, L., & Nociar, A. (2016). ESPAD report 2015: results from the European school survey project on alcohol and other drugs. European Monitoring Centre for Drugs and Drug Addiction.

Krohn, M. D., Loughran, T. A., Thornberry, T. P., Jang, D. W., Freeman-Gallant, A., & Castro, E. D. (2016). Explaining adolescent drug use in adjacent generations: Testing the generality of theoretical explanations. *Journal of drug issues*, *46*(4), 373-395.

Kumar, K., Roberts, C., Finn, G. M., & Chang, Y.-C. (2022). Using theory in health professions education research: a guide for early career researchers. In (Vol. 22, pp. 1-6): Springer.

Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2005). Why do young people drink? A review of drinking motives. *Clinical psychology review*, *25*(7), 841-861.

Kwak, S. K., & Kim, J. H. (2017). Statistical data preparation: management of missing values and outliers. *Korean journal of anesthesiology*, *70*(4), 407-411.

LaBrie, J. W., Huchting, K., Pedersen, E. R., Hummer, J. F., Shelesky, K., & Tawalbeh, S. (2007). Female college drinking and the social learning theory: An examination of the developmental transition period from high school to college. *Journal of College Student Development*, *48*(3), 344.

Lacy, S., Watson, B. R., Riffe, D., & Lovejoy, J. (2015). Issues and best practices in content analysis. *Journalism & mass communication quarterly*, *92*(4), 791-811.

Laerd Statistics. (2020). *The ultimate IBM SPSS Statistics guides*. In https://statistics.laerd.com/

Lasser, J., Schmidt, E., Diep, J., & Huebel, A. (2010). Underage rural drinking: Survey data and implications for educators. *The Rural Educator*, *31*(3), 38-46.

Lea, S., Black, K., & Asbridge, M. (2009). An overview of injuries to adolescents and young adults related to substance use: data from Canadian emergency departments. *Canadian journal of emergency medicine*, *11*(4), 330-336.

Lindsay, J. (2012). The gendered trouble with alcohol: Young people managing alcohol related violence. *International Journal of Drug Policy*, *23*(3), 236-241.

Loring, B. (2014). Alcohol and inequities: guidance for addressing inequities in alcohol-related harm. World Health Organization. Regional Office for Europe.

Loukas, A., Ripperger-Suhler, K. G., & Horton, K. D. (2009). Examining Temporal Associations Between School Connectedness and Early Adolescent Adjustment [Article]. *Journal of Youth & Adolescence*, *38*(6), 804-812. https://doi.org/10.1007/s10964-008-9312-9

Lukács, A., Szabó, A., Horváth, E., Máté, Z., Erdős, C., Molnár, R., & Paulik, E. (2021). Students in Danger: Binge Drinking Behaviour and Associated Factors in Hungary. *Zdr Varst*, *60*(4), 244-252. https://doi.org/10.2478/sjph-2021-0033

Mabood, N., Ali, S., Dong, K. A., Wild, T. C., & Newton, A. S. (2013). Experiences of pediatric emergency physicians in providing alcohol-related care to adolescents in the emergency department. *Pediatric emergency care*, *29*(12), 1260-1265. https://doi.org/10.1097/pec.0000000000000024

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in educational research*, *16*(2), 193-205.

MacKinnon, D. P., & Luecken, L. J. (2008). How and for whom? Mediation and moderation in health psychology. *Health Psychology*, *27*(2, Suppl), S99-S100. https://doi.org/10.1037/0278-6133.27.2(Suppl.).S99 (Mediation and Moderation)

Mäkelä, P., & Paljärvi, T. (2008). Do consequences of a given pattern of drinking vary by socioeconomic status? A mortality and hospitalisation follow-up for alcohol-related causes of the Finnish Drinking Habits Surveys [research-article]. *Journal of Epidemiology and Community Health (1979-)*, *62*(8), 728-733. https://elib.tcd.ie/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsjsr&AN=edsjsr.40665889

Manning, V., Best, D. W., Faulkner, N., & Titherington, E. (2009). New estimates of the number of children living with substance misusing parents: results from UK national household surveys. *BMC public health*, *9*, 377. https://doi.org/10.1186/1471-2458-9-377

Mansor, A. N., Rasul, M. S., Rauf, R. A. A., & Koh, B. L. (2013). Developing and sustaining reading habit among teenagers. *The Asia-Pacific Education Researcher*, *22*(4), 357-365.

Manthey, J., Shield, K. D., Rylett, M., Hasan, O. S., Probst, C., & Rehm, J. (2019). Global alcohol exposure between 1990 and 2017 and forecasts until 2030: a modelling study. *The Lancet*, *393*(10190), 2493-2502.

Marmorstein, N. R. (2009). Longitudinal associations between alcohol problems and depressive symptoms: early adolescence through early adulthood. *Alcoholism: Clinical and Experimental Research*, *33*(1), 49-59.

Marsh, R. J. (2018). Building school connectedness for students with emotional and behavioral disorders. *Intervention in School and Clinic*, *54*(2), 67-74.

Martinotti, G., Lupi, M., Carlucci, L., Santacroce, R., Cinosi, E., Acciavatti, T., Sarchione, F., Verrastro, V., Diotaiuti, P., & Petruccelli, I. (2017). Alcohol drinking patterns in young people: a survey-based study. *Journal of health psychology*, *22*(14), 1889-1896.

Masue, O. S., Swai, I. L., & Anasel, M. G. (2013). The Qualitative-Quantitative'Disparities' in Social Science Research: What Does Qualitative Comparative Analysis (QCA) Brings in to Bridge the Gap? *Asian Social Science*, *9*(10), 211.

Mayer, S. E. (2003). What is a disadvantaged group? Effective Communities Project. Minneapolis, MN. In.

McCambridge, J., & Mialon, M. (2018). Alcohol industry involvement in science: A systematic review of the perspectives of the alcohol research community. *Drug and alcohol review*, *37*(5), 565-579.

McGilloway, S., & Weafer, J. A. (2021). Evaluation of Drinkaware's Junior Cycle Alcohol Education Programme (JC AEP) 2018-2020.

McNicholl, B., Goggin, D., & O'Donovan, D. (2018). Alcohol-related presentations to emergency departments in Ireland: a descriptive prevalence study. *BMJ open*, *8*(5), e021932.

Menard, S. (1995). Applied Logistic Regression Analysis. Sage.

Mesel, T. (2013). The necessary distinction between methodology and philosophical assumptions in healthcare research. *Scandinavian journal of caring sciences*, *27*(3), 750-756.

Miller, D. (2018). School Attendance Data from Primary and Post-Primary Schools, 2016/2017 (under Section 21(6) of the Education (Welfare) Act, 2000). Analysis and Report to the Child and Family Agency. https://www.tusla.ie/services/educational-welfare-services/publications/research-and-statistics/

Miller, H. V., Jennings, W. G., Alvarez-Rivera, L. L., & Miller, J. M. (2008). Explaining substance use among Puerto Rican adolescents: A partial test of social learning theory. *Journal of drug issues*, *38*(1), 261-283.

Miller, J. W., Naimi, T. S., Brewer, R. D., & Jones, S. E. (2007). Binge drinking and associated health risk behaviors among high school students. *Pediatrics*, *119*(1), 76-85.

Millings, A., Buck, R., Montgomery, A., Spears, M., & Stallard, P. (2012). School connectedness, peer attachment, and self-esteem as predictors of adolescent depression. *Journal of adolescence*, *35*(4), 1061-1067.

Mokinaro, S., Vincente, J., Benedetti, E., Cerrai, S., Colasante, E., Arpa, S., Chomynova, P., Kraus, L., Monshouwer, K., & Spika, S. (2020). ESPAD Report 2019: Results from European School Survey Project on Alcohol and Other Drugs.

Mongan, D., & Long, J. (2015). Standard drink measures throughout Europe; peoples' understanding of standard drinks. *RARHA: Joint Actional on Reducing Alcohol Related Harm*.

Moseholm, E., & Fetters, M. D. (2017). Conceptual models to guide integration during analysis in convergent mixed methods studies. *Methodological Innovations*, *10*(2), 2059799117703118.

Motos Sellés, P., Cortés Tomás, M. T., & Giménez Costa, J. A. (2020). Evaluation of AUDIT consumption items new adaptation to improve the screening of college students binge drinking. *Adicciones, 2020, vol. 32, num. 4, p. 255-264*.

Murphy, E., O'Sullivan, I., O'Donovan, D., Hope, A., & Davoren, M. P. (2016). The association between parental attitudes and alcohol consumption and adolescent alcohol consumption in Southern Ireland: a cross-sectional study. *BMC public health*, *16*(1), 1-8.

Myers, R. (1990). Classical and Modern Regression with Applications (2nd ed.).

NHTSA. (2001). *National Highway Traffic Safety Administration (NHTSA) Underage Drinking Questionnaire*.

https://bha.health.maryland.gov/MSPF/Documents/MSPF%20Survey%20Question%20Bank.pdf

NMBI. (2021). *Code of Professional Conduct and Ethics*. Nursing and Midwifery Board of Ireland. Retrieved November 26, 2022 from

Norman, L. B., & Ford, J. A. (2015). Adolescent ecstasy use: A test of social bonds and social learning theory. *Deviant Behavior*, *36*(7), 527-538.

O'Donnell, K. W., J., Dantzer, C., & Steptoe, A. (2006). Alcohol consumption and symptoms of depression in young adults from 20 countries. *Journal of Studies on Alcohol*, *67*(6), 837-840.

O'Donnell, M., Sims, S., Maclean, M. J., Gonzalez-Izquierdo, A., Gilbert, R., & Stanley, F. J. (2017). Trends in alcohol-related injury admissions in adolescents in Western Australia and England: population-based cohort study. *BMJ open*, *7*(5), e014913.

O'Dwyer, C., Mongan, D., Doyle, A., & Galvin, B. (2021). Health Research Board Overview Series 11–Alcohol consumption, alcohol-related harm, and alcohol policy in Ireland. *Health Research Board: Dublin*.

O'Dwyer, C., Mongan, D., , Millar, S. R., Rackard, M., , Galvin, B., Long, J., & Barry, J. (2019). Drinking patterns and the distribution of alcohol-related harms in Ireland: evidence for the prevention paradox. *BMC Public Health*, *19*(1), 1323.

O'Shea, J., & Goff, P. (2009). SAOR MODEL; Screening and Brief Intervention (SBI); for problem alcohol use in the emergency department & acute care settings. *Waterford: HSE*.

Oxford English Dictionary. (2018). Oxford English Dictionary.

Pallant, J. (2013). SPSS survival manual: A step by step guide to data analysis using IBM SPSS. Open University Press

Parrott, D. J., & Eckhardt, C. I. (2018). Effects of alcohol on human aggression. *Current Opinion in Psychology*, *19*, 1-5.

Pedersen, W., & Bakken, A. (2016). Urban landscapes of adolescent substance use. *Acta Sociologica*, *59*(2), 131-150.

Pengpid, S., & Peltzer, K. (2012). Alcohol use and associated factors among adolescent students in Thailand. *West Indian Medical Journal*, *61*(9).

Phillips, T., Coulton, S., & Drummond, C. (2019). Burden of alcohol disorders on emergency department attendances and hospital admissions in England. *Alcohol and alcoholism*, *54*(5), 516-524.

Pobal. (2017). *Launch of 2016 Pobal HP Deprivation Index*. Government of Ireland Retrieved from https://maps.pobal.ie/WebApps/DeprivationIndices/index.html

Polit, D. F., & Beck, C. T. (2008). Nursing research: Generating and assessing evidence for nursing practice. Lippincott Williams & Wilkins.

Preston, P., & Goodfellow, M. (2006). Cohort comparisons: Social learning explanations for alcohol use among adolescents and older adults. *Addictive Behaviors*, *31*(12), 2268-2283.

PSI. (2019). *Code of Professional Ethics of the Psychological Society of Ireland*. https://www.psychologicalsociety.ie/source/Code%20of%20Professional%20Ethics%20(Oct%202019).pdf

Randolph, J. (2009). A guide to writing the literature dissertation review. *Practical Assessment, Research & Evaluation*, *14*(13), 1-13.

Ravens-Sieberer, U. (2006). The Kidscreen Questionnaires Quality Of Life Questionnaires For Children And Adolescents. *Handbook*.

Ravens-Sieberer, U., Herdman, M., Devine, J., Otto, C., Bullinger, M., Rose, M., & Klasen, F. (2014). The European KIDSCREEN approach to measure quality of life and well-being in children: development, current application, and future advances. *Quality of Life Research*, *23*(3), 791-803. https://doi.org/10.1007/s11136-013-0428-3

Razali, N. M., & Wah, Y. B. (2011). Power comparisons of shapiro-wilk, kolmogorov-smirnov, lilliefors and anderson-darling tests. *Journal of statistical modeling and analytics*, *2*(1), 21-33.

Roche, A., Kostadinov, V., Fischer, J., Nicholas, R., O'Rourke, K., Pidd, K., & Trifonoff, A. (2015). Addressing inequities in alcohol consumption and related harms. *Health promotion international*, *30*(suppl_2), ii20-ii35.

Rossow, I., Bogstrand, S. T., Ekeberg, Ø., & Normann, P. T. (2013). Associations between heavy episodic drinking and alcohol related injuries: a case control study. *BMC public health*, *13*(1), 1-7.

Rotter, J. B., Chance, J. E., & Phares, E. J. (1972). An introduction to social learning theory. *Applications of a social learning theory of personality*, 1-44.

Rutherford, L., Waller, L., Merga, M., McRae, M., Bullen, E., & Johanson, K. (2017). Contours of teenagers' reading in the digital era: Scoping the research. *New Review of children's literature and librarianship*, *23*(1), 27-46.

Ryan, P. (2015). Positivism: paradigm or culture? *Policy Studies*, *36*(4), 417-433.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, *25*(1), 54-67.

Ryan, S. M., Jorm, A. F., & Lubman, D. I. (2010). Parenting factors associated with reduced adolescent alcohol use: a systematic review of longitudinal studies. *Australian & New Zealand Journal of Psychiatry*, *44*(9), 774-783.

Sabharwal, M. (2018). Perceived barriers of young adults for participation in physical activity. *Current Research in Nutrition and Food Science Journal*, *6*(2), 437-449.

Sarkis-Onofre, R., Catalá-López, F., Aromataris, E., & Lockwood, C. (2021). How to properly use the PRISMA Statement. *Systematic Reviews*, *10*(1), 1-3.

Schulte, M. T., Ramo, D., & Brown, S. A. (2009). Gender differences in factors influencing alcohol use and drinking progression among adolescents. *Clinical psychology review*, *29*(6), 535-547.

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English language teaching*, *5*(9), 9-16.

Shochet, I. M., Dadds, M. R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child & Adolescent Psychology*, *35*(2), 170-179.

Shumba, J., Quinn, M., Nic Carthaigh, C., & Leitao, C. (2021). *Over the fence: perspectives on and experiences of child poverty in Tallaght*. C. D. Initiative.

Smit, K., Otten, R., Voogt, C., Kleinjan, M., Engels, R., & Kuntsche, E. (2018). Exposure to drinking mediates the association between parental alcohol use and preteen alcohol use. *Addictive Behaviors*, *87*, 244-250.

Smith, T., & Curran, A. (2010). Right time, right place: Alcohol-harm reduction strategies with children and young people. In: London: Alcohol Concern.

Smyth, E., Banks, J., O'Sullivan, J., MacCoy, S., Redmond, P., & McGuinness, S. (2019). *Evaluation of the National Youthreach Programme*. Research Series.

Smyth, E., & Darmody, M. (2021). Risk and protective factors in adolescent behaviour: The role of family, school and neighbourhood characteristics in (mis) behaviour among young people.

Solem, R. C. (2015). Limitation of a cross-sectional study. *American Journal of Orthodontics and Dentofacial Orthopedics*, *148*(2), 205.

Spirito, A., Barnett, N. P., Lewander, W., Colby, S. M., Rohsenow, D. J., Eaton, C. A., & Monti, P. M. (2001). Risks associated with alcohol-positive status among adolescents in the emergency department: a matched case-control study. *The Journal of pediatrics*, *139*(5), 694-699.

Squeglia, L. M., Sorg, S. F., Schweinsburg, A. D., Wetherill, R. R., Pulido, C., & Tapert, S. F. (2012). Binge drinking differentially affects adolescent male and female brain morphometry. *Psychopharmacology*, *220*(3), 529-539.

Steinberg, L. J. (2010). A dual systems model of adolescent risk-taking. *The Journal of the International Society for Developmental Psychobiology*, *52*(3), 216-224. https://onlinelibrary.wiley.com/doi/pdf/10.1002/dev.20445

Stemler, S. E. (2015). Content analysis. Emerging trends in the social and behavioral sciences: An Interdisciplinary, Searchable, and Linkable Resource, 1-14.

Stephens, R., Ling, J., Heffernan, T. M., Heather, N., & Jones, K. (2008). Review A review of the literature on the cognitive effects of alcohol hangover. *Alcohol & Alcoholism*, *43*(2), 163-170.

Strommen, L. T., & Mates, B. F. (2004). Learning to love reading: Interviews with older children and teens. *Journal of Adolescent & Adult Literacy*, *48*(3), 188-200.

Tabachnick, B., & Fidell, L. S. (2014). Using multivariate statistics (New International ed.). *Harlow: Pearson*.

Tallaght University Hospital. (2020). *Tallaght University Hospital Annual Report and Accounts*. https://www.tuh.ie/About-us/2020-Annual-Report-.pdf

Tapert, S. F., Granholm, E., Leedy, N. G., & Brown, S. A. (2002). Substance use and withdrawal: neuropsychological functioning over 8 years in youth. *Journal of the International Neuropsychological Society*, *8*(7), 873-883.

Tashakkori, A., & Teddlie, C. (2008). Quality of inferences in mixed methods research: Calling for an integrative framework. *Advances in mixed methods research*, *53*(7), 101-119.

Telzer, E. H., Van Hoorn, J., Rogers, C. R., & Do, K. T. (2018). Social influence on positive youth development: A developmental neuroscience perspective. *Advances in child development and behavior*, *54*, 215-258.

Terry-McElrath, Y. M., O'Malley, P. M., & Johnston, L. D. (2011). Exercise and substance use among American youth, 1991–2009. *American journal of preventive medicine*, *40*(5), 530-540.

Turyahikayo, E. (2014). Resolving the qualitative-quantitative debate in healthcare research. *Medical Practice and Reviews*, *5*(1), 6-15.

TUSLA. (2020). *Outcomes for Children*. TUSLA, Child and Family Agency. Retrieved October 26, 2021 from https://outcomes4children.tusla.ie/achieving/

Uprichard, E., & Dawney, L. (2019). Data diffraction: Challenging data integration in mixed methods research. *Journal of Mixed Methods Research*, *13*(1), 19-32.

Velleman, R. (2009). Influences on how children and young people learn about and behave towards alcohol. *A review of the literature for the Joseph Rowntree Foundation (part one). York: Joseph Rowntree Foundation*.

Verelst, S., Moonen, P.-J., Desruelles, D., & Gillet, J.-B. (2012). Emergency department visits due to alcohol intoxication: characteristics of patients and impact on the emergency room. *Alcohol and alcoholism*, *47*(4), 433-438.

Verenikina, I. M. (Ed.). (2003). *Vygotsky's Socio-Cultural Theory and the Zone of Proximal Development*. University of Wollongong Press. http://ro.uow.edu.au/sspapers/3201.

Viertiö, S., Kiviruusu, O., Piirtola, M., Kaprio, J., Korhonen, T., Marttunen, M., & Suvisaari, J. (2021). Factors contributing to psychological distress in the working population, with a special reference to gender difference. *BMC public health*, *21*(1), 1-17.

Vukojević, M., Zovko, A., Talić, I., Tanović, M., Rešić, B., Vrdoljak, I., & Splavski, B. (2017). Parental socioeconomic status as a predictor of physical and mental health outcomes in children–literature review. *Acta Clinica Croatica*, *56*(4.), 742-748.

Welsh, C., Earley, K., Delahanty, J., Wright, K. S., Berens, T., Williams, A. A., Barnett, B., & DiClemente, C. C. (2014). Residents' knowledge of standard drink equivalents:

Implications for screening and brief intervention for at-risk alcohol use. *The American Journal on Addictions*, *23*(2), 194-196.

Wheeler, S. B. (2010). Effects of self-esteem and academic performance on adolescent decision-making: an examination of early sexual intercourse and illegal substance use. *Journal of adolescent health*, *47*(6), 582-590.

White, A. M., Kraus, C. L., Flom, J. D., Kestenbaum, L. A., Mitchell, J. R., Shah, K., & Swartzwelder, H. S. (2005). College students lack knowledge of standard drink volumes: implications for definitions of risky drinking based on survey data. *Alcoholism: Clinical and Experimental Research*, *29*(4), 631-638.

White, H. R., & Labouvie, E. W. (1989). Towards the assessment of adolescent problem drinking. *Journal of Studies on Alcohol*, *50*(1), 30-37.

WHO. (2007). Alcohol and injury in emergency departments: summary of the report from the WHO Collaborative Study on Alcohol and Injuries. World Health Organization.

WHO. (2012). *European action plan to reduce the harmful use of alcohol 2012-2020*. W. Europe. https://apps.who.int/iris/bitstream/handle/10665/107307/E96726.pdf?sequence=1

WHO. (2018). WHO helps EU Member States enhance surveillance of alcohol consumption and harm. WHO Europe. Retrieved August 7, 2022 from

Wilkinson, S. (2000). Women with breast cancer talking causes: Comparing content, biographical and discursive analyses. *Feminism & Psychology*, *10*(4), 431-460.

Wynne, C., Comiskey, C., Hollywood, E., Quirke, M. B., O'Sullivan, K., & McGilloway, S. (2014). The relationship between body mass index and health-related quality of life in urban disadvantaged children. *Quality of Life Research*, *23*(6), 1895-1905.

Young, S., Corley, R., Stallings, M., Rhee, S., Crowley, T., & Hewitt, J. (2002). Substance use, abuse and dependence in adolescence: prevalence, symptom profiles and correlates. *Drug and alcohol dependence*, *68*(3), 309-322.