



**PREVALENCE, CHARACTERISTICS AND FUNCTIONS OF
NON-SUICIDAL SELF-INJURY AMONG YOUNG ADULTS IN A HIGHER
LEARNING INSTITUTIONS IN KEDAH, MALAYSIA**

By

THANGESWARY A/P ANNAMALLAI

**Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Master of Science**

May 2024

FPSK (m) 2024 13

All material contained within the thesis, including without limitation text, logos, icons, photographs, and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment
of the requirement for the degree of Master of Science

**PREVALENCE, CHARACTERISTICS AND FUNCTIONS OF
NON-SUICIDAL SELF-INJURY AMONG YOUNG ADULTS IN A HIGHER
LEARNING INSTITUTIONS IN KEDAH, MALAYSIA**

By

THANGESWARY A/P ANNAMALLAI

May 2024

Chairman : Professor Kulanthayan a/l KC Mani @ Subramaniam, PhD
Faculty : Medicine and Health Sciences

Non-suicidal self-injury (NSSI) is defined as the deliberate infliction of damage, pain or both to one's own body tissue without the intention of suicide. NSSI is a serious and prevalent problem within adolescents throughout the world with the prevalence range of 17-34%. A broad variety of different functions can underlie acts of NSSI. The objective of the study was to determine the prevalence of NSSI behaviour among students in higher learning institutions, to describe the sociodemographic characteristics (age, sex, socioeconomic status, ethnicity and parent's education level), to determine the functions of NSSI and to determine the association between the functions of NSSI (based on the Four Functional Model (FFM) and the NSSI behaviour among young adults of higher learning institutions.

This study employed cluster sampling to select 552 respondents, aged 18-23, from a polytechnic from Kedah. and other higher learning institutes. NSSI was assessed with the Functional Assessment of Self-Mutilation (FASM). The descriptive statistics were

first conducted to examine the frequency and basic characteristics of NSSI in the sample selected. The demographic factors are described. Group comparisons was conducted using chi square test, for the proportion of categorical measures and simple logistic regression and multiple logistic regression test to find an equation that best predicts the probability of NSSI behaviour.

A total of 27.5% young adolescents had reported self-injuring behaviour with most of them frequently hitting oneself, picking on a wound, cutting/carving skin, hitting self on purpose, and biting. The most common reasons for NSSI were ‘to punish oneself, ‘to feel relaxed’, ‘to make others angry’ and ‘to stop bad feelings. Automatic Negative Reinforcement (ANR) and Automatic Positive Reinforcement (APR) are both was found associated to the NSSI behaviour. APR had significant positive relationship (OR=3.51, 95 % CI: 1.72-7.13), suggesting that those who reported positive reinforcement as a motivation were 3.51 times more likely in engage in NSSI. ANR significant positive relationship (OR=2.04, 95% CI:1.02-4.08), suggesting that those who reported positive reinforcement as a motivation were 2.04 times more likely in engage in NSSI. The study reported 27.5% prevalence rate reported. Key findings show that NSSI is more common among females, 19-year-olds, first-year students, and those from lower socioeconomic backgrounds, particularly those with parents holding secondary education. NSSI behaviors are mainly driven by internal emotional factors, such as relaxation, self-punishment, and emotional relief, and are significantly influenced by positive and negative reinforcement mechanisms. Logistic regression analysis confirms that reinforcement mechanisms, along with demographic factors like gender and maternal education, are major predictors of NSSI. The study emphasizes the importance of early intervention targeting emotional regulation and

coping strategies to prevent more severe mental health issues. It recommends tailored prevention and treatment programs, incorporating mindfulness, grounding techniques, and therapies like DBT and CBT, to support young adults and reduce NSSI behaviors.

Keywords: characteristics, FASM, functions, non-suicidal self-injury, prevalence

SGD: GOAL 3: Good Health and Well Being



Abstrak disertasi yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

**KELAZIMAN, CIRI-CIRI DAN FUNGSI MENCEDERAKAN DIRI TANPA
NIAT MEMBUNUH DIRI DI KALANGAN REMAJA DEWASA DI
INSTITUSI PENGAJIAN TINGGI DI NEGERI KEDAH, MALAYSIA**

Oleh

THANGESWARY A/P ANNAMALLAI

Mei 2024

Pengerusi : Profesor Kulanthayan a/l KC Mani @ Subramaniam, PhD
Fakulti : Perubatan dan Sains Kesihatan

Kecederaan diri tanpa niat bunuh diri (NSSI) ditakrifkan sebagai kecederaan, kesakitan atau kedua-duanya yang disengajakan kepada tisu badan sendiri tanpa niat membunuh diri. NSSI adalah masalah serius dan lazim dalam kalangan remaja di seluruh dunia dengan julat prevalens 17-34%. Pelbagai fungsi yang berbeza boleh mempengaruhi tindakan NSSI. Objektif kajian adalah untuk menentukan kelaziman tingkah laku NSSI dalam kalangan pelajar di institusi pengajian tinggi, menerangkan ciri sosiodemografi (umur, jantina, status sosioekonomi, etnik dan tahap pendidikan ibu bapa), menentukan fungsi NSSI dan menentukan perkaitan antara fungsi NSSI (berdasarkan Model Four Functional Model) dan tingkah laku NSSI di kalangan golongan dewasa muda institusi pengajian tinggi.

Dalam kajian ini, persampelan kelompok dalam populasi dibahagikan kepada kumpulan pada pelbagai peringkat yang melibatkan 600 orang responden. NSSI dinilai dengan Functional Assessment of Self Mutilation (FASM). Statistik deskriptif

pertama kali dijalankan untuk mengkaji kekerapan dan ciri-ciri asas NSSI dalam sampel yang dipilih. Faktor demografi diterangkan. Perbandingan kumpulan dijalankan menggunakan ujian khi kuasa dua, ujian X² untuk perkadaran ukuran kategori dan regresi logistik mudah dan ujian regresi logistik berganda untuk mencari persamaan yang terbaik meramalkan kebarangkalian nilai pembolehubah Y sebagai fungsi pembolehubah X. Latar belakang: Kecederaan diri tanpa bunuh diri (NSSI) ditakrifkan sebagai kecederaan, kesakitan atau kedua-duanya yang disengajakan kepada tisu badan sendiri tanpa niat membunuh diri. NSSI adalah masalah serius dan lazim dalam kalangan remaja di seluruh dunia dengan julat prevalens 17-34%. Pelbagai fungsi yang berbeza boleh mendasari tindakan NSSI.

Sebanyak 27.5% remaja muda telah melaporkan tingkah laku mencederakan diri dengan kebanyakan mereka kerap memukul diri sendiri, mengambil luka, memotong/mengukir kulit, memukul diri dengan sengaja dan menggigit. Sebab yang paling biasa untuk NSSI adalah 'untuk menghukum diri sendiri', 'untuk berasa santai', 'untuk membuat orang lain marah' dan 'untuk menghentikan perasaan buruk. Peneguhan Negatif Automatik (ANR) dan Peneguhan Positif Automatik (APR) kedua-duanya didapati dikaitkan dengan tingkah laku NSSI. APR mempunyai hubungan positif yang signifikan (OR=3.51, 95 % CI: 1.72-7.13), menunjukkan bahawa mereka yang melaporkan peneguhan positif sebagai motivasi adalah 3.51 kali lebih berkemungkinan terlibat dalam NSSI. Hubungan positif yang signifikan ANR (OR=2.04, 95% CI:1.02-4.08), menunjukkan bahawa mereka yang melaporkan peneguhan positif sebagai motivasi adalah 2.04 kali lebih berkemungkinan terlibat dalam NSSI. Kajian melaporkan kadar prevalens 27.5% dilaporkan. Penemuan utama menunjukkan bahawa NSSI lebih kerap berlaku dalam kalangan wanita, 19 tahun,

pelajar tahun pertama, dan mereka yang mempunyai latar belakang sosioekonomi rendah, terutamanya mereka yang mempunyai ibu bapa yang berpendidikan menengah. Tingkah laku NSSI terutamanya didorong oleh faktor emosi dalaman, seperti kelonggaran, hukuman diri, dan kelegaan emosi, dan banyak dipengaruhi oleh mekanisme peneguhan positif dan negatif. Analisis regresi logistik mengesahkan bahawa mekanisme pengukuhan, bersama-sama dengan faktor demografi seperti jantina dan pendidikan ibu, adalah peramal utama NSSI. Kajian itu menekankan kepentingan intervensi awal yang menyasarkan peraturan emosi dan strategi mengatasi untuk mencegah isu kesihatan mental yang lebih teruk. Ia mengesyorkan program pencegahan dan rawatan yang disesuaikan, menggabungkan kesedaran, teknik asas, dan terapi seperti DBT dan CBT, untuk menyokong orang dewasa muda dan mengurangkan tingkah laku NSSI.

Kata Kunci: ciri-ciri, FASM, fungsi, kecederaan diri tanpa bunuh diri, kelaziman

SDG: MATLAMAT 3: Kesihatan baik dan Kesejahteraan

ACKNOWLEDGEMENTS

I would like to express my uttermost gratitude to The Almighty for the completion of this study.

I am very thankful to my supervisor Professor Dr Kulanthayan KC Mani for his endless guidance, constant support, and willingness to help to improve the writing and executing this study. I would also like to take this opportunity to thank my co-supervisors, Dr. Norliza bt Ahmad, Dr. Aishah Siddiqah bt Alimuddin and Dr. Muhammad Hibatullah b. Romli. Thank you from the bottom of my heart for your time, all extra communication throughout my journey and the things you taught me directly and indirectly.

My thanks also go to my husband Mr. Suresh Kumar and my precious sons, Haresh Kumar, Dhanesh Kumar and Harendrra Kumar who constantly included me in their prayer for my success. My greatest gratitude also goes to my parents, Mr. Annamallai and Madam Thanaletchumi who kept encouraging me throughout my life to achieve all my dreams. Not forgetting my sisters Thiruchelvi, Uma and my youngest brother Alagendran who were always there for me in ups and downs. Without the prayer and inspiration from these good souls my success journey may have not been possible.

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Kulanthayan a/l K.C. Mani @ Subramanian, PhD

Professor
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Chairman)

Norliza Ahmad, PhD

Associate Professor
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

Aishah Siddiqah Alimuddin, PhD

Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

Muhammad Hibatullah b. Romli,

Senior Lecturer
Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

ZALILAH MOHD SHARIFF, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 13 January 2025

TABLE OF CONTENTS

	Page
ABSTRACT	i
ABSTRAK	iv
ACKNOWLEDGEMENTS	vii
APPROVAL	viii
DECLARATION	x
LIST OF TABLES	xv
LIST OF FIGURES	xvi
LIST OF APPENDICES	xvii
LIST OF ABBREVIATIONS	xviii
 CHAPTER	
 1 INTRODUCTION	 1
1.1 Background of the Study	1
1.2 Problem Statement	6
1.3 Significance of the Study	11
1.4 Research Questions	13
1.5 Research Objectives	13
1.6 Research Hypothesis	14
 2 LITERATURE REVIEW	 15
2.1 Prevalence of NSSI	15
2.2 The Sociodemographic Factors of NSSI	18
2.2.1 Sex	18
2.2.2 Age	20
2.2.3 Socioeconomic Status	22
2.2.4 Race/ Ethnicity	24
2.2.5 Parents Educational Level	27
2.3 Four Function Model	28
2.4 Categorising NSSI Factors according to Four Functional Model	33
2.4.1 Automatic Negative Reinforcement	33
2.4.1.1 Self-Criticism and External/Parental Criticism	33
2.4.1.2 Emotional Dysregulation	34
2.4.1.3 Cyberbully	36
2.4.2 Automatic Positive Reinforcement	37
2.4.2.1 Youth Development	38
2.4.2.2 Expressed Emotions and Shame/Self Punishment	38
2.4.2.3 Anger	40
2.4.2.4 Intense Distressing Feeling	40
2.4.2.5 Guilt and Shame	41
2.4.2.6 Borderline Personality Disorder	42
2.4.2.7 Impulsivity	43

2.4.3	Social Negative Reinforcement	44
2.4.3.1	Depersonalization	44
2.4.3.2	Family Non-Intactness	45
2.4.4	Social Positive Reinforcement	46
2.4.4.1	Family Functioning and Relationships	46
2.4.4.2	Fear of Compassion	48
2.5	Conceptual Framework	49
3	METHODOLOGY	51
3.1	Study Location	51
3.2	Study Design	52
3.3	Study Duration	52
3.4	Sampling	53
3.4.1	Sampling Population	53
3.4.2	Selection Criteria	54
3.4.2.1	Inclusion Criteria	54
3.4.2.2	Exclusion Criteria	54
3.4.3	Sampling Frame	55
3.4.4	Study Instrument	59
3.5	Quality Control	62
3.5.1	Reliability	62
3.5.2	Pilot Study	62
3.6	Data Analysis	63
3.7	Study Ethics	63
3.8	Variables and Operational Definitions	64
3.8.1	Dependent Variable	64
3.8.2	Independent Variables	64
4	RESULTS	66
4.1	Overview of Analysis	66
4.2	Descriptive Analysis	66
4.2.1	Prevalence of NSSI	66
4.2.2	Sociodemographic Characteristics of Respondents	67
4.2.3	Description of Socio-Demographics Factors of NSSI	68
4.2.4	Description on the Characteristics of NSSI	69
4.3	Functions of NSSI Behaviour	70
4.4	Association between Respondents' Sociodemographic Factors on NSSI	72
4.5	Univariate Analysis of Functions of NSSI	73
4.6	Univariate Analysis on Four Functional Model	75
4.7	Simple Logistic Regression Results	77
4.8	Multiple Logistic Regression Results	78
4.9	Hypothesis Testing	79
5	DISCUSSION	81
5.1	Prevalence of NSSI	81
5.2	Description Analysis of Socio-Demographics Factors on NSSI	82
5.2.1	Gender	82

5.2.2	Age	85
5.2.3	Race/Ethnicity	87
5.2.4	Family Income	89
5.2.5	Parents Education	91
5.3	Descriptive Analysis on the Characteristics of NSSI	93
5.4	Functions of NSSI Behaviour	95
5.5	Analysis of the Relationship between FFM and NSSI"	96
5.6	Hypotheses Testing	99
6	CONCLUSION	101
6.1	Strength	104
6.2	Limitations	105
6.3	Recommendations	107
	REFERENCES	110
	APPENDICES	124
	BIODATA OF STUDENT	140
	PUBLICATION	141

LIST OF TABLES

Table	Page
3.1 Results of Reliability Using Cronbach's Alpha	62
3.2 Operational Definitions for Variables	65
4.1 Results of Normality Test	66
4.2 Prevalence of NSSI	67
4.3 Sociodemographic Characteristics of Respondents	67
4.4 Description of Socio-Demographics Factors on NSSI	69
4.5 Characteristics of NSSI Behaviours	70
4.6 Functions of NSSI Behaviour	71
4.7 Association between Respondents' Sociodemographic Factors on NSSI	73
4.8 Univariate Analysis of Functions of NSSI	74
4.9 Univariate Analysis on Four Functional Model	76
4.10 Simple Logistic Regression Results	78
4.11 Multiple Logistic Regression Method Forward: Conditional	79

LIST OF FIGURES

Figure	Page
1.1 Incidence Rate (per 100 000) of Self-Harm by States and Age Groups, Malaysia 2011	6
1.2 Incidence Rate (per 100 000) of Self-Harm by Sex and Age Groups, Malaysia 2011	7
2.1 The Four Functional Model of Nick and Prestein 2004 (Jenelle et al., 016)	32
2.2 Conceptual Framework Understanding NSSI	50
3.1 The Location Map of the Kedah, in Malaysia	51

LIST OF APPENDICES

Appendix	Page
A The Number of Responses on the Functions of NSSI	124
B The Number of Responses on the Functions of NSSI	125
C Ethical Amendment from Ethical Committee for Research Involving Human Subjects (JKEUPM), Universiti Putra Malaysia	128
D Questionnaire	131
E Baseline Questionnaire	136

LIST OF ABBREVIATIONS

NSSI	Non-suicidal self-injury
ANR	Automatic Negative Reinforcement
APR	Automatic Positive Reinforcement
SNR	Social Negative Reinforcement
SPR	Social Positive Reinforcement



CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Non-suicidal self-injury (NSSI) is the act of deliberately harming own body without apparent suicidal intent. Non-suicidal self-injury (NSSI) is “the deliberate, self-inflicted damage of body tissue without suicidal intent and for purposes not socially or culturally sanctioned” (International Society for the Study of Self-injury, 2018). This act comprises socially unacceptable acts like cutting, burning, carving, severe scratching, punching, or hitting; breaking bones; biting; interfering with the healing of wounds; and (occasionally) auto-amputation and enucleation of the eye. Among them skin carving, burning, and hitting against a hard surface until bruises, are the common type of NSSI act. This definition does not include suicidal behaviour, socially acceptable behaviours like tattoos, body piercing, or religious rites, as well as unintentional and indirect self-injurious behaviours (such as disordered eating or drug misuse) (Brown, 2017). Tattoos and body piercings are examples of culturally accepted behaviours that are not classified as NSSI (Claes et al. 2005).

In the beginning of year 1960s, the word ‘parasuicide’ was used to state NSSI behaviour. This term was used to classify all types of non-accidental, self-poisoning or self-injury that did not end up in suicide, with or without the intention of suicide (O’Connor, 2011). In time the word ‘parasuicide’ was replaced with the word ‘deliberate non-suicidal self-injury’. The word ‘delibrate’ was dropped due to the impact on the patients, the word was derogatory. At the same time, in western country

NSSI was labelled as 'attempted suicide' without considering the action was with or without suicidal ideation (Skegg, 2005).

After 1987, the term is used as NSSI to indicate deliberate self-injury without suicidal ideation. This kind of self-injury is often not intended as a suicide attempt, but instead is a dangerous coping mechanism for great emotional anguish, intense rage, and frustration. It is also apprehended as a painful strategy to avoid suicide. While self-harm may temporarily relieve stress and create a sense of serenity, it is typically followed by feelings of regret and humiliation as well as the reemergence of unpleasant emotions. Even though life-threatening injuries are typically not planned, self-injury raises the likelihood of more severe, even deadly, self-aggression.

Self-harm is frequently a complex and multidimensional coping strategy used by people who are experiencing severe emotional turmoil. Some find that it offers a way to control or lessen extreme distress or anxiety, providing a brief period of respite from these debilitating emotions. By inflicting physical injury, one can take the focus off the emotional suffering they are going through and onto something more manageable: their physical discomfort. Furthermore, self-harming can give one a sense of control over their body, emotions, or circumstances in life, especially when they feel helpless. The physical suffering from self-harm can be a means of experiencing something concrete for those who are emotionally numb or empty, helping them to overcome their insensitivity. Additionally, it enables people to convey their Self-harm is frequently a sophisticated and multidimensional coping strategy used by people who are experiencing severe emotional upheaval. Some find that it offers a way to control or lessen extreme distress or anxiety, providing a brief period of respite from these

debilitating emotions. By inflicting physical misery, one can take the focus off of the emotional suffering they are going through and onto something more manageable: their physical discomfort. Furthermore, self-harming can give one a sense of control over their body, emotions, or circumstances in life especially when they feel helpless. The physical suffering from self-harm can be a means of experiencing something concrete for those who are emotionally numb or empty, helping them to overcome their insensitivity.

Non-suicidal self-injury is considered as a predictor of suicidal behaviour (Rodav et al., 2014). Accordingly, the individual who has experienced frequent self-injury is most likely to engage in suicidal behaviour. Furthermore, self-injurers who tried various methods of self-injury and having a longer history of engaging in self-injury are more prone to suicidal behaviours.

The fundamental difference between the non-suicidal self-harm and suicide itself lies in the intention. The non-suicidal self-injury does not end in suicide while suicide does. Self-injurers young adults do not intent to end their lives while the adolescent who show suicidal behaviour do intent to end their lives (Favazza, 2012).

Both these behaviours are truly engaged to relieve themselves from pain and distress. Suicidal behaviour is more lethal and it requires medical attention than non-suicidal self-injury. However, the frequent feel of pain and the disappearing sense of fear erodes the fear of suicide and thus increases the risk for suicide (Selby et al., 2014). Based on the study conducted in United States also stated that 70 % of the self-injurers, do attempt suicide at least once (Kim & Dickstein, 2013).

As a matter of fact, the NSSI is also seen as an act of self-healing, among the suicide intenders to avoid suicidal tendencies. The major difference between the two actions is that one injures with the intention to suicide whereas the other injure to avoid suicide. Many times, both these actions can be exhibited simultaneously by the same individual (Butler & Malone, 2013). However, many self-injures are not suicidal (Wilkinson & Goodyer, 2011), but subsequently can lead to the suicidal behaviour if it is not curbed at an early stage. In conclusion, NSSI plays a role as a gateway to extreme acts of suicidal behaviours.

The American Psychiatric Association (2013), as stated that both NSSI and suicide in young adults is the outcome of a complex and complicated process which involves personality, social, environmental, and cultural factors (Hawton Saunders, 2012). There are also many risks such as, intrapsychic, psychosocial, and interpersonal risk factors involved with NSSI. These young adults would experience emotional dysregulation, higher degree of psychiatric problems like anxiety disorder, borderline personality disorder, eating disorder and even worse substance use disorder (Lloyd-Richardson, 2010). These actions of NSSI act as a relief from negative feelings, induces positive emotions, resolves difficulty and most of all eliminates an excessive emotionality and control of dissociation (Walsh, 2012).

NSSI in young adults might present with a range of symptoms that are suggestive of their struggles (Gail, 2016). They sometimes blame accidents for these, which can include recurrent, inexplicable scars or scabs as well as cuts, scratches, bruises, or other wounds that are usually on the wrists, arms, thighs, or torso. Observations of altered eating and sleeping schedules may also be present. Regardless of their

customary dress preferences, they may regularly cover their skin with long sleeves or pants, even in hot weather. They may exhibit erratic and impetuous conduct as well as thoughts of worthlessness or pessimism. Physical evidence, such as blood stains on clothing, bedding, towels, or tissues, may be discovered in relationships where problems frequently occur. They may have things like razors with them.

According to Asarnow et al., 2011; NSSI is a foremost prognosticator of the ensuing suicide attempt. Therefore, it is very important and crucial for the people who are in close contact with the young adults to understand the motives for injury, warning signs and the effect of the action on the whole community. The authorities involved in treating these patients should be more open to the conditions and be completely not judgmental to treat them effectively and release them from the factors motivating them to exhibit such unhealthy behaviour.

Epidemiological information on NSSI has proven to be challenging to find. Self-harm behaviour is frequently not disclosed by individuals, and few injuries are severe enough to need medical attention. The NSSI behaviour must be taken seriously and thorough research must be conducted nationwide to facilitate the young adults especially, to reduce the NSSI behaviour which may lead further to suicidal attempt. The young adults in Malaysia are secretly exhibiting their inner emotions, psychological issues and the social non-intactness behaviour which is not given enough attention by the authorities. The authorities like those who are the closest to the young adults, mainly the parents, family, close relatives, teachers, and the surrounding community should be alerted. Prompt and proper attention is needed to restrain the act of NSSI.

To date, there is a limited number of studies conducted in Malaysian context, to study the prevalence of NSSI among young adults, the severity of the occurrence and the major motivating factors that are involved. This study is conducted to address the occurrence of NSSI behaviour between the depth explored in western countries and in Malaysia.

1.2 Problem Statement

The data obtained on NSSI incidents in Malaysia dated 2011, is given in Figure 1 and Figure 2. This scenario must be addressed and the newest statistics need to be taken to be able to foresee the prevalence and the severity of the issue among the young adults

State	Children/ Adolescent			Adults			Total		
	N	# Population	Rate	N	# Population	Rate	N	# Population	Rate
W. Persekutuan	47	569,500	8.3	170	1,289,800	13.2	217	1,859,300	11.7
Perlis	46	92,500	49.7	38	145,200	26.2	84	237,700	35.3
Kedah	34	768,900	4.4	75	1,204,300	6.2	109	1,973,200	5.5
Pulau Pinang	77	495,100	15.6	171	1,098,700	15.6	248	1,593,800	15.6
Perak	111	876,500	12.7	218	1,521,100	14.3	329	2,397,600	13.7
Selangor	118	1,810,700	6.5	405	3,766,800	10.8	523	5,577,500	9.4
Negeri Sembilan	18	381,900	4.7	49	661,000	7.4	67	1,042,900	6.4
Melaka	10	306,200	3.3	13	526,900	2.5	23	833,100	2.8
Johor	634	1,208,100	52.5	1,858	2,193,800	84.7	2,492	3,401,900	73.3
Pahang	68	610,300	11.1	159	914,600	17.4	227	1,524,900	14.9
Terengganu	14	472,900	3.0	22	601,200	3.7	36	1,074,100	3.4
Kelantan	9	736,700	1.2	16	878,500	1.8	25	1,615,200	1.5
Sabah	53	1,309,300	4.0	120	2,007,300	6.0	173	3,316,600	5.2
Sarawak	61	960,200	6.4	201	1,556,400	12.9	262	2,516,600	10.4
Malaysia	1,300	10,598,800	12.3	3,515	18,365,600	19.1	4,815	28,964,400	16.6

Figure 1.1 : Incidence Rate (per 100 000) of Self-Harm by States and Age Groups, Malaysia 2011

(Source: Malaysian Suicide Registry Malaysia, 2011)

Based on the data obtained by the Malaysian Suicide Registry Malaysia in 2011, the highest rate of NSSI registered in Johor, Selangor and Perak. The lowest rate is registered in Kelantan, Terengganu and Melaka. This could be due to sociodemographic factor that were studied in any studies.

Age Groups	Gender	N	No. of population	Incidence rate per 100,000
Children/ adolescent	Male	462	5,435,300	8.5
	Female	838	5,163,500	16.2
	Total	1,300	10,598,800	12.3
Adults	Male	1,763	9,476,800	18.6
	Female	1,752	8,888,800	19.7
	Total	3,515	18,365,600	19.1
Total	Male	2,225	14,912,100	14.9
	Female	2,590	14,052,300	18.4
	Total	4,815	28,964,400	16.6

Figure 1.2 : Incidence Rate (per 100 000) of Self-Harm by Sex and Age Groups, Malaysia 2011
(Source: National Suicide Registry Malaysia, 2011)

Based on the data obtained children and adolescents, females are more prone to NSSI compared to males. However, in adults, both females and males are almost equally engaged in NSSI.

NSSI represents a growing concern among young adults in Malaysia, yet the issue remains under-researched within this demographic. Although the 2011 Malaysian Suicide Registry data showed noteworthy incidence rates in many states and age categories, there are few thorough research examining the prevalence, features, and underlying causes of NSSI in young adults in Malaysia. The difficulties in collecting reliable data are intensified by the fact that many young people who participate in

NSSI do not seek professional assistance, and mental health resources are frequently few or little known in underdeveloped nations.

The extant body of literature primarily concentrates on populations in the West, resulting in a significant knowledge gap about the cultural, psychological, and sociodemographic elements that underlie NSSI in Malaysia. Furthermore, it is still unknown what the precise purposes and reasons are for these activities in Malaysia.

NSSI is also linked to unfavorable long-term consequences, such as worsening psychological suffering, less favorable chances for success in school and the workplace, and a higher likelihood of suicide attempts. Early detection and intervention are essential in light of these grave implications. However, the majority of the young adult population, especially those who are not in academic settings, is ignored in favor of convenience samples of college-aged students in contemporary studies.

Sociodemographic factors are crucial in understanding the prevalence and characteristics of NSSI. Elements such as age, gender, socioeconomic status, parents' educational background, and marital status can act as either independent or confounding variables that influence NSSI behaviors. Grasping these associations is essential for several reasons. Firstly, sociodemographic variables may directly affect the likelihood of engaging in NSSI. Factors like socioeconomic stress, cultural attitudes towards mental health, and access to resources can independently impact the prevalence of NSSI. For example, individuals from lower socioeconomic backgrounds might experience higher levels of stress, which could increase the likelihood of NSSI.

Secondly, these variables can confound the relationship between NSSI and other psychological or environmental factors. For instance, the influence of a stressful academic environment on NSSI may be complicated by socioeconomic status or the level of family support available. In such cases, it becomes challenging to isolate the impact of the academic environment from the underlying sociodemographic conditions. By examining these sociodemographic factors, it is easier to understand the complex interplay between these variables and NSSI. This understanding is pivotal for developing targeted and effective intervention strategies that address the unique needs of different demographic groups.

Examining the associations between the functions of NSSI and NSSI behaviors among young adults in higher learning institutions is essential for several reasons. Firstly, understanding the specific functions and motivations behind NSSI allows for more targeted interventions, treatments can be tailored more accurately and resulting in more effective support for those affected. Secondly, identifying the triggers and patterns associated with NSSI is crucial for developing preventive strategies. This proactive approach helps in mitigating factors that contribute to self-injury before they escalate. Thirdly, early identification and intervention based on an understanding of the functions of NSSI can significantly improve mental health outcomes. When the underlying reasons for NSSI are addressed promptly, it reduces long-term psychological distress and enhances overall well-being. Early intervention is key to preventing the progression of self-injury behaviors and promoting mental health.

Therefore, by examining the prevalence, characteristics and functions of NSSI among young adults in a particular Malaysian community, this study seeks to close research

gaps that currently exist. It will look into how common NSSI is and what characteristics the people who participate in this behavior have in common. In addition, the research will ascertain the several elements; psychological, environmental, and cultural effects among them that lead to NSSI. This research also aims to provide a nuanced understanding of NSSI in Malaysia, informing the development of effective prevention and intervention strategies tailored to the unique needs of Malaysian young adults. This study will also contribute to the broader field of mental health research by emphasizing the importance of cultural and sociodemographic contexts in understanding and addressing NSSI. This study aims to fill critical gaps in research on NSSI among young adults in a specific Malaysian community through a multifaceted approach.

Firstly, it seeks to explore the prevalence and characteristics of NSSI within this demographic. By investigating how common NSSI is and the demographic traits associated with it, the study aims to paint a detailed picture of its incidence among young adults in Malaysia. Secondly, the research endeavors to identify the various factors contributing to NSSI behaviors. This includes examining psychological, environmental, and cultural influences that may play significant roles in the initiation and persistence of NSSI among young adults in Malaysia. Thirdly, the study aims to delve into the motivations and functions underlying NSSI among this population. By understanding why young adults engage in NSSI, whether as a coping mechanism, means of self-expression, or other reasons, researchers can better tailor interventions to address these specific needs. Lastly, the research will analyze the associations between sociodemographic factors—such as age, gender, socioeconomic status, educational background and NSSI. This analysis will clarify whether these factors

independently influence NSSI behaviors or act as confounding variables in the relationship between other psychological and environmental factors and NSSI.

By achieving these objectives, the study aims to provide an exact understanding of NSSI in Malaysia. This understanding is crucial for developing effective prevention and intervention strategies tailored to the unique cultural and sociodemographic context of Malaysian young adults. Moreover, the research contributes to the broader field of mental health by highlighting the significance of these contextual factors in both understanding and addressing NSSI globally.

1.3 Significance of the Study

In terms of contributing to the body of knowledge, this research addresses a notable gap in the literature concerning the prevalence and functions of NSSI specifically among Malaysian young adults. Existing studies often focus on Western contexts, thus this study enriches the field by offering insights from a non-Western perspective. Understanding the prevalence and underlying functions of NSSI is particularly critical as timely interventions can mitigate its progression to more severe outcomes, including suicidal thoughts and behaviors, and serious mental health conditions.

This study holds significant implications for organizations, particularly community development practitioners, aiming to understand and address non-suicidal self-injury (NSSI) behaviors among young adults in Malaysia. By exploring these factors, the study provides crucial insights that can guide the development of effective strategies and interventions, fostering a more positive national outlook for future generations.

NSSI is associated with a number of unfavorable long-term effects. Continued NSSI is associated with increased psychological and academic discomfort (Whitlock et al., 2015), worse educational and occupational results (Borschmann et al., 2017), and decreased life satisfaction (Kiekens et al., 2017). Furthermore, research indicates that having a history of NSSI doubles the chance of attempting suicide in the future. In fact, studies show that the risk of suicide increases four times for those with a history of NSSI (Ribeiro et al., 2016). These results emphasize how important it is to recognize problems early and take action.

In order to lessen the long-term effects of NSSI, early detection and intervention are essential. Studies underscore the significance of school-based mental health initiatives and easily accessible community resources in identifying and assisting persons who are considered to be at-risk (Robinson et al., 2018). By addressing the unique purposes and driving forces behind NSSI, interventions can be more effectively designed, giving young adults better coping skills and lowering the rate of self-harm.

From a policy perspective, the findings of this study are invaluable for government agencies in formulating strategies to tackle social issues and promote healthier youth development. By utilizing these insights, policymakers can implement targeted interventions that cater to the unique needs of young Malaysians, thereby fostering their overall well-being and resilience. This study also provides practical guidance for departments handling youth and children's issues, offering actionable recommendations to support the healthy development and life trajectories of Malaysia's youth population.

1.4 Research Questions

- a) What is the prevalence of the NSSI among young adults in higher learning institutions in Kedah?
- b) What are the sociodemographic characteristics (age, sex, socioeconomic status, ethnicity and parents' education level) among young adults in higher learning institutions in Kedah.
- c) What are the characteristics of NSSI among among young adults in higher learning institutions in Kedah.
- d) What are the functions of NSSI behaviour among young adults in higher learning institutions in Kedah?
- e) What is the association between the functions of non-suicidal self-injury (NSSI) and NSSI behaviors among young adults in higher learning institutions in Kedah?

1.5 Research Objectives

The objective of the study was: -

- a) To determine the prevalence of non-suicidal self-injury behaviour among young adults in higher learning institutions in Kedah.
- b) To describe the sociodemographic characteristics (age, sex, socioeconomic status, ethnicity and parents' education level) among young adults in higher learning institutions in Kedah.
- c) To determine the characteristics of NSSI among young adults in higher learning institutions in Kedah.
- d) To determine the functions of NSSI among young adults in higher learning institutions in Kedah.

- e) To determine the association between the functions of NSSI and the NSSI behaviour among young adults in higher learning institutions in Kedah.

1.6 Research Hypothesis

The research hypotheses of this study to determine the association between the functions of NSSI and the NSSI behaviour among young adults in higher learning institutions in Kedah: -

H_{A1}: There is an association between the APR factors and NSSI behaviour among young adults in higher learning institutions in Kedah.

H_{A2}: There is an association between the ANR factors and NSSI behaviour among young adults in higher learning institutions in Kedah.

H_{A3}: There is an association between the SPR factors and NSSI behaviour among young adults in higher learning institutions in Kedah.

H_{A4}: There is an association between the SNR factors and NSSI behaviour among young adults in higher learning institutions in Kedah.

CHAPTER 2

LITERATURE REVIEW

2.1 Prevalence of NSSI

Non-suicidal self-injury is an act to ease emotional distress, is not uncommon in young adults (John & Cate, 2017). Although there is limited information on NSSI prevalence prior to the early 2000s, throughout the past 15 years, prevalence rates have remained consistent among publications from various nations (Swannel et al, 2014).

According to studies, the age at which NSSI first manifests itself is between 12 and 14 years old (Nock et al., 2006). It is stated that the onset of NSSI typically occurs in early young adults' age between 11 and 15 and can continue into adulthood (Rodav, Levy and Hamdan, 2014). However, NSSI behaviour has also been seen in children younger than 12 years old. Although NSSI has been traditionally thought to begin during early adolescence (Nock, 2010) it is particularly present in mid-adolescence (Brown, 2017). Most researchers found that self-harming behaviour is more common overall, including in teenagers and young adults (Cipriano 2017).

Studies have reported a wide variability in the prevalence rates of non-suicidal self-injury (NSSI), ranging from 2.9% to 69.6% in non-clinical populations of adolescents and young adults (Cerutti et al., 2011; Muehlenkamp et al., 2012) and from 20% to 80% in clinical populations (Cerutti et al., 2014). Lim et al. (2018) found the overall lifetime prevalence rate of NSSI among young adults to be 22.1%. The studies, in 2020, has stated that NSSI among the middle and high school students, who are considered as young adults, ranging from 8.8 % to 22.8% (Park et.al., 2020). An

estimated value indicates that 7%-14% young adults deliberately injure themselves at least once (Wilkinson, 2013).

The study on the prevalence of NSSI in a school sample of young adults in Canada which was published in 2002, found a prevalence of “self-mutilation” of around 13%. (Swannel et al, 2014) Zetterqvist et al. (2013) found that 6.7% of 3,097 Swedish teenagers in their community sample had NSSI that met the DSM-5's suggested criteria. 50% of teenage inpatients in this study met the criterion, indicating higher prevalence in clinical populations. The report emphasizes how serious NSSI is in both clinical and community settings. However, North American and European studies on rates and characteristics of NSSI tend to predominate. NSSI is especially prevalent during adolescence with average of 17–18% in some reviews of community samples (Muehlenkamp et al., 2012 & Swannel et al., 2014).

Although NSSI behaviour is a common phenomenon, the results differ greatly amongst populations. A study conducted in Korea in 2021 stated that the lifetime prevalence in young adults' ranges from 8.8 % -22% (Son et. al., 2021). Only a small number of studies, primarily from Hong Kong, Taiwan, and Guangdong, found that between 17.0 and 33.6 percent of Chinese young adults had NSSI in the previous 12 months. According to different studies, the prevalence of NSSI behaviour also peaks at the age of 15 - 16 years and decreases at 17 years (Plener, 2015). In a study conducted in Iran, the prevalence of NSSI among female and male young adults was 26.8% and 17.9%, respectively. Evidence suggests that this behaviour is more common in females (Ayyubi et al., 2013). According to two studies conducted in China, 33.7 to 51% of the community's young adults had NSSI. In another study in

China, a total of 15,623 adolescents in rural regions were engaged in a nationwide survey, and approximately 29% of them reported a history of NSSI at least once during the last year (Tang et al., 2018).

NSSI-related problems are currently a big concern throughout Asia. According to a study on NSSI among Chinese students in Malaysia, 68% respondents engaged in NSSI behaviour (Ee and May, 2011). Additionally, it was discovered that 56.81% of teenagers among 342 secondary school pupils had allegedly engaged in self-harming behavior (Teik and Aman, 2015). A few investigations conducted in Malaysia, notably on non-clinical samples, have proven the existence of NSSI behavior in the local setting (Johari et al., 2022; Masiran et al., 2017). Malaysia has a 19 per 100,000 adult prevalence of NSSI conduct and a 12 per 100,000 rate of NSSI behavior in children and adolescents (Masiran et al., 2017). Numerous community and review investigations have demonstrated the existence of NSSI in Malaysian non-clinical samples in the local setting (Kamaruzaman, and Jodi, 2018). Moreover, community research suggests that around 13% of young people have engaged in NSSI behaviors (Kwang et al., 2018). About 56.81% of teenagers out of 342 secondary school students in the Malaysian state of Penang were reported to be participating in NSSI conduct, according to Ganaprakasam et al. (2021).

Many studies have found that the occurrence of this event is on the rise, especially in adolescents, ranging from 3.7-23.5% and about 8.8-22% in young adults (Muehlenkamp et al. 2012; Swannell et al. 2014; Klonsky, 2018). NSSI is a strong predictor of subsequent completed suicide, according to (Asarnow et al., 2011).

2.2 The Sociodemographic Factors of NSSI

It is crucial to consider sociodemographic factors when assessing the prevalence and characteristics of NSSI. Gender and age are significant variables. Females usually report higher rates of NSSI during adolescence, although these differences tend to vanish in adulthood, according to Muehlenkamp and Gutierrez (2004). Socioeconomic status also has an impact on NSSI behaviors. Research indicates that individuals from lower socioeconomic backgrounds are more likely to participate in NSSI because they experience higher levels of stress and have less access to mental health facilities (Boyd et al., 2016). The cultural setting greatly affects the prevalence and perception of NSSI. For instance, the stigma associated with mental health issues may contribute to underreporting of NSSI in Asian countries (Tang et al., 2018).

2.2.1 Sex

Sex is the foremost factor associated with the finding that involves young adults. Sex is also the main factor associated with non-suicidal self-injury. A large-scale review by Bresin and Schoenleber in 2015 established sex as an important epidemiological factor that can influence NSSI.

The results from few studies suggested that female displayed more NSSI behaviours than males, in both clinical and non-clinical samples (Claes et al., 2007; Muehlenkamp and Gutierrez, 2007; Yates et al., 2008; Muehlenkamp et al., 2013). Furthermore, an individual study had found that females had an earlier age of onset than males (Andover, 2010). Klonsky et al., in 2011 stated that non-suicidal self-injury behaviour is more common in female young adults than in male young adults.

Biologically, early maturing young girls become more sensitive towards their interpersonal relationships and more sensitive than their opposite sex. This leads them to be more depressed when they are exposed to the same amount of stress compared to their male counterparts. However, the same author (Klonsky, 2011) also suggested that sex play no role in non-suicidal self-injury at all but it varies in terms of the methods of self-injury. The differences is in the method chosen: women are more prone than males to use NSSI techniques that typically entail blood, such as self-cutting, while men are more likely to use ways like striking, burning, and hammering (Claes et al., 2007).

In another cross-sectional study conducted in Australia there was no significant different in the males and females engaging in NSSI (John & Cate, 2017). However, the methods to non-suicidal self-injury and the degree of damages varies between these two sex group (Hawton, 2012). Additionally, according to Liang, Yan, and Zhang (2014), in general many studies proves that girls have a higher tendency to non-suicidal self-injury and even suicide. According to Andover (2010), females who are still developing biologically are more vulnerable to depression than boys because they are more sensitive to stress and interpersonal relationships. The higher frequency of NSSI in females could be attributed to this increased sensitivity.

According to Claes et al. (2007), males are frequently motivated by social factors such peer pressure or the need to blend in. However, according to Glenn and Klonsky (2013), women are more prone to participate in NSSI as a kind of self-punishment and a way to release negative emotional emotions. Lloyd-Richardson et al. (2007) reported that the Four Functional Model of Nock and Prinstein indicates that there were no

gender differences in the NSSI functions among young people. The study reported that approximately 90% of young adults fitting the criteria for NSSI disorder engaged in behaviors for automatic negative functions, followed by automatic positive functions, with around 27% reporting social functions.

There are no discernible gender variations in the prevalence of NSS. For example, a cross-sectional study conducted in Australia (John & Cate, 2017) indicated no significant difference in NSSI engagement between males and females. But there were differences in the techniques and intensity of self-harm across the sexes, with men generally committing more severe types (Hawton, 2012). Additionally, according to Liang, Yan, and Zhang (2014), females are more likely than boys to engage in suicide thoughts and behaviors. This suggests that more research is necessary to determine the underlying causes of these inconsistency.

Gender differences in NSSI are evident in terms of prevalence, methods, and motivations. Females are more likely to engage in NSSI to cope with negative emotions, while males often do so for social reasons. The literature shows that gender and NSSI interact in a complicated way. While NSSI practices are more common and tend to start earlier in life in women, there are differences in the approaches and reasons used by the sexes. The differences in methods and severity of NSSI behaviors further underscore the need for tailored approaches in addressing this issue.

2.2.2 Age

A study had provided evidence that stated that NSSI starts at the ages between 12 and 16, at an early adolescent age (Klonsky, 2011). This is due to the complex

transformation that the young adults adhere at this phase with relationships between biological, psychological, social and cultural factors (Hawton, 2012).

Plener et al. (2015) reviewed longitudinal research on NSSI and discovered that the prevalence of NSSI continuously rises until age 12, peaks between ages 14 and 16, and then begins to decline around age 18. Gandhi et al. (2018) observed that among young adults in Belgium, the odds of beginning NSSI were highest between the ages of 14 and 15, and they began to decline around the age of 18. According to a few studies, adolescence is the crucial time for the development of NSSI because ages 18 to 20 are the second most prevalent age for the condition to manifest after age 14 (Gandhi et al., 2018).

According to the systematic review made, NSSI behaviour often starts between the ages of 13 and 15 years, just like other risky behaviours such alcohol and substance misuse mainly in United States of America, (Muehlenkamp et al., 2012). Adolescence appears to be the beginning of a developmental stage that is characterised by higher rates of NSSI behaviours (Cerutti et al., 2014; Manca et al., 2014). A study reports that the rates of NSSI in males takes two peaks, one below 10 years of age and between 20-29 years old. Whereas in females there is a gradual rise from 10 years old to 20-29 (Ruziana et. al., 2017).

The differences in age of commencement imply that there might be particular developmental elements that affect varied patterns to NSSI initiation that could affect characteristics of the behaviour depending on the age at which self-injury begins.

It's interesting to note that certain research points to the possibility that gender can influence the developmental peaks of NSSI behavior. Males have two separate peaks, one below 10 years old and the other between 20 and 29 years old (Ruziana et al., 2017). In females, the onset often shows a slow increase starting at age 10, reaching a peak between 20 and 29 years old. This shows that the onset and development of NSSI may be influenced by developmental factors specific to gender.

The variations in the ages at which NSSI first appears suggest the existence of particular developmental components that influence the onset and features of the behavior. Puberty and other biological changes can make a person more susceptible to emotional turmoil and impulsive behavior. Psychological elements are also important; these include coping strategies and mental health conditions like anxiety and sadness.

These findings underscore the importance of early intervention and the need for gender-specific approaches to effectively address NSSI behaviors. Future research should continue to explore the nuanced developmental trajectories of NSSI to better understand and support individuals at risk.

2.2.3 Socioeconomic Status

According to the Department of Statistics Malaysia, households are classified into three income groups: T20 (top 20%), M40 (middle 40%), and B40 (bottom 40%), based on total household income. As of 2022, the thresholds for these groups range from below RM5,250 for B40 to above RM11,820 for T20, with further subdivisions within each group. While incomes have shown modest growth—urban households

reported a 2.9% increase in average income from RM8,635 in 2019 to RM9,428 in 2022—the rising cost of living, driven by inflation and slower wage growth, continues to challenge many households. For instance, in urban areas such as the Klang Valley, higher housing and food costs exacerbate financial burdens, even for the T20 group.

Yates et al., 2008, has reported that adolescent in high socioeconomic status in United States is more prone to self-injury. However, Wan et al., 2011 has reported that NSSI is high in families with an economic disadvantage based on a study conducted in China. Therefore, these factors alone suggest that young adults in different socioeconomic background require different motivation and support to confront the challenges that arises for a better emotional and psychological well-being.

Recently, young adults irrespective of the economic background are found to be engaging in the NSSI act due to the overwhelming expectations of their future. Studies conducted in UK (Page et al., 2014) and another cross-sectional study conducted of Swedish young adults (Baetens et al., 2014) stated that young people who had lower socioeconomic position as children are more likely to engage in self-harm with purpose to injure oneself. Although different countries have different measurement of socioeconomic status and different magnitude of socioeconomic deprivation, the NSSI behaviour is obviously reported higher in low-income group. Therefore, understanding the role of parental socioeconomic status and its association to NSSI is crucial.

These conflicting findings indicate that young adults from different socioeconomic backgrounds face unique challenges that influence their emotional and psychological

well-being. While high socioeconomic status adolescents may struggle with high expectations and perfectionism, those from low SES backgrounds may face financial stress and lack of resources, both of which can lead to NSSI.

Recent studies suggest that young adults, regardless of their economic background, engage in NSSI due to overwhelming future expectations. This is consistent across different socioeconomic groups, indicating that societal pressures play a significant role in the onset of NSSI.

Understanding the role of parental socioeconomic status is crucial in addressing NSSI among young adults. Studies indicate that lower parental SES is associated with higher rates of NSSI, as children in these environments often experience more stress and fewer support systems (Page et al., 2014; Baetens et al., 2014).

Socioeconomic status significantly influences the prevalence and motivations for NSSI among young adults. High SES is associated with pressures related to achievement, while low SES is linked to financial stress and limited resources. Understanding these variations is crucial for developing effective prevention, intervention strategies and help in addressing the root causes of NSSI and promoting better emotional and psychological well-being for all socioeconomic groups.

2.2.4 Race/ Ethnicity

The race factor is studied because it was discovered that there was a severe lack of NSSI research of this kind in terms of race and the studies that were reviewed did not clearly distinguish between racial and ethnic groups.

Wester and Trepal (2010) investigated the relationship between coping strategies and non-suicidal self-injury (NSSI), emphasizing that adaptive coping mechanisms reduce the likelihood of NSSI engagement. The study also explored the role of ethnic identity and belonging in mitigating NSSI risks among Caucasian, African American, Hispanic, Asian American, and Multiracial students, finding African Americans and Asian Americans having significantly lower NSSI engagement than all other racial groups. Wester and colleagues found that individuals with a strong sense of ethnic identity and belonging often demonstrated greater psychological resilience, which could protect against self-injurious behaviors. This aligns with broader research suggesting that ethnic identity can provide a sense of community and self-worth, reducing susceptibility to maladaptive coping methods.

Another studies have shown that NSSI is more prevalent among White adolescents and young adults compared to their African American and Hispanic counterparts. For example, a study on college students indicated that 21.7% of White participants engaged in NSSI, compared to 9.2% of African Americans and 10.4% of Hispanics. Interestingly, contrasting findings have been observed in specific contexts, such as low-income or rural areas, where African American youth displayed higher rates of self-injury than their White peers. Such variability underscores the influence of socioeconomic and environmental factors on NSSI behaviors (Wester et al.,2015).

Culture may affect NSSI more than previously thought, given the intimate connection between culture and self-harming behaviours (Colucci, 2006; Colucci et al., 2013). In fact, the most current edition of the DSM views culture as a crucial factor in both the classification and significance of NSSI (American Psychiatric Association, 2013).

The prevalence and manifestation of NSSI are influenced by societal and psychological factors, according to research conducted in South Asia, particularly Malaysia. According to a comprehensive assessment of NSSI in the area, prevalence rates for non-clinical individuals varied significantly, ranging from 3.2% to 44.8%, depending on methodological and demographic variations. Anxiety and depression are two mental health conditions that have been repeatedly found to be important risk factors for NSSI behavior (Bhola et al., 2017; Sinha et al., 2019). Another research indicates that there may be ethnic differences in psychological distress and NSSI practices, particularly in Malaysia. For example, it was observed that Indian participants had higher median self-harm scores than Chinese and Malays, which may be a reflection of systemic and societal pressures (BMJ Open, 2021). However in Malaysia, a variety of ethnic groups are also involved in NSSI behavior.. According to Guan and Aman's (2015) research, Malaysian Chinese adolescents between the ages of 13 and 16 exhibited a significant prevalence of NSSI behavior, with a range of 56.8% to 68.0%.

Race and ethnicity are critical factors in understanding NSSI behavior. The influence of race and ethnicity on NSSI behavior is multifaceted. The interplay of cultural, religious, and psychological factors influences the prevalence and expression of NSSI across different ethnic groups. The Malaysian context demonstrates significant ethnic differences in NSSI prevalence, highlighting the need for culturally sensitive interventions.

2.2.5 Parents Educational Level

Children with parents who have low educational levels were shown to have a higher risk of NSSI, according to a study from Belgium (Baetens et al., 2014). This is probably because the parental techniques might be different between highly educated parents and low educated parents.

A few studies conducted in Malaysia had focused on the parental education level and the achievement of children's education and parents' educational level and positive youth development. A study on the connection between parents' education levels and their involvement in their kids' education found that parents who are more educated are more likely to be actively involved in their kids' education (Vellymalay, 2011). Similarly, Kiadarbandsari et al. (2016) observed that respondents from households with more educated moms were more likely to fall into the right categories for positive youth development, contribution, and depressive symptoms than respondents from families with less educated mothers.

By far, there is no much studies about the parental education level and the NSSI behaviour among young adults in Malaysia. This fact has created a curiosity to explore the factor and find the correlation between parental educational level and NSSI behaviour.

Parental education levels significantly influence children's development and mental health outcomes, including the risk of NSSI. The existing literature underscores the significant impact of parental education on children's development and mental health. In Malaysia, the positive effects of higher parental education on youth development

and mental health outcomes indicate that parental involvement and support play crucial roles. However, the absence of research directly linking parental education levels to NSSI behavior in Malaysia presents an opportunity for further investigation.

2.3 Four Function Model

The functions of NSSI can be defined as “variables that motivate and reinforce the behaviour” (Klonsky, 2007) and exploration of these functions has been a large focus of research in recent years.

After the year 2000, when the studies to better understand the motivational factors of NSSI were carried out, various models were proposed. Furthermore, the documented prevalence of NSSI in adolescent populations, which is frequently in the double digits, implies that this behaviour is not just present in people who have been diagnosed with borderline personality disorder or severe psychopathology. Only a few function-based models of NSSI focus on correctional populations.

Two-function model has two type of functions: interpersonal (social) and intrapersonal (automatic). Using NSSI to control internal states, such as generating a desirable emotional state or reducing unpleasant feelings, is known as intrapersonal functions while influencing others with NSSI in order to attract their attention or elicit a response is a tactic referred to as interpersonal functions. This model captures the overall motivations for NSSI, but it is not detailed enough to understand the range of reasons why people engage in this behavior.

However, the three functional model emphasizing the differences between interpersonal functions, intrapersonal-positive reinforcement, and intrapersonal-negative reinforcement and clarifies this further. This approach provides additional information, but it still falls short of capturing the complexity of NSSI reasons.

Conversely the four-function model for non-suicidal self-injury (NSSI) is seen to be more advantageous and thorough than the two- and three-function models since it provides a better understanding of the functions behind NSSI. This is a comprehensive explanation of why the four-function model is usually thought to be superior: Within automatic and social categories, it integrates both positive and negative reinforcement. This specificity recognizes that people may self-injure for unique reasons that are not sufficiently covered by wider categories, allowing for a more in-depth examination of the varied causes behind NSSI. The inclusion of both positive and negative reinforcement in intrapersonal and interpersonal contexts provides a more comprehensive understanding of NSSI than the four-function model does. As a result, physicians may be able to better focus and personalize their interventions to each patient's unique set of reasons. The four-function model can also direct the creation of more accurate evaluation instruments to pinpoint the various NSSI functions in a person's behavior.

The four-function model (FFM) of NSSI was proposed by Nock & Prinstein (2004). In this model, the functions of NSSI are categorized by two dichotomous factors stating that the reinforcement for NSSI can be either (a) positive or negative or (b) automatic (i.e., intrapersonal) or social (i.e., interpersonal). The four processes proposed by the model include:

Automatic Negative Reinforcement (ANR) refers to use NSSI as a coping mechanism or as a means of escaping unpleasant internal experiences, such as severe emotional distress, tension, worry, or depression. People commonly employ NSSI as a coping mechanism to mitigate really bad emotions. When distress is promptly soothed, the behavior is encouraged, which increases the probability that it will be repeated. The temporary reduction of negative feelings could initiate a vicious cycle where the person resorts to NSSI anytime they sense a recurrence of those emotions, which would eventually lead to frequent self-harm (Nock & Prinstein, 2004).

Automatic Positive Reinforcement (APR) entails using NSSI to produce a desired positive internal state, like becoming more in charge of one's life or experiencing something when numb. The physical experience of NSSI offers a tangible, if uncomfortable, way to overcome feelings of numbness or dissociation and feel alive or present. NSSI may help someone feel in control of their body and emotions when they feel powerless or uncontrollable in other areas of their life (Nock & Prinstein, 2004).

Social Negative Reinforcement (SNR) refers to using NSSI as a means of avoiding or escaping unwelcome social contacts or situations, such as confrontations, requests, or perceived threats from others. NSSI may be used by people as a means of avoiding difficult social circumstances or as a means of escaping duties and expectations. This avoidance may temporarily diminish social pressures, which would strengthen the habit. By using NSSI to communicate signs of suffering, people can lower the expectations others have of them, which reduces social stress (Nock & Prinstein, 2004).

Social Positive Reinforcement (SPR) entails using NSSI to get approval, attention, or other social benefits from family, friends, or other authoritative people. NSSI can be utilized to communicate discomfort when verbal communication is not successful. The worry and attention of others may help to maintain the behavior. The response of others, such as increased concern, attention, or therapy, can reinforce the NSSI behavior and provide the social support that the individual might not otherwise receive (Nock & Prinstein, 2004).

Identifying the dominant function in a particular person might inform tailored therapy approaches, such as developing social communication skills for SPR or emotion management techniques for ANR. The NSSI For Functional Model offers a framework for clinical practice and theoretical investigation. Using this model, clinicians can evaluate the underlying causes of NSSI in their patients, leading to the creation of more focused and successful

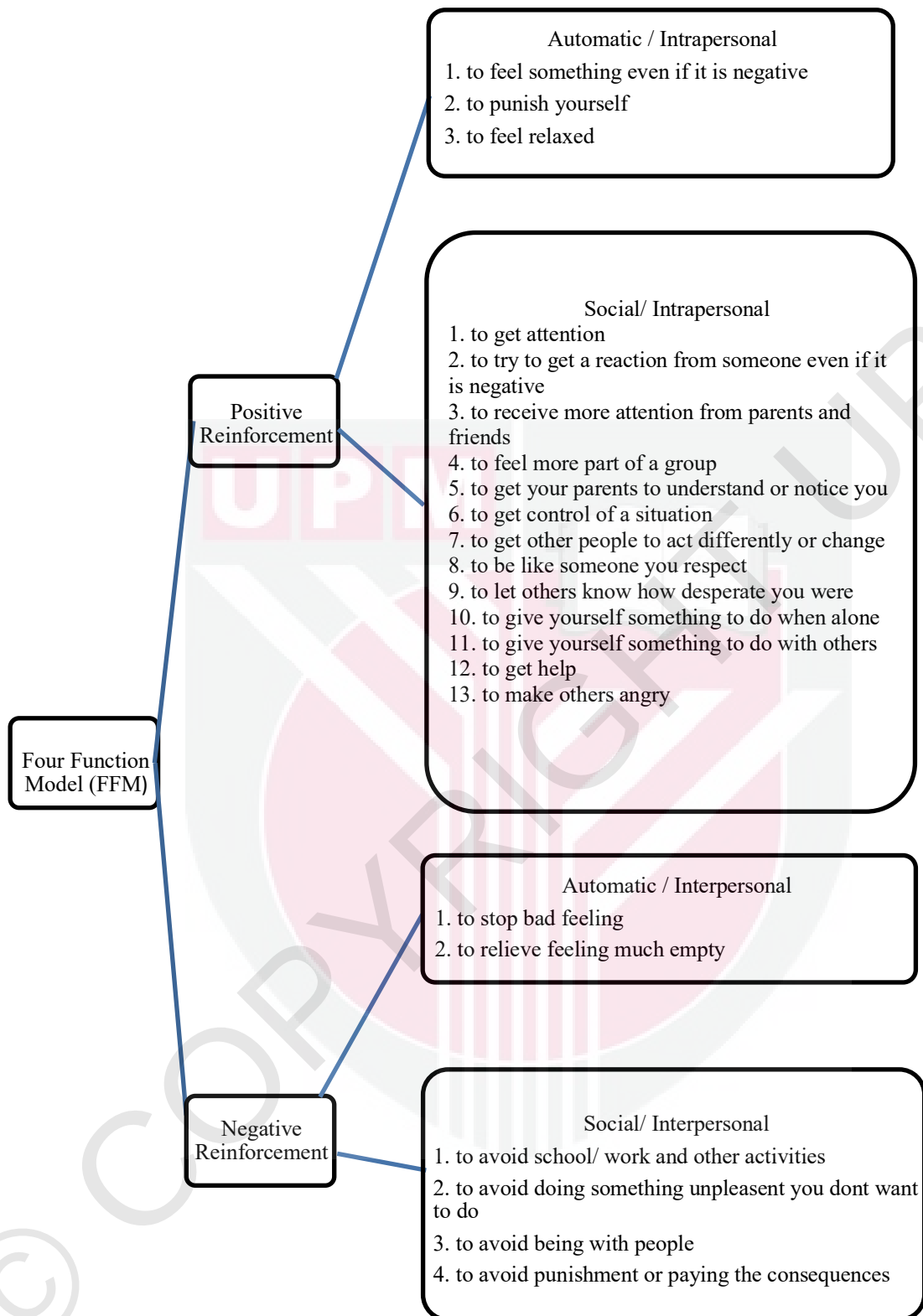


Figure 2.1 : The Four Functional Model of Nick and Prestein 2004 (Jenelle et al., 016)

2.4 Categorising NSSI Factors according to Four Functional Model

2.4.1 Automatic Negative Reinforcement

Automatic negative reinforcement occurs when a behaviour terminates an aversive stimulus directly and the behaviour is strengthened. The aversive stimulus is not terminated by another individual.

2.4.1.1 Self-Criticism and External/Parental Criticism

A study reported that young adults who engage in NSSI has higher level of self-criticism (Germain and Hooley, 2012). Similarly, researchers also have stated that young adults who engage in the NSSI may have experienced a greater amount of parental criticism than those without a history of NSSI behaviour (Ammerman and Brown, 2018).

In addition to this, Nock (2009) came up with a probable clarification that an individual who self-criticise or had experience criticism from other may engage in NSSI as to punish themselves for the mistake, wrongdoing, or the perceived imperfections. They engage in NSSI due to the sense of dissatisfaction and guilt of the wrongdoings. You and Leong suggests that self-criticism and external/parental criticism lead to the NSSI behaviour along the time (You and Leung, 2012). Based on this the actual predictors happen to be the parental criticism. However, complete longitudinal research is not conducted yet to investigate the correlation between parental criticism, self- criticism, and the occurrence of NSSI among young adults. Furthermore, the results obtained were also stated not sufficient to generalize the finding to the entire population or the specific age group of interest.

Besides, parental criticism, You et. al. (2017), also highlighted another predictor that might have an association with NSSI that is parental control. The results obtained from their longitudinal studies, indicates that the greater parental control or and greater frequencies of NSSI across the time. The study also stated the conditions could be vice versa. The parental control or, and parental criticism could be the after NSSI engagement. These complicated situations need to be studied in Malaysian young adults to untangle the binder. Rohner (2005) has introduced, the parental criticism is from the neglecting or disapproving parent. Parental rejection is also a strong factor that influences NSSI behaviour. Latina and Stattin in 2016, exhibited that parents' rejection is positively associated with NSSI.

The expression and understanding of parental control and criticism in relation to NSSI are also influenced by cultural differences in parenting methods between Eastern and Western societies. Notwithstanding mounting data, there are still unanswered concerns regarding the precise processes by which parental control and criticism lead to NSSI. More investigation is needed on how parenting practices are influenced by cultural norms and how this affects NSSI across a range of demographic groups. By addressing these gaps, more specialized interventions and support plans that are designed to reduce young adults' risk factors for NSSI can be developed.

2.4.1.2 Emotional Dysregulation

Emotion regulation, which is broadly defined as unconscious or explicit attempts to notice, comprehend, and manage one's emotions, has been a key component in earlier research on NSSI (Aldao et al., 2016). Emotional dysregulation is a term used to describe an emotional response is that not well regulated to fit the traditionally

accepted domain of emotional reactions. It is commonly classified as mood swings, or labile mood. However, the concept of emotion (dys) regulation is not conceptually clear (Aldao et al., 2016). As noted above, the constructs of emotion regulation and dysregulation are broad and multidimensional.

NSSI is seen as the results of a complex emotional ruminative process which snowballs into emotional intensity and, ultimately leads to emotional dysregulation. In this situation NSSI plays a role as to distraction which temporarily gives a sense of relief and drastically reduces the negative emotions. However, NSSI is still considered as a negative reinforcement and a badly handled regulatory skill.

According to a new meta-analysis of long-term risk variables for NSSI, affect dysregulation is a major but underwhelming indicator of the condition (Perez et al., 2012). Similar findings were reached in the study that focused on NSSI, with limited access to emotion management tools demonstrating connections with self-injurious behaviour (Perez et al., 2012).

Furthermore, NSSI also prevents a young adult from further exploring into more positive and productive skills to further enhance the emotional regulation (Tinne Buelens et al, 2019). This research has demonstrated that self-reported negative feelings tend to rise before engaging in NSSI and fall after the act (Muehlenkamp et al., 2009).

According to Wolff et al. (2019), the emotion dysregulation features that were most highly linked to non-severe mood disorder (NSSI) were the inability to control one's impulses, the inability to access regulation techniques, the inability to engage in goal-

directed conduct, and the denial of emotional responses. According to Hatkevich et al. (2019) and Neacsiu et al. (2018), there is evidence from multiple research linking emotion dysregulation to suicide. It's unknown, therefore, how emotion dysregulation differs in people with suicidal thoughts vs those who merely have NSSI.

Although there is a lot of data connecting emotion dysregulation to NSSI, there are still questions about the precise processes by which this dysregulation results in self-harming behaviors. According to certain research, NSSI is a maladaptive emotion management technique used to momentarily reduce strong unpleasant feelings. Contradictory research, however, suggests that NSSI might not be able to control emotions in the long run and might even make it more difficult for people to acquire adaptive emotion regulation techniques.

2.4.1.3 Cyberbully

The new millennium has brought in some new way of doing things. Among them is cyberbully. The rapid development in Information and Communication technology made emergence of cyberbully to many users of social media especially to young adults (Smith et al., 2008). The negative effects of cyberbullying on health include future psychological issues, self-harm, and suicide. The study of cyberbullying is still in its early stages; however, it is well known that the experience may be extremely distressing (Langos 2012, Wolke 2017). According to several earlier studies, young adults who reported experiencing bullying or participating in cyberbullying were more likely to engage in suicide and self-harming behaviours (O'Connor 2009; John et al., 2018).

Even though ICT and cyberbully is still a new this millennium and the studies on the association between cyberbully and NSSI is still at an early stage, a few studies has reported that young adults had fallen victims to cyberbullying and exhibited NSSI and suicidal behaviour (O'Connor et al., 2009 & John A, et al., 2018).

However, the Covid 19 pandemic has changed the scenario tremendously. According to a study, estimates of the prevalence of cyberbullying victimisation for Chinese adolescents range from 15 to 35 percent (Li et al., 2019). According to the findings of multiple empirical investigations (John et al., 2018), being a victim of cyberbullying was strongly correlated with NSSI and suicidal conduct. The adolescents who experience bullying (including cyber victimization) are more prone to engage in NSSI and that being a victim of cyberbullying is linked to a higher risk of suicidality in teenagers (Messias et al., 2014). These results show that being a victim of cyberbullying may be a significant risk factor for adolescent NSSI.

2.4.2 Automatic Positive Reinforcement

Automatic reinforcement occurs when a person's behaviour creates a favourable outcome without the involvement of another person (Cooper, Heron, & Heward, 2007). It is a behaviour maintained by automatic reinforcement is "non-social" (Patel, Carr, Kim, Robles, & Eastridge, 2000) or that automatic reinforcement is 'a reinforcement contingency that exists independent of the social environment' (Falcomata, Roane, Hovanetz, & Kettering, 2004). The first is automatic positive reinforcement which occurs when a person obtains something as a result of their own behaviour.

2.4.2.1 Youth Development

An adolescent could maintain a healthy lifestyle attitude that could facilitate them through various stresses caused by the pubertal changes and the other life challenges during the transition period from childhood to adulthood, by developing positive youth development qualities (Park, 2013). These positive attitudes would be a constructive factor that could lead them through the hurdles in the transition period more productively. Among the positive attitudes that could prevent young adults from engaging in NSSI behaviour are resilience, self-efficacy, spirituality, recognition of positive behaviours, and social, moral and emotional competencies. According to Ben and Daniel (2016), there was no study conducted on the positive youth development qualities against self-destructive behaviour.

Positive youth development traits should theoretically reduce the incidence of NSSI; however, the relative strength and consistency of these connections have been proven to show inconsistent outcomes across several studies. Although the advantages of positive youth development are well acknowledged, there are still few empirical studies that directly connect these attributes to lower NSSI. Longitudinal studies that investigate the causal relationships between NSSI prevention and positive youth development in a variety of demographic and cultural contexts are needed.

2.4.2.2 Expressed Emotions and Shame/Self Punishment

Individuals engage in NSSI as to express the self-directed anger, self-disgust and to express feelings of worthlessness has the desire to self-punish (Hooley and Franklin, 2017). This is supported by another study, by Fox et al. (2017), stating that NSSI is an option for those who believe that they deserve pain, that leads to emotional benefits.

In another situation individuals with NSSI behaviour also are reported as having low self-esteem and higher level of self-criticism (Forrester et al., 2017 and Hooley et al., 2010), self-dissatisfaction (Klonsky et al., 2014), and self-hatred (Xavier et al., 2016) than individuals who not self-injure. All studies based on self-esteem stresses that young adults less appreciate their own value are more prone to engage in NSSI as a mode of self-punishment. Subsequently, brief intervention carried out which emphasized to improvise the self-worth, showed a positive association towards reducing the willingness to withstand the pain caused by NSSI (Hooley and St. Germain, 2014).

Shame is defined as an unpleasant sensation of guilt or shame brought on by your own or another person's improper behaviour. Shame, it is said, develops low self-esteem, worthlessness, humiliation, and powerlessness, which makes people desire to "sink into the floor" or vanish (Tangney, 2002). Shame-afflicted people think they can't change who they are on the inside. The majority of studies on shame refers to "Shame-Proneness," a propensity to feel shame in a variety of circumstances. Depression or poor self-esteem may result from ineffective shame control (Tangney, 2002). In order to control their emotions of guilt, people who perceive themselves as "defective" or "flawed" can become aggressive and engage in self-destructive behaviour.

People who suffer shame may turn to NSSI as a coping mechanism for severe negative emotions and as a means of keeping control over their overpowering feelings. The ways in which shame influences NSSI behavior, the possible moderating effects of cultural and developmental factors on shame-proneness, and the productive interventions aimed at addressing shame-related vulnerabilities in NSSI prevention

and treatment are among the important unanswered concerns. Therefore, more research is required to determine if shame emerges as a result of self-injurious behaviors or before the initiation of NSSI.

2.4.2.3 Anger

According to research (Dickson et al. 2019), parental rejection encourages anger dysregulation. There are two ways that anger can be expressed: (a) anger-in, which is the internalisation of anger; and (b), anger-out, which is the outward manifestation of wrath toward other people or things in the environment (Spielberger et al. 2014). When compared to a control group, adolescent outpatients who participated in NSSI reported significantly higher levels of internalised rage (García-Nieto et al. 2015). Parental rejection, NSSI, and indirect self-injury were all found to be substantially correlated with anger (Claes et al. 2010).

Even though the anger that is associated with NSSI is stated as an outward act of anger expression, but the anger is a result of parental neglect and criticism. The young adults express their anger in the form of NSSI to get the attention of their parents and close ones. This anger factor needs to dwell deeper into the curb the problem from the roots.

2.4.2.4 Intense Distressing Feeling

According to Nock & Prinstein, 2004, this non-suicidal self-injury is an act that helps them relief from negative thoughts and emotions. The sharp pain in the physical body helps distract them from other unbearable emotional pain or feeling. Attention deprived young adults do engage in such activities to gain attention and to show that

they are in distress. Besides, the existent of scars together with the other psychological factors leads to the increased psychological distress over time (Tinne Buelens et al, 2019).

2.4.2.5 Guilt and Shame

Guilt is an emotion one perceived when one believes that one has violated some universal standard or and did something wrong in life and voluntarily holds responsibility for the violation. While shame is the feeling of embarrassment or agony caused by a wrongdoing, or feeling the whole-self is wrong (Tangney, 2006).

In some cases, young adults in families with un-peaceful environment, tend to think that they could be a part of the problem happening. Out of guilt, they think they need to punish themselves by engaging in deliberate self-injury (Wilkinson & Goodyer, 2011). According to them these acts of non-suicidal self-injury also make people in their surrounding feel sorry and guilty of not paying attention to their needs.

Understanding the differences between shame and guilt and how they affect NSSI is essential. Shame can intensify feelings of worthlessness and encourage self-destructive actions, but guilt frequently encourages people to seek self-punishment as a sort of atonement or resolution (Wilkinson & Goodyer, 2011). An unhealthy coping mechanism for excessive emotional discomfort brought on by imagined conflicts or family obligations could be guilt-driven NSSI. On the other hand, shame-driven NSSI could be a symptom of deeper problems with identity and self-worth, which are made worse by neglectful or critical family interactions.

It is still unclear how much each of these emotions alone contributes to NSSI and how they interact with other psychological factors. To address these disparities, detailed evaluations of the personal motives and environmental elements affecting NSSI experiences with guilt and shame are necessary.

2.4.2.6 Borderline Personality Disorder

Borderline personality disorder (BPD) is a significant mental disorder marked by affect dysregulation, interpersonal interaction and self-image instability, and self-harm (Association AP, 2013). Borderline personality disorder (BPD) is another mental condition or disorder affects how people think and feel about themselves and other people in daily life. It typically develops by early adulthood.

Recent epidemiological research has revealed that between 2% to 6 % of the general population suffers from BPD (Grant et al., 2008) One of the unintended consequences of BPD that has been connected to is self-harm, which can range in severity. NSSI and BPD symptoms also peak in late adolescence and early adulthood (American Psychiatric Association, 2013). Around 9% of those with BPD die by suicide, while 65-80% of people with BPD engage in NSSI (Zanarini, 2005). Although NSSI and BPD have a strong association, nothing is known about the relationship between specific BPD symptoms and NSSI behaviours.

Young people with BPD tend to experience unpleasant emotions more intensely and for a longer period than typical adults. Because they are unable to control their unpleasant emotions, they choose to use NSSI as a comfort measure. NSSI reduces the discomfort by serving as a negative reinforcement. Young adults who engage in

NSSI behaviour have much higher levels of negative emotions like hostility, guilt, sadness, and fury than non-NSSI people, according to research (Evans et al., 2005).

2.4.2.7 Impulsivity

The tendency to act without properly analysing your choices is known as impulsivity. Examples include speaking out of turn, making impulsive purchases, and crossing the street without looking. This type of behaviour is quite typical, especially in kids or teenagers, and is not always a sign of problems. Three types of impulsive behaviour can be distinguished: a quick response without conscious thought, responding without enough thought, and a propensity to act less thoughtfully than those with comparable levels of knowledge and aptitude.

It has been suggested that impulsivity is a personal characteristic that is crucial for NSSI (Chapman et al., 2006). According to studies, those with a history of NSSI report higher levels of impulsivity in themselves (Glenn and Klonsky, 2010). These inconsistent findings could be explained by the fact that those who engage in NSSI only think of themselves as being more impulsive. In contrast to teenage boys, Hawton et al. (2012) showed that impulsivity was an independent risk factor for non-suicidal self-injury in adolescent girls. However, the Irish study found that impulsivity was only a risk factor for NSSI in boys and not in girls. These contradictory results suggest that impulsivity may be crucial in determining high-risk categories.

The contradictory results of gender differences in the relationship between impulsivity and NSSI highlight the necessity for culturally sensitive research and taking into account contextual elements that could reduce these associations. Furthermore, further

research is needed to determine how other psychosocial factors, such as familial dynamics and peer pressure, shape impulsivity and NSSI in various genders.

2.4.3 Social Negative Reinforcement

The third specific class of reinforcement is called “social negative reinforcement” and this occurs when a behaviour gets a person away from something or gets something taken away from the person through the actions of another person.

2.4.3.1 Depersonalization

Depersonalization is the one of the major struggles confronted by the young adults who engage in NSSI. Depersonalization is a feeling that one is observing oneself from outside of the body and the disturbing sense of feeling that everything around is not real. It is a feeling like living in a dream. This condition makes it difficult to identify and describe one’s true emotion (Klonsky & Muehlenkamp, 2007).

Depersonalization disorder, often triggered by traumatic experiences such as abuse, accidents, or severe stressors, underscores the role of adverse life events in exacerbating dissociative symptoms (American Psychiatric Association, 2013). The association between trauma and depersonalization disorder suggests a complex interplay between psychological distress and dissociative experiences, potentially influencing vulnerability to NSSI among affected individuals.

Studies on NSSI and depersonalization demonstrate the common link between self-harming actions and dissociative symptoms. NSSI does not treat underlying emotional discomfort, but by grounding people in physical experiences, it may provide

momentary relief from symptoms of depersonalization. Even with this acknowledged correlation, there are still unanswered questions about the precise mechanisms by which depersonalization affects NSSI. The relationship between stress, trauma exposure, and other psychosocial variables and the emergence and persistence of depersonalization symptoms in self-injuring individuals should be investigated in future research. Furthermore, it is necessary to do culturally aware research to examine how depersonalization experiences differ among various groups and environments.

2.4.3.2 Family Non-Intactness

A family often acts as a close unit where there is one or more parent and children living together under one roof. This is where a child is supposedly getting in with the most contact. Due to that, a family is also expectedly having the most important role in influencing a positive behaviour and preventing adolescent behavioural problems.

In a close knitted institution, a sudden parental death, parental separation, divorce may cause in adolescent non-suicidal self-injury (Liang and Zhang, 2014). According to Zing and his colleagues when parents decide to separate or get a divorce, the emotional and psychological well-being of and adolescent is affected and one is forced to exhibit the impact in non-suicidal self-injuring oneself.

The same effect is also observed in families where a separated parent remarries. This happens due to the complications that arises when an adolescent is put in a situation to interact with a new parent to build a rapport and communicate with the separated parents and still maintain a relationship. The impact on the psychological factor becomes more overwhelming for an adolescent and the outcome could be bizarre.

High parental neglect and low parental care have been found to be predictive of NSSI (Bureau et al., 2010). Young people's NSSI has been linked to the existence, regularity, and intensity of caregiving relationships that are negligent, unprotective, and invalidating (Baetens et al., 2014).

2.4.4 Social Positive Reinforcement

Social positive reinforcement occurs when a behavior is followed by a rewarding social outcome, such as gaining attention, approval, or praise from others (Skinner, 1953). This reinforcement strengthens the likelihood of the behavior being repeated in the future. It plays a critical role in social learning, where individuals learn by observing and interacting with others (Lange, 2020; Carr et al., 2021). Such reinforcement can impact a variety of behaviors, from academic achievements to social behaviors, by encouraging actions that elicit positive responses from others.

2.4.4.1 Family Functioning and Relationships

Poor family dynamics frequently contribute to NSSI and research shows a substantial relationship between NSSI and family functioning. In particular, variables linked to increased risks of NSSI among teenagers include poor communication, low family cohesion, and frequent disagreements. Teenagers who grow up in households with inflexible or disorganized systems that are either excessively controlling or unstable are more prone to suffer from emotional discomfort, which may show up as self-harming behaviors. Similarly, NSSI and other maladaptive coping techniques are at high risk due to limited family flexibility and a lack of emotional support (Bahr, 2019; Lai et al., 2023).

The parent-child relationship is the child's primary relationship, and the strength of that relationship affects the child's social and emotional development, claims attachment theory (Ivbijaro et al., 2019). Parents are a child's primary socialisation impact and are important for a child's growth and health. Consequently, several parental characteristics have been connected to NSSI in children (Bureau et al., 2010). Children who experience poor parenting later in life are more likely to have melancholy, anxiety, anger, and social discomfort (Anosike, Isah & Igboeli, 2020).

A malfunction in these factors is more likely increases the likelihood of self-injury and suicide in an adolescent (Liang 2014). It is also reported that NSSI adolescent are more likely to experience family violence, parents' separation and poor connectiveness with their parents (Lloyd-Richardson, 2010). They are also more presumably, have experienced neglect from parents, criticism or even abuse from close family members (Kaess et al., 2013). Parental divorce, poor parenting, and child and family trauma are additional risk factors for non-suicidal self-injury (O' Connor, 2014).

Recent studies report that, from the young adults' point of view, only the children who does not get proper emotional support, bad criticism and excessive parental control engage more in NSSI than the other (Baetens et. at., 2015). These young adults are surely less connected to their parents or their caretakers and at some point, engage themselves in NSSI as to relinquish the suppressed emotions (Ghandi et. al., 2018). Young adults who self-harm frequently perceive their relationship with caregivers as unreliable and think they may not be deserving of care. Young adults with such bad family malfunction also fail to integrate experiences, process multiple levels of

thinking and feeling and adopting various interpretation from others. Furthermore, the binding process and the empathetic relationship with the parents and caretakers becomes more difficult (Yates et. al., 2008). All these aspects in early young adults' period gives them no options than exhibiting NSSI as an act of outcry.

However, there are studies that states that the young adults who exhibit NSSI, at times are less likely to share their feelings and lack the resources to deal with stress and frustration, which is caused by the immense level of aspects to cope at an early age (Quirk, 2015). For some individuals, the pain that is caused by cutting, hitting or even carving themselves keeps their mind away from emotional pain, thus reduces the emotional discomfort (Evans et. al., 2005).

2.4.4.2 Fear of Compassion

Apart from all these, another major factor that need to attended but had only got minimal attention is the compassion. Young adults facing difficult situation or stressful difficulties, are developing compassion to facilitate them to cope with the setbacks and psychologically adjust with the difficulties while making a connection with the surrounding (Barnard and Curry, 2011).

Compassion is defined as sympathetic pity and concern for the sufferings or misfortunes of others. These young adults who are from a severe background and high self-criticism, are more likely to create a block to be kind to themselves. They experience a lot of fear to express their feelings and emotions and find comfort in being self-compassionate (Gilbert et. al., 2010). According to Gilbert et al. (2010), the fears of compassion can be divided into three dimensions, namely:

- i) Fear of compassion for others – expressing or feeling for others
- ii) Fear of compassion from others- receiving feeling and response from other
- iii) Fear of compassion of self – feeling for oneself

In a community sample of teenagers, Xavier et al. (2015) discovered that early experiences of threat and submissiveness, fear of compassion for oneself, negative affect, and gender have a significant and independent contribution to the prediction of the frequency of self-harm acts.

2.5 Conceptual Framework

The purpose of this conceptual framework is to investigate the variables that contribute to young adults in Malaysia engaging in non-suicidal self-injury (NSSI). Numerous sociodemographic characteristics are identified in the study, along with the functions of NSSI as independent variables (IVs) and NSSI behavior as the dependent variable (DV).

This paradigm takes into account many sociodemographic characteristics, such as age, sex, ethnicity, parents' marital status, and educational attainment. For instance, age may correlate with developmental challenges and emotional regulation difficulties, potentially affecting NSSI prevalence. Gender differences can impact the frequency and methods of NSSI, with females often engaging in NSSI for emotional regulation and males for different reasons. Lower SES is linked to higher stress levels and limited access to mental health resources, making individuals more susceptible to NSSI for emotional relief. Ethnicity and cultural background may shape attitudes towards mental health and coping strategies, influencing NSSI behaviors in distinct ways.

Additionally, the marital status and educational level of parents can affect family dynamics and access to support, further impacting NSSI risk.

These factors are thought to affect NSSI behavior in different ways. Automatic Negative Reinforcement (ANR), Automatic Positive Reinforcement (APR), Social Negative Reinforcement (SNR), and Social Positive Reinforcement (SPR) are the four types of NSSI functions. While APR refers to using NSSI to produce happy sensations or feelings, especially in situations when psychological discomfort is present, ANR refers to using NSSI to alleviate negative emotions or psychological distress.

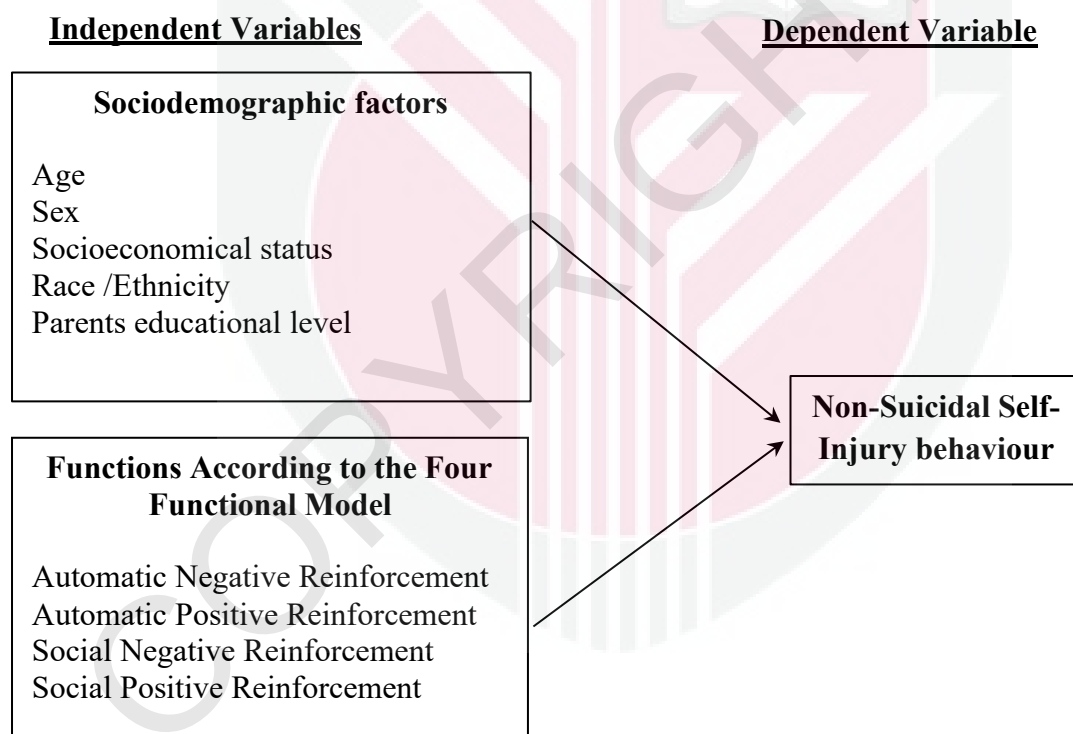


Figure 2.2 : Conceptual Framework Understanding NSSI

CHAPTER 3

METHODOLOGY

3.1 Study Location

The respondents for this study are chosen from the higher education institutions in Kedah state. Kedah is a state of Malaysia, located in the north western part of Peninsular Malaysia.

The sample of this study was selected from higher learning institutions which consists of young adults' students who come various walks of lives from all parts of Malaysia.



Figure 3.1 : The Location Map of the Kedah, in Malaysia

3.2 Study Design

Cluster sampling can be an efficient and effective way to conduct research, provided the clusters are appropriately defined and sampled. The method's success relies on careful planning and consideration of the population's structure. In this study, cluster sampling technique was used to select the study population. Initially, it was defined clusters based on naturally occurring groups like polytechnics. Then clusters for inclusion was randomly selected to ensure unbiased representation. Within each selected cluster, stratified sampling was used to maintain the natural distribution of boys and girls, avoiding the use of prefixed numbers. This approach helped to minimize potential biases and ensure that the sample accurately reflected the study population.

This study was conducted using quantitative method; cross sectional study to understand the phenomenon of non-suicidal self-injury behaviour among young adults in Malaysia. The quantitative method was used to test the hypotheses by gathering, evaluating numerical statistic and applying statistical tests. The descriptive correlational approach was used, in view of appropriateness to test statistical relationship between the variables and to determine the extended relationship between those variables.

3.3 Study Duration

This study was carried out over a period of four years from February 2020 to May 2024.

3.4 Sampling

3.4.1 Sampling Population

This study uses two stage cluster sampling which is a probability sampling method in which you divide a population into clusters, such as districts or schools, and then randomly select of these clusters as sample. The clusters should ideally each be mini-representations of the population.

First, the sample of young adults of this study is going to be selected mainly from a Polytechnic which consists of multiracial young adults' students from all over Malaysia. Then the students of each year of study were divided. Then simple random sampling technique was used to select the respondents. Simple random sampling is an unbiased sampling technique which gives every member of the sample an equal probability to be chosen as respondent (Yates, Moore & Starnes, 2008). It also provides a more homogeneous sample and generalization from the sample to the population of the study. All students in three selected classes were given the questionnaire.

The following 10 sociodemographic characteristics were assessed: sex, age (18-22), race/ethnicity (Malay, Chinese, Indian and others), year of study (1-5 years), parents' highest educational qualification (No school, Primary, Secondary, Diploma/similar, Degree and Masters/PhD), monthly household income ranging from <RM 1500, RM 1501-2500, RM 2501-5000 and >RM 5001, parents marital status (married, single parent, divorced), respondents current staying with (parents, mother only, father only, grandparents, uncle/auntly or others) and finally number of siblings (<3, 1-3, 4-5, 6-8 and more than 8). Data were collected through a structured self-administered online

questionnaire. This instrument, designed to gather comprehensive information on both sociodemographic factors and NSSI behaviours, includes sections on demographic details and NSSI specifics, including methods, frequency, and functions.

3.4.2 Selection Criteria

The specific requirements for participant inclusion or exclusion in this study, was to ensure that the sample accurately represents the target population and aligns with the study's objectives. This section is crucial for establishing the boundaries of who is eligible to participate, based on predefined characteristics and conditions.

3.4.2.1 Inclusion Criteria

The inclusion criteria are as follows:

- 1 Young adults aged 18 year and above
2. English and Bahasa Malaysia literate
3. Computer literate
4. Those who have access to handphones or laptops

3.4.2.2 Exclusion Criteria

The exclusion criteria are as follows:

1. Students with learning disabilities.

3.4.3 Sampling Frame

Sample Size Calculation to Determine the Prevalence of NSSI among Young Adults

The sample are students from polytechnics in Kedah, Malaysia. Single proportion formula (Charan & Biswas, 2013a) was used to calculate the sample size required to determine the NSSI behaviour among young adults. To determine the NSSI behaviour (type 1 error (α) was set to 0.05, desired precision 10%, 95% confidence interval).

$Z_{(1-\alpha/2)}$ = Is standard normal variant (at 5%, type 1 error ($P < 0.05$) = 1.96

P = Expected proportion in population-based study by Desmet et al., (2016)

D = Absolute error or precision = 0.05

$$\text{Sample size} = \frac{Z_{1-\alpha/2}^2 p(1-p)}{d^2}$$

Prevalence of NSSI among young adults from previous study is about 8.8 % to 22.0%.

Confidence Interval, CI at 95% CI: $Z^2_{(1-\alpha/2)} = 1.96$

The prevalence of NSSI about 8.8 % (based on the studies by Park et al., 2021)

so precision = $\pm 5.315\% = 0.05315$

$$n = \frac{Z^2_{(1-\alpha/2)} P (1-P)}{d^2}$$

$$= \frac{(1.96)^2 * (0.088) (1-0.088)}{(0.025)^2}$$

$$= \frac{3.8416 * 0.080256}{(0.000625)}$$

$$= 493.29$$

$$= 493$$

Thus, a total 493 students are needed to estimate the population value is $8.8 \% \pm 2.5\%$ with a 95% level of confidence and the sample estimated is between 8.8 % and 22%.

Sample Size for the Description of Sociodemographic Factors (Sex)

$$\text{Sample size, } n = \frac{\left(Z_{1-\frac{\alpha}{2}} \sqrt{P(1-P)} + Z_{1-\beta} \sqrt{P_1(1-P_1) + P_2(1-P_2)} \right)^2}{(P_1 - P_2)^2}$$

$$= 151.096$$

$$= 151$$

n=sample size

$$z_{1-\alpha/2} = 1.96$$

p1=larger proportion (P1 = female with NSSI =59.6)

p2=smaller proportion (P2 =male with NSSI = 34.9)

$$P = (p_1 + p_2) / 2 = 0.4725$$

Adjusted for eligibility in computing the sample size.

$$n_{\text{new1}} = n / (1 + [n - 1] / N)$$

$$n = 151; N = 6862$$

$$\text{Therefore: } n_{\text{new1}} = 151 / (1 + [151 - 1] / 6862)$$

$$= 148$$

Adjustment for the estimated sample design effect - (if the sampling technique is cluster or stratified sampling)

$$n_{\text{new2}} = n_{\text{new1}} * \text{Design effect} \quad [\text{Design effect} = 1.3]$$

$$= 148 \times 1.3$$

$$= 192.4$$

$$= 192$$

Adjust for the expected response rate or non-response (L)

Response rate = 1 – non-response

$n_{new3} = n_{new2} / \text{response rate}$

$= n_{new2} / (1 - L)$

Response rate = 0.8 (80%); or non-response (L) = 0.2 (20%)

Therefore: $n_{new3} = 192 / 0.8$

$= 240$

Adjust for the expected proportion eligible (based on the inclusion criteria)

$n_{new4} = n_{new3} / \text{proportion eligible}$

proportion eligible = 0.9 (90%)

Therefore: $n_{new4} = 240 / 0.9$

$= 266.67$

$= 267$

Therefore, a number of 600 respondents was used in this study.

Sociodemographic factors	PI	P2	α	$Z_{1-\beta}$	Sample size (n)	Adjusted sample size
Sex	Female with NSSI 59.6 (0.596)	Male with NSSI 34.9 (0.349)	1.96	0.842	151	267
Ethnicity	Major population with NSSI 55.5(0.555)	Other than major population with NSSI 38.7 (0.387)	1.96	0.842	329	366
Socioeconomic status	High & moderate income with NSSI 52.4 (0.524)	Low Income with NSSI 43.4 (0.434)	1.96	0.842	252	280

Sample Size for Hypothesis Testing

$$\begin{aligned}\text{Sample size, } n &= \frac{\left(Z_{1-\frac{\alpha}{2}} \sqrt{P(1-P)} + Z_{1-\beta} \sqrt{P_1(1-P_1) + P_2(1-P_2)} \right)^2}{(P_1 - P_2)^2} \\ &= \frac{2.877868}{0.0225} \\ &= 127\end{aligned}$$

n=sample size

$$z_{1-\alpha/2} = 1.96$$

p1=larger proportion (P1 automatic reinforcement- NSSI = 0.32)

p2=smaller proportion (P2 Social reinforcement = 0.17)

$$P = (p_1 + p_2) / 2 = 0.245$$

$$z_{1-\beta} = .842$$

Adjustment in computing the sample size.

$$\begin{aligned}n_{\text{new1}} &= \frac{127}{(1 + [127 - 1] / 6862)} \quad [n = 127; N = 6862]\end{aligned}$$

$$\text{Therefore: } n_{\text{new1}} = 127 / (1 + [127 - 1] / 6862)$$

$$= \frac{102}{1.02}$$

$$= 100$$

Adjustment for the estimated sample design effect - (if the sampling technique is cluster or stratified sampling)

$$n_{\text{new2}} = n_{\text{new1}} * \text{Design effect} \quad [\text{Design effect} = 1.3]$$

$$= 100 \times 1.3$$

$$= 130$$

Adjust for the expected response rate or non-response (L)

Response rate = 1 – non-response

$$\begin{aligned}n_{\text{new3}} &= n_{\text{new2}} / \text{response rate} \\ &= n_{\text{new2}} / (1 - L)\end{aligned}$$

Response rate = 0.8 (80%); or non-response (L) = 0.2 (20%)

$$\begin{aligned}\text{Therefore: } n_{\text{new3}} &= 130 / 0.8 = \\ &= 162.5 \\ &= 163\end{aligned}$$

Adjust for the expected proportion eligible (based on the inclusion criteria)

$$\begin{aligned}n_{\text{new4}} &= n_{\text{new3}} / \text{proportion eligible} \\ \text{proportion eligible} &= 0.9 (90\%) \\ \text{Therefore: } n_{\text{new4}} &= 163 / 0.9 \\ &= 181.11 \\ &= 181\end{aligned}$$

In conclusion a total number of 600 respondents was used to get the data Instrument and Data Collection

3.4.4 Study Instrument

The data for this study was collected using questionnaire. The questionnaire that is identified and fulfils the objectives of this study is the Functional Assessments of Self-Mutilation (FASM) (Lloyd et.al.,1997). This is a designed to assess the methods, frequency, and functions of self-reported NSSI. The first part of this questionnaire is

able to measure the respondents' engagement in each of 11 NSSI behaviour. On a checklist of NSSI, respondents were asked if they had purposely engaged in each of the 11 different NSSI behaviours within the previous year, the frequency with which they had done so, and whether or not they had sought medical attention as a proxy for the severity of their injuries.

To this date the FASM questionnaire is only available in English. This questionnaire was translated by Editing and Translation service, centre for the advancement of Language Competency Universiti Putra Malaysia and Bahasa Melayu head of Panel of SJKT Kajang. This is then cross checked by converting back to English. The approved questionnaire is used in a pilot test to test the validity and reliability of the translated version of the FASM questionnaire. The pilot test involves around 50 students from the same institutions.

Prior to the actual data collection, the selected students from the respective schools was informed about the purpose of the study. The consent letters were distributed earlier and received consent from the parents and school before data collection. Adequate time was allocated to answer the questions. The data for this study was collected using online self-administered questionnaire. Respondents were then randomly chosen from the list using simple random sampling technique. The respondents were given the assurance that their feedback is confidential and solely be used for the purpose of this study only. The questionnaire was distributed through the school counsellors to the students. Duration of the data collection process until completion was between 2-3 weeks. Upon receiving feedback from the selected sample, data was analysed.

A principal components analysis of the 11 behaviours yielded two factors, the first factor included items considered more clinically severe in nature, denoted as ‘moderate/severe NSSI’: cutting/carving, burning, self-tattooing, scraping, and erasing (i.e. using an eraser to rub skin to the point of burning and bleeding) skin. The second factor consisted of less severe behaviours, denoted as ‘minor NSSI’: hitting self, pulling hair, biting self, inserting objects under nails or skin, picking at a wound, and picking areas to draw blood. Participants were also asked the length of time they contemplated the behaviour(s); at what age their NSSI first began; whether NSSI was performed under the influence of drugs or alcohol; the degree of physical pain experienced during NSSI; and whether any of these behaviours was a suicide attempt. Two factors emerged from a principal components analysis of the 11 behaviours. The first factor included behaviours that were deemed to be more clinically severe in nature and were designated as “moderate/severe NSSI”: cutting, carving, burning, self-tattooing, scraping, and erasing (i.e., rubbing skin with an eraser until it was burned and bled). The second set of behaviours, referred to as “mild NSSI,” included punching oneself, pulling one’s hair, biting one’s own fingernails or skin, sticking items under one’s nails or skin, picking at one is wound, and picking at regions to draw blood. Participants were also questioned about the length of time they spent thinking about the behavior(s), their age when NSSI first started, whether they used drugs or alcohol while performing NSSI, how much physical pain they felt while performing NSSI, and whether they engaged in any of these behaviours.

The FASM’s second section consists of 22 statements that score motivations for NSSI on a four-point Likert scale, from never to often, and is presented in checklist format. Items such as affect regulation, interpersonal influence, anti-dissociation/feeling

production, and self-punishment functions are taken from more generally discussed theories of NSSI. As previously mentioned, Nock & Prinstein (2005) have shown that a four-factor model of NSSI functions—automatic-negative reinforcement, automatic-positive reinforcement, social negative reinforcement, and social positive reinforcement—has both structural and construct validity.

3.5 Quality Control

Below is a brief description of the validity and reliability test for the questionnaire used.

3.5.1 Reliability

Cronbach's Alpha for each variable has been confirmed to be more than 0.7, using the pilot test data, which indicates that there is evidence of a seamless relationship between the items and the constructs based on this table, which is Table 3.1.

Table 3.1 : Results of Reliability Using Cronbach's Alpha

Variables	Cronbach's Alpha	N of Items
Automatic Positive reinforcement	0.847	2
Automatic negative reinforcement	0.869	3
Social negative reinforcement	0.752	4
Social positive reinforcement	0.809	13
Non-Suicidal Self Injury behaviour	0.862	17

3.5.2 Pilot Study

This research has many independent variables Age, Sex, Socioeconomical status, Ethnicity, Marital status and Parents educational level. Automatic Negative Reinforcement, Automatic Positive Reinforcement, Social Negative Reinforcement

Social Positive Reinforcement including the dependent variable such as non-suicidal self-injury behaviour have more than one item and the table below provide the reliability test by using Cronbach's Alpha. The rule of thumb is Cronbach's Alpha value should be more than 0.7 but some studies have also accepted until 0.6 as in the table below Cronbach's Alpha value of all variables is more than 0.6 are close to 0.7 meaning that their items are consistent and are explaining their constructs.

3.6 Data Analysis

The analysis of data for this study was done using the SPSS package version 26 as SPSS enables quick computation and examination of the quantitative data. Exploratory Data Analysis was conducted to detect or identify the data set for any mistakes or errors that can affect the validity of the data.

Hereafter, descriptive analysis which consists of means, frequency, and mode to analyse the level of socioeconomic status, parents' level of education and non-suicidal self-injury behaviour among children were carried out. Thereafter, the data was analysed using Simple and Multiple Logistic Regression to find one or more possible correlations between variables, such as in the case with cause-and-effect relationships.

3.7 Study Ethics

Ethical approval was obtained from the Ethic Committee for Research Involving Human Subject (ref no: JKEUPM-2022-516) prior to the utilisation of the secondary data. All information from these data were treated as strictly confidential for the sole use of this research purpose only.

3.8 Variables and Operational Definitions

3.8.1 Dependent Variable

NSSI behaviour exhibited by the respondents

3.8.2 Independent Variables

Age

Sex

Socioeconomical status

Race/ Ethnicity

Parents educational level

Automatic Negative Reinforcement

Automatic Positive Reinforcement

Social Negative Reinforcement

Social Positive Reinforcement

Table 3.2 : Operational Definitions for Variables

Variables	Operational Definitions
Age	Age in years as reported by dates according to date of birth, which in the identification card. The age of the respondents was categorised as: i. 18 ii. 19 iii. 20 iv. 21 v. 22
Sex	Sex was categorized into: i. Male (Father) ii. Female (Mother)
Socioeconomical status	Household income was described as respondents' parent/parents sole/combined monthly household income in Ringgit Malaysia per month as below: i. < RM 1500 ii. RM 1500- 2500 iii. RM 2501- 5000 iv. >RM 5001
Ethnicity	Ethnicity was reported and categorized as: i. Malay ii. Chinese iii. Indian iv. Others
Parents educational level	Parent education was referred to the highest education level reported by parents and categorized as: i. Never went to school ii. Primary school iii. Secondary school iv. Diploma and equivalent v. Degree vi. Masters and PhD or equivalent
Automatic Negative Reinforcement	Automatic negative reinforcement occurs when a behaviour terminates an aversive stimulus directly and the behaviour is strengthened. The aversive stimulus is not terminated by another individual.
Automatic Positive Reinforcement	Automatic reinforcement occurs when a person's behaviour creates a favourable outcome without the involvement of another person
Social Negative Reinforcement	Social negative reinforcement occurs when an aversive stimulus or situation is terminated by another individual contingent on a behaviour and the behaviour is strengthened.
Social Positive Reinforcement	Social positive reinforcement occurs when behaviour gets the child something through the actions of another

CHAPTER 4

RESULTS

4.1 Overview of Analysis

There were 552 respondents who answered the questionnaire from the higher learning institutions from Kedah state. Normality Test of Variables

The Table 4.1 has stated that the skewness of the variables was within the acceptable range of -1.96 to 1.96 and kurtosis was also within this range. The Shapiro-Wilk test was $p=0.00$ which is less than $p=0.05$. Therefore, the values are almost symmetrical.

Table 4.1 : Results of Normality Test

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Automatic Positive reinforcement	1.231	0.106	1.63	0.212
Automatic negative reinforcement	1.238	0.106	1.265	0.212
Social negative reinforcement	0.712	0.1	1.961	0.2
Social positive reinforcement	0.229	0.1	0.422	0.199
Non-Suicidal Self Injury behaviour	1.137	0.1	2.724	0.2

4.2 Descriptive Analysis

4.2.1 Prevalence of NSSI

Out of 552 total 27.5% of the respondents have answered “yes” in engaging in one or more than one NSSI behaviours in the past years. This value represents an approximate 5% increase compared to previously reported figures.

Table 4.2 : Prevalence of NSSI

		Frequency	Percent
NSSI	No	400	62.5
	Yes	152	27.5
	Total	552	100.0

4.2.2 Sociodemographic Characteristics of Respondents

Table 4.3 provides the results of the demographic characteristics of the respondents.

Table shows that the 54.2% are females engage in NSSI behaviour. The highest percentage of respondents, 38.0% of 552 respondents are aged 19.

In terms of parents' education, more than 45% of the respondents' mothers and fathers had completed secondary education. The young adults in families with a monthly income of less than RM 1500, which is about 30.4% of engage in NSSI behaviour.

Table 4.3 : Sociodemographic Characteristics of Respondents

		Frequency	Percent
Age	18	201	36.4
	19	210	38.0
	20	112	20.3
	21	16	2.9
	22	13	2.4
Gender	Male	253	45.8
	Female	299	54.2
Mother's education level	Never went to school	10	1.8
	Primary	35	6.3
	Secondary	293	53.1
	Diploma or similar	99	17.9
	Degree	95	17.2
	Masters ot PhD	20	3.7
Fatherr's education level	Never went to school	6	1.1
	Primary	47	8.5
	Secondary	247	44.7
	Diploma or similar	148	26.8
	Degree	85	15.4
	Masters ot PhD	19	3.5
Family monthly	< RM 1500	168	30.4
	RM 1501- 2500	128	23.2
	RM 2510 -5000	116	21.0
	> RM 5000	140	25.4

4.2.3 Description of Socio-Demographics Factors of NSSI

Based on Table 4.4, 65.8 % of females and 34.2 % of males have indicated NSSI behaviour. The young adults whom the study was done on are aged between 18-23 years old. Based on the results, the highest percentage of students who exhibited NSSI behaviour are the 19-year-old students, about 36.8% of respondents.

Most respondents who exhibited NSSI behaviour are from year 1 and 2 in their tertiary education. The highest number of self-injurers are 1st year students, 48.0%.

In terms of races, the Malay students take up about 61 % followed by the Chinese students with 19% and 15% students from the Indian community. The students who are categorized as others are just about 4%.

The socioeconomical status or the monthly income of the parents or caretaker also plays a prominent part in the NSSI behaviour among the students. Among the respondents with self-injuring behaviour, 32.9% are from the lowest income group or family income less than RM 1500 a month. Moreover 21.7% are of the RM 1501-2500 income group, 20.4% are from RM 2501-5000 income and 25.0% are from the highest income group.

Based on the data obtained, 40% of self-injurers have parents who have only completed up to secondary education.

Table 4.4 : Description of Socio-Demographics Factors on NSSI

Factors	Categories	N	Yes NSSI		Non -NSSI	
			n	(%)	n	(%)
Age	18	201	52	34.2	149	37.3
	19	210	56	36.8	154	38.4
	20	112	33	21.7	79	19.8
	21	16	6	4.0	10	2.5
	22	13	5	2.0	8	2.0
Sex	Female	299	100	65.8	199	49.8
	Male	253	52	34.2	201	50.2
Race	Malay	279	94	61.8	185	46.3
	Chinese	81	29	19.1	52	13.0
	Indian	65	23	15.1	42	10.5
	Others	127	6	4.0	121	30.2
Economical status (RM)	< 1500	168	50	32.9	118	29.5
	1501- 2500	116	33	21.7	83	20.8
	2501 -5000	140	31	20.4	109	27.2
	>5001	128	38	25.0	90	22.5
Mothers' Education	No school	10	4	2.6	6	1.5
	Primary	35	12	7.9	23	5.7
	Secondary	293	66	43.5	227	56.7
	Diploma	99	42	27.6	57	14.3
	Degree	95	28	18.4	67	16.8
	Masters/ PhD	20	0	-	20	5.0
Fathers' Education	No school	6	6	3.9	0	0
	Primary	47	15	9.9	32	8.0
	Secondary	247	63	41.4	184	46.0
	Diploma	148	35	23.1	113	28.3
	Degree	85	29	19.1	56	14.0
	Masters/ PhD	19	4	2.6	15	3.7

4.2.4 Description on the Characteristics of NSSI

The information in Table 4.5 tabulates the type of harm/ injury that is apprehended by the respondents who have confessed of injuring themselves.

Among the participants who engage in NSSI behaviour, some characteristics of the behaviours are more prominent than the others. The five most common type of actions

is picking at the wound (19.6%), hitting oneself with purpose (15.4%) and biting oneself (12.5%). These behaviours are followed closely by picking areas of the body to bleed and pulling out the hair, at 10.0% and 9.4 % respectively. Other predictor behaviour like cutting or carving the skin, picking areas of the body to the point of drawing blood, and “erasing” the skin up to bleeding condition are less common among the young adults who took part in this study. Behaviours like inserting objects under the nail or skin, scraping the skin, and applying a tattoo happens to be the least favoured mode of self-injuring among these respondents.

Table 4.5 : Characteristics of NSSI Behaviours

	No		Yes	
	n	%	n	%
Cut or carved on your skin	514	93.1	38	6.9
Hit yourself on purpose	467	84.6	85	15.4
Pulled your hair out	500	90.6	52	9.4
Gave yourself a tattoo	543	98.4	9	1.6
Picked at a wound	444	80.4	108	19.6
Burned your skin	542	98.2	10	1.8
Inserted objects under your nail	525	95.1	27	4.9
Bit yourself	483	87.5	69	12.5
Picked areas of your body to bleed	497	90.0	55	10.0
Scraped your skin	522	94.6	30	5.4
Erased your skin	508	92.0	44	8.0

4.3 Functions of NSSI Behaviour

The five most common reasons for NSSI among the young adults in this study includes ‘to feel relaxed’ (27.7%) or to punish oneself (26.8%), to feel something even if it is pain, (18.8%) ‘to stop bad feelings’ (24,8%) or to relieve feeling numb or empty’(23.9%), and finally ‘to get control of the situation’(21,9%). The functions such as to feel relaxed, to punish oneself and to feel something even if it is painful are categorised as Automatic Positive Reinforcement, whereby it occurs when a person’s

behaviour creates a favourable outcome without the involvement of another person. Automatic Negative Reinforcement refers to behaviours maintained by automatic contingencies that can be said to produce their own consequences without the intervention of another person altering the environment in any way because of the behaviour of interest. Functions like to stop bad feelings and to relieve feeling numb or empty fall under this category. Only the intention to get control over the situation is categorised as Social Positive Reinforcement. This indicates that Social Positive Reinforcement occurs when a behaviour gets the person something in return through the actions of another.

Table 4.6 : Functions of NSSI Behaviour

Item	No (Never = 0)		Yes (Rarely - Often)	
	n	%	n	%
Automatic Positive Reinforcement				
To feel something, even if it was pain	448	81.2	104	18.8
To punish yourself	404	73.2	148	26.8
to feel relaxed	399	72.3	153	27.7
Social Positive Reinforcement				
To get attention	471	85.3	81	14.7
To get control of a situation	431	78.1	121	21.9
To try to get a reaction from someone, even if it's a negative reaction	482	87.3	70	12.7
To receive more attention from your parents or friends	480	87.0	72	13.0
To get other people to act differently or change	498	90.2	54	9.8
To be like someone you respect	494	89.5	58	10.5
To let others know how desperate you were	494	89.5	58	10.5
To feel more a part of a group	502	90.9	50	9.1
To get your parents to understand or notice you	484	87.7	68	12.3
To give yourself something to do when alone	458	83.0	94	17.0
To give yourself something to do when with others	502	90.9	50	9.1
To get help	488	88.4	64	11.6
To make others angry	509	92.2	43	7.8
Automatic Negative Reinforcement				
To relieve feeling "numb" or empty	420	76.1	132	23.9
To stop bad feelings	415	75.2	137	24.8
Social Negative Reinforcement				

Table 4.6 : Continued

To avoid school, work, or other activities	465	84.2	87	15.8
To avoid having to do something unpleasant you don't want to do	459	83.2	93	16.8
To avoid being with people	477	86.4	75	13.6
To avoid punishment or paying the consequences	495	89.7	57	10.3
Positive Reinforcement Automatic / Intrapersonal	353	63.9	199	36.1
Positive Reinforcement Social/ Intrapersonal	373	67.6	179	32.4
Negative Reinforcement Automatic / Interpersonal	386	69.9	166	30.1
Negative Reinforcement Social/ Interpersonal	403	73.0	149	27.0

4.4 Association between Respondents' Sociodemographic Factors on NSSI

In this detailed analysis of demographic factors and their relationships with NSSI, several noteworthy associations emerged. First, age did not significantly correlate with NSSI ($p = 0.349$), suggesting that NSSI occurrence was consistent across different age groups. However, year of study exhibited significance ($p = 0.022^*$), with higher NSSI prevalence in the third year compared to other years. The year of study of the respondents is a significant factor that contributes to this action, $X^2 (2, N = 152) = 4.15, p = .02$. Gender was also a significant factor ($p = 0.042^*$), indicating that more females reported NSSI than males. Female students are more likely to engage in NSSI behaviour, $X^2 (1, N = 152) = 11.49, p < 0.05$. Notably, mother's education level, father's education level and family monthly income did not show significant associations with NSSI. These findings provide valuable insights into the demographic factors associated with NSSI, underscoring the importance of considering age, year of study, and gender in understanding and addressing NSSI risk factors.

Table 4.7 : Association between Respondents' Sociodemographic Factors on NSSI

Factors	Category	Total	NSSI		χ^2	P
			No n (%)	Yes n (%)		
Age	≤ 19	411	287(69.8)	124 (30.2)	4.44	0.349
	Above 19	141	88 (62.4)	53 (37.6)		
Year of study	Junior (1 st year)	277	196 (70.8)	81 (29.2)	11.49	0.022*
	Senior (2 nd year& above)	275	179 (65.1)	96 (34.9)		
Gender	Male	253	183 (72.3)	70 (27.7)	4.15	0.042*
	Female	299	192 (64.2)	107 (35.8)		
Mother's education level	Secondary and below	338	217 (64.2)	121 (35.8)	10.46	0.063
	Tertiary	214	158 (73.8)	56 (26.2)		
Father's education level	Secondary and below	300	197 (65.7)	103 (34.3)	5.71	0.335
	Tertiary	252	178 (70.6)	74 (29.4)		
Family monthly income	Low income < RM 2500	296	189 (63.9)	107 (36.1)	4.93	0.177
	Medium income >RM2500	256	186 (72.7)	70 (27.3)		

*Significant $p < 0.05$

4.5 Univariate Analysis of Functions of NSSI

Based on Table 4.8, all the functions which were expected to be the main factors of NSSI, exhibited to be significant to the actions of NSSI among the respondents. All the 22 factors identified in the FASM model had been identified to be a contributing factor of NSSI behaviour among the young adults in higher learning institutions.

In this comprehensive analysis of the functions of Non-Suicidal Self-Injury (NSSI) and their relationships with the presence or absence of NSSI, various functions were examined and categorized. The table presents a compelling picture, with each function displaying highly significant associations with NSSI ($p < 0.001$). Notably, functions such as 'To feel something, even if it was pain,' 'To punish yourself,' 'To feel relaxed,' and 'To get control of a situation' are strongly linked to NSSI, with a

considerably higher prevalence of NSSI among individuals reporting these functions. Similarly, motivations like ‘To be like someone you respect,’ ‘To feel more a part of a group,’ and ‘To relieve feeling ‘numb’ or empty’ are also significantly associated with NSSI. These findings illuminate the multifaceted nature of NSSI, highlighting a range of emotional and psychological motivations that individuals may have for engaging in self-injurious behaviours. Understanding these functions is crucial for developing effective interventions and support systems for those at risk of NSSI.

Table 4.8 : Univariate Analysis of Functions of NSSI

Factors Category		Total	NSSI		χ^2	P
			No n (%)	Yes n (%)		
To feel something, even if it was pain	No	448	340 (75.9)	108 (24.1)	69.13	0.001*
	Yes	104	35 (33.7)	69 (66.3)		
To punish yourself	No	404	322 (79.7)	82 (20.3)	95.80	0.001*
	Yes	148	53 (35.8)	95 (64.2)		
to feel relaxed	No	399	323 (81)	76 (19)	111.98	0.001*
	Yes	153	52 (34)	101 (66)		
To get attention	No	471	347 (73.7)	124 (26.3)	48.52	0.001*
	Yes	81	28 (34.6)	53 (65.4)		
To get control of a situation	No	431	329 (76.3)	102 (23.7)	63.68	0.001*
	Yes	121	46 (38.0)	75 (62.0)		
To try to get a reaction from someone, even if its a negative reaction	No	482	352 (73.0)	130 (27.0)	45.28	0.001*
	Yes	70	23 (32.9)	47 (67.1)		
To receive more attention from your parents or friends	No	480	345 (71.9)	135 (28.1)	26.23	0.001*
	Yes	72	30 (41.7)	42 (58.3)		
To get other people to act differently or change	No	498	356 (71.5)	142 (28.5)	29.47	0.001*
	Yes	54	19 (35.2)	35 (64.8)		
To be like someone you respect	No	494	347 (70.2)	147 (29.8)	11.50	0.001
	Yes	58	28 (48.3)	30 (51.7)		

Table 4.8 : Continued

To let others know how desperate you were	No	494	354 (71.7)	140 (28.3)	29.95	0.001*
	Yes	58	21 (36.2)	37 (63.8)		
To feel more a part of a group	No	502	350 (69.7)	152 (30.3)	8.12	0.004*
	Yes	50	25 (50)	25 (50)		
To get your parents to understand or notice you	No	484	348 (71.9)	136 (28.1)	28.37	0.001*
	Yes	68	27 (39.7)	41 (60.3)		
To give yourself something to do when alone	No	458	340 (74.2)	118 (25.8)	49.02	0.001*
	Yes	94	35 (37.2)	59 (62.8)		
To give yourself something to do when with others	No	502	355 (70.7)	147 (29.3)	19.70	0.001*
	Yes	50	20 (40)	30 (60)		
To get help	No	488	351 (71.9)	137 (28.1)	30.78	0.001*
	Yes	64	24 (37.5)	40 (62.5)		
To make others angry	No	509	358 (70.3)	151 (29.7)	17.27	0.001*
	Yes	43	17 (39.5)	26 (60.5)		
To relieve feeling "numb" or empty	No	420	332 (79)	88 (21)	99.57	0.001*
	Yes	132	43 (32.6)	89 (67.4)		
To stop bad feelings	No	415	324 (78.1)	91 (21.9)	78.89	0.001*
	Yes	137	51 (37.2)	86 (62.8)		
To avoid school, work, or other activities	No	465	332 (71.4)	133 (28.6)	16.24	0.001*
	Yes	87	43 (49.4)	44 (50.6)		
To avoid having to do something unpleasant you don't want to do	No	459	341 (74.3)	118 (25.7)	50.54	0.001*
	Yes	93	34 (36.6)	59 (63.4)		
To avoid being with people	No	477	346 (72.5)	131 (27.5)	34.13	0.001*
	Yes	75	29 (38.7)	46 (61.3)		
To avoid punishment or paying the consequences	No	495	349 (70.5)	146 (29.5)	14.54	0.001*
	Yes	57	26 (45.6)	31 (54.4)		

*Significant $p < 0.05$

4.6 Univariate Analysis on Four Functional Model

In this cross-tabulation analysis, factors related to Non-Suicidal Self-Injury (NSSI) were examined, and their associations with the presence or absence of NSSI were

assessed. The factors included ‘Positive Reinforcement Automatic/Intrapersonal,’ ‘Positive Reinforcement Social/Intrapersonal,’ ‘Negative Reinforcement Automatic/Interpersonal,’ and ‘Negative Reinforcement Social/Interpersonal.’ Notably, all these factors displayed significant associations with NSSI ($p < 0.001$). Specifically, ‘Positive Reinforcement Automatic/Intrapersonal’ and ‘Positive Reinforcement Social/Intrapersonal’ were associated with likelihood of NSSI, with 61.8% and 61.5% of individuals reporting NSSI when these factors were present, respectively. Similarly, ‘Negative Reinforcement Automatic/Interpersonal’ and ‘Negative Reinforcement Social/Interpersonal’ factors were also associated with NSSI, with 63.9% and 59.7% of individuals reporting NSSI when these factors were present, respectively. These findings underscore the significance of these factors in the context of NSSI and highlight the need for further exploration and understanding of their roles in this behaviour.

Table 4.9 : Univariate Analysis on Four Functional Model

Factors	Category	Total	NSSI		χ^2	P
			No n (%)	Yes n (%)		
Positive Reinforcement Automatic / Intrapersonal	No	353	299 (84.7)	54 (15.3)	126.38	0.001*
	Yes	199	76 (38.2)	123 (61.8)		
Positive Reinforcement Social/ Intrapersonal	No	373	306 (82)	67 (18)	105.02	0.001*
	Yes	179	69 (38.5)	110 (61.5)		
Negative Reinforcement Automatic / Interpersonal	No	386	315 (81.6)	71 (18.4)	110.13	0.001*
	Yes	166	60 (36.1)	106 (63.9)		
Negative Reinforcement Social/ Interpersonal	No	403	315 (78.2)	88 (21.8)	71.71	0.001*
	Yes	149	60 (40.3)	89 (59.7)		

*Significant $P < 0.05$

4.7 Simple Logistic Regression Results

The logistic regression analysis identifies several significant predictors of non-suicidal self-injury (NSSI) behavior. Among these, motivations tied to reinforcement mechanisms—both positive and negative—show strong associations with NSSI. Positive reinforcement that is automatic or intrapersonal increases the odds of NSSI nearly ninefold (OR = 8.96), while negative reinforcement of an automatic or interpersonal nature raises the likelihood approximately eightfold (OR = 7.84). Similarly, motivations involving social factors also play a critical role, with positive reinforcement increasing the odds by over sevenfold (OR = 7.28) and negative reinforcement by more than fivefold (OR = 5.31). These findings underscore the profound influence of psychological and interpersonal reinforcement in driving NSSI, with all these associations being highly statistically significant ($p < 0.001$).

Demographic factors, such as maternal education level and gender, also contribute to the risk of NSSI. A lower maternal education level is associated with a 57% increase in the likelihood of NSSI (OR = 1.57, $p = 0.019$), potentially reflecting the impact of family dynamics and socio-economic factors on emotional well-being. Gender differences reveal that females are 46% more likely to engage in NSSI compared to males (OR = 1.46, $p = 0.042$), which is consistent with broader research identifying higher prevalence rates of NSSI among females.

Interestingly, the year of study does not significantly predict NSSI behavior (OR = 1.07, $p = 0.757$), suggesting that the academic stage may not play a direct role in influencing NSSI in this sample.

Table 4.10 : Simple Logistic Regression Results

	B	Wald	P	OR	95% C.I	
					Lower	Upper
Positive Reinforcement Automatic / Intrapersonal	2.19	111.44	0.001*	8.96	5.96	13.46
Negative Reinforcement Automatic / Interpersonal	2.06	97.77	0.001*	7.84	5.21	11.79
Positive Reinforcement Social/ Intrapersonal	1.99	94.34	0.001*	7.28	4.88	10.87
Negative Reinforcement Social/ Interpersonal	1.67	65.68	0.001*	5.31	3.55	7.95
experience pain during this self-harm	1.39	29.15	0.001*	4.01	2.42	6.64
Mother's education level (low)	0.45	5.54	0.019*	1.57	1.08	2.29
Gender (female)	0.38	4.13	0.042*	1.46	1.01	2.09

Dependent variable: NSSI (Yes)

4.8 Multiple Logistic Regression Results

Table 4.11, a logistic regression analysis with the dependent variable NSSI behaviour, several predictors were analysed. Among them are Positive Reinforcement Automatic/Intrapersonal demonstrated a significant positive relationship (OR=3.51, 95 % CI: 1.72-7.13), suggesting that those who reported positive reinforcement as a motivation were 3.51 times more likely in engage in NSSI. Negative Reinforcement Automatic/Interpersonal also exhibited a significant but slightly lower relationship (OR=2.04, 95% CI:1.02-4.08). Overall, these findings suggest that both intrapersonal and interpersonal factors play a role in predicting NSSI, with Positive Reinforcement being particularly influential.

For APR,” the B coefficient is 1.25. This positive results suggest that there is a relationship between positive reinforcement and NSSI. This predictor is statistically significant at the 0.05 and the p-value of 0.001. The OR value indicates that the

likelihood of NSSI increases by 3.51 times for every unit increase in positive reinforcement.

The ANR and NSSI appear to have a positive relationship, as indicated by its B coefficient of 0.71. The probabilities of NSSI are 2.04 times higher for every unit increase in negative reinforcement.

In conclusion, there is a strong relationship between NSSI and both positive and negative reinforcement. The effect of positive reinforcement is bigger; people who receive more positive reinforcement are 3.51 times more likely to participate in NSSI. The probability of NSSI is similarly increased by negative reinforcement.

Table 4.11 : Multiple Logistic Regression Method Forward: Conditional

	B	Wald	P	OR	95% C.I		Cox & Snell R Square	Nagelkerke R Square
					Lower	Upper		
Positive Reinforcement Automatic / Intrapersonal	1.25	11.97	0.001*	3.51	1.72	7.13	0.23	0.30
Negative Reinforcement Automatic / Interpersonal	0.71	4.04	0.045*	2.04	1.02	4.08		
Constant	-1.59	39.93	0.000	0.20				

Dependent variable: NSSI (Yes)

4.9 Hypothesis Testing

According to the hypotheses, NSSI conduct among students in higher education institutions is substantially correlated with all four forms of reinforcement: automatic positive, automatic negative, social positive, and social negative. NSSI may function

as a mechanism for internal emotional regulation, as evidenced by automatic negative reinforcement (e.g., avoiding or diminishing bad emotions) and automatic positive reinforcement (e.g., experiencing self-soothing or relief from emotional distress). However, social negative reinforcement (e.g., avoiding social expectations or responsibilities) and social positive reinforcement (e.g., receiving attention or caring from others) suggest that external social factors can also have an impact on NSSI behaviors.

No.	Hypothesis	Remarks
H _{A1} :	There is a relationship between the automatic positive reinforcement's factors and NSSI behaviour among students in higher learning institutions	Supported
H _{A2} :	There is a relationship between the automatic negative reinforcement's factors and NSSI behaviour among students in higher learning institutions	Supported
H _{A3} :	There is a relationship between the social positive reinforcement's factors and NSSI behaviour among students in higher learning institutions	Supported
H _{A4} :	There is a relationship between the social negative reinforcement's factors and NSSI behaviour among students in higher learning institutions	Supported

CHAPTER 5

DISCUSSION

5.1 Prevalence of NSSI

The results of this study show that NSSI behaviours is considerably high among young adults in Malaysia. The findings of this study indicate that young adults in Malaysia frequently engage in NSSI practises. More than a quarter of the sample exhibited this behaviour that is about 27.5% of them engaged in NSSI actions. NSSI behaviours resulted in injuries that needed medical attention is about 14.4%.

The study's rate is comparable to the prevalence worldwide. In young people, the lifetime prevalence rate of NSSI is 22.1%, according to Lim et al. (2018). NSSI among middle and high school students, who are regarded as young people, ranges from 8.8% to 22.8%, according to the research by Park et al. (2020).

Due to the way the brain develops during this time, impulsivity and emotional reactivity are higher than typical, making these years a sensitive time for the emergence of NSSI (Casey et al, 2008). NSSI is a widespread danger to young adults' mental health after two decades of research finding and conclusion by Brown (2017). These high rates of NSSI could also be caused by several other factors. First, the items might not be measuring self-mutilation in the sense that is used here. Another explanation for our results could be related to the way NSSI was measured, which involved anonymous self-report on a comprehensive list of different self-harm acts. It is likely that more thorough, widely defined assessments that include cued listings of self-harm acts capture a wider range of NSSI and, as a result, produce a higher rate of

NSSI than free-response survey forms (Muehlenkamp & Gutierrez, 2004). Finally, it is possible that NSSI behaviours are more common in the community than was previously thought. Additionally, there is evidence that NSSI rates among young adults are still rising (Muehlenkamp et al., 2012). Numerous studies have found that NSSI is a substantial predictor of later completed suicide (Asarnow et al., 2011).

5.2 Description Analysis of Socio-Demographics Factors on NSSI

5.2.1 Gender

Based on the finding of this research, females often demonstrate a higher prevalence and earlier onset of NSSI compared to males. Gender disparities further emerge, with female adolescents displaying higher rates of NSSI than their male counterparts (Guan & Aman, 2015). This pattern is evident across multiple studies, including those by Muehlenkamp et al. (2013), which point to a heightened vulnerability among females during adolescence and early adulthood. This period of development often coincides with increased sensitivity to interpersonal relationships and stress, factors that have been strongly linked to NSSI (Klonsky, 2011; Andover, 2010). Biological differences, such as the impact of early maturation, may exacerbate this sensitivity, making females more prone to depression and emotional distress (Liang, Yan, & Zhang, 2014). These findings suggest that gender plays a critical role in shaping the experiences and triggers associated with NSSI.

The methods and motivations behind NSSI also reveal notable gender-based distinctions. Females are more likely to engage in behaviors involving bloodletting, such as cutting, whereas males often favor methods like striking or burning (Claes et al., 2007; Hawton, 2012). Emotional regulation and self-punishment frequently drive

NSSI behaviors in females, reflecting their tendency to internalize distress (Glenn & Klonsky, 2013). In contrast, males often cite external factors, such as peer influence or a desire to fit in, as motivators for engaging in self-harm (Claes et al., 2007). However, other studies, such as that by Lloyd-Richardson et al. (2007), challenge the universality of these gender differences. Their findings suggest that young people of all genders primarily engage in NSSI for automatic negative reinforcement, while social factors play a comparatively smaller role.

However, a cross-sectional study by John and Cate (2017) found no significant difference in the rates of NSSI between males and females. Despite this, differences emerged in the severity and methods of self-harm, with males tending toward more severe forms of NSSI. Bresin and Schoenleber (2015) argue that while gender is a significant factor, it interacts with other variables, such as personality traits and environmental stressors, to influence self-injurious behavior. These inconsistencies underscore the complexity of NSSI and the need to consider additional factors, including cultural, societal, and individual differences, when analyzing its prevalence and manifestations.

A meta-analysis by Smith et al. (2022) revealed that while females generally report higher rates of NSSI worldwide, the degree of this difference varies across regions. In collectivist societies, for instance, females may experience heightened stress due to familial and societal expectations, while in individualistic cultures, males may encounter unique pressures that influence their engagement in NSSI. Additionally, Nguyen et al. (2021) highlighted the role of digital media and online communities in shaping contemporary NSSI behaviors. Their study found that females tend to engage

with emotionally expressive online content, whereas males are more likely to discuss coping mechanisms or external stressors in digital forums. These findings suggest that the interplay between gender and modern sociocultural influences warrants further investigation.

The implications of these findings for prevention and intervention strategies are profound. Programs designed for females might focus on building emotional resilience, improving stress management skills, and fostering healthy interpersonal relationships. Conversely, interventions targeting males could address peer dynamics and offer alternative coping mechanisms for managing social pressures. However, the contradictions within the literature, such as those noted by Liang, Yan, and Zhang (2014), underscore the need for holistic approaches that consider cultural norms, individual traits, and access to support systems. By tailoring strategies to these factors, prevention and treatment efforts can become more effective and inclusive.

Overall, gender differences in NSSI behaviors are evident, yet they are mediated by a range of biological, psychological, and cultural variables. While females generally exhibit higher rates and earlier onset of NSSI, the methods and motivations differ significantly between genders. The complexity of these patterns highlights the necessity of further research to explore the interplay of contextual and individual factors. Such efforts will be crucial in developing nuanced prevention and intervention strategies that address the diverse needs of individuals engaging in NSSI. Understanding these nuances can pave the way for more effective approaches, ultimately reducing the prevalence of NSSI and providing targeted support for those most at risk.

5.2.2 Age

This study highlighted the most number of NSSI occurrence in young adults from the ages 18-22 is 19 years old. While some studies suggest that developmental growth and improved coping mechanisms contribute to this decrease, others have noted that ages 18 to 20 remain a secondary peak period for NSSI prevalence (Gandhi et al., 2018). This secondary peak may reflect the transitional challenges of emerging adulthood, including increased autonomy and responsibility, which could reintroduce stressors previously mitigated during adolescence. These fluctuations underscore the need for targeted interventions addressing NSSI at various developmental stages, with particular attention to gender-specific patterns. The findings also point to a decline in NSSI prevalence after adolescence, particularly beyond the age of 20.

This finding did not align with many other findings that states that NSSI frequently emerges during early adolescence, typically between the ages of 12 and 16, as evidenced by Klonsky (2011). Supporting this, Plener et al. (2015) conducted a longitudinal review that highlighted a consistent rise in NSSI prevalence until age 12, peaking between 14 and 16 years, and subsequently declining by the age of 18. Similarly, Gandhi et al. (2018) found that among young adults in Belgium, the probability of initiating NSSI was highest between ages 14 and 15 and declined markedly after 18.

The critical period of adolescence, characterized by heightened emotional reactivity and identity exploration serves as the backdrop for the emergence of risky behaviors, including NSSI, alcohol consumption, and substance misuse (Muehlenkamp et al.,

2012). Studies further affirm that adolescence is a critical phase for NSSI onset, with rates peaking between ages 13 and 15 (Cerutti et al., 2014; Manca et al., 2014).

Interestingly, gender differences have been observed in NSSI developmental trajectories. Research by Ruziana et al. (2017) revealed that males experience two distinct peaks in NSSI: one before age 10 and another between 20 and 29. Conversely, females exhibit a gradual increase in prevalence starting around age 10, peaking between 20 and 29. These findings suggest that developmental factors such as puberty and gender-specific psychosocial influences may shape distinct patterns of NSSI onset.

The variations in age of NSSI onset highlight the interplay between biological, psychological, and environmental factors. Pubertal changes, for instance, amplify emotional intensity and impulsivity, making young individuals particularly susceptible to self-injury. Psychological variables such as maladaptive coping mechanisms, anxiety, and depression further exacerbate this risk. Moreover, social and cultural contexts significantly influence NSSI behaviors, as adolescents navigate complex pressures related to academic performance, peer relationships, and societal expectations (Park, 2013).

Positive youth development attributes, such as resilience, self-efficacy, and prosocial bonding, could potentially mitigate NSSI behaviors. Park (2013) suggested that cultivating these qualities helps adolescents manage stress more effectively, while Ben and Daniel (2016) highlighted the role of social, moral, and emotional competencies in promoting healthier coping mechanisms.

In conclusion, adolescence remains a critical period for both the onset and peak of NSSI behaviors, necessitating timely and tailored interventions. Future research should explore the of risk and resilience factors will pave the way for more effective prevention and intervention strategies, ultimately supporting young individuals in navigating the challenges of adolescence and early adulthood.

5.2.3 Race/Ethnicity

The findings of this study suggest that race does not significantly impact NSSI behavior. However, religion and ethnicity appear to have a modest influence, shaped by individual beliefs, levels of religious adherence, and cultural practices. Previous research supports this perspective, revealing that while many young adults who self-identify as religious engage in NSSI, the precise role of religion remains unclear (Nicholas et al., 2013).

Ethnicity and culture, however, may hold a more profound influence than initially assumed. As highlighted by Colucci (2006) and Colucci et al. (2013), cultural factors intertwine with self-harming behaviors, with the DSM-5 recognizing culture's role in the classification and understanding of NSSI (American Psychiatric Association, 2013). Ethnic identity theory further supports this interplay, proposing that a strong ethnic affiliation fosters psychological well-being through enhanced self-acceptance and resilience via social connections (Iwamoto & Liu, 2010; Croyle, 2007). Thus, individuals with heightened ethnic identity may exhibit lower susceptibility to stressors like discrimination, potentially mitigating NSSI risk.

Globally, indigenous and minority cultural groups exhibit higher rates of mental health challenges, often correlating with increased NSSI prevalence (Santiago & Miranda, 2014). These trends emphasize the intricate relationship between cultural identity, mental health, and self-harming behaviors. For example, a strong sense of cultural belonging can act as a protective factor, offering emotional support and validation that reduces the likelihood of engaging in self-harm.

Malaysia offers a unique context for exploring the intersection of ethnicity and NSSI. Research highlights a significant prevalence of NSSI among Malaysian Chinese adolescents, with estimates ranging from 56.8% to 68% among individuals aged 13 to 16 (Guan & Aman, 2015). Indian (16.2%), Malay (15%), Chinese (11.6%), and other ethnic groups (28.9%) are all represented in NSSI cases, revealing important ethnic variations (Mohamad et al., 2021). Malaysian studies also indicate that psychological predictors contribute significantly to NSSI among adolescents, with behaviors such as hair plucking and self-cutting being the most commonly reported (Ganaprakasam et al., 2021).

The Malaysian context underscores the importance of culturally sensitive interventions in addressing NSSI. The variability in NSSI prevalence across ethnic groups reflects the diverse socio-cultural and psychological influences shaping this behavior. Tailored prevention and treatment strategies must consider these cultural and ethnic to effectively address the unique needs of various communities. By prioritizing these culturally informed approaches, mental health practitioners can better support individuals struggling with NSSI, ultimately fostering improved mental health outcomes across diverse populations.

5.2.4 Family Income

The data from this study shows, that young adults from the lowest income groups had the highest prevalence of NSSI. Although individuals from higher income brackets did not show a significant difference in NSSI rates, the pattern of behavior in lower-income groups remains noteworthy.

According to the Department of Statistics Malaysia, households are classified into three income groups: T20 (top 20%), M40 (middle 40%), and B40 (bottom 40%), based on total household income. For instance, in urban areas such as the Klang Valley, higher housing and food costs exacerbate financial burdens, even for the T20 group. These pressures have led to reduced disposable income and lifestyle downgrades for some, highlighting the complex interplay between income growth and living expenses in Malaysia's socioeconomic landscape. Additionally, Wan et al. (2011), suggested that NSSI is more prevalent among individuals from economically disadvantaged families. Similarly, Page et al. (2014) in the UK and Baetens et al. (2014) in Sweden both observed that young people from lower socioeconomic backgrounds were more likely to engage in self-harm.

These findings align with the idea that NSSI can be driven by factors such as financial instability, the lack of resources, and insufficient support systems in families with lower SES. Lower parental SES is often associated with higher rates of NSSI, as children growing up in these environments may experience more stress and have fewer coping mechanisms. For instance, Baetens et al. (2014) found that individuals with lower parental SES faced heightened emotional and psychological stress, which in turn increased the likelihood of self-injury. This indicates that NSSI may be more than

an individual behavioral issue; it is also deeply intertwined with the broader socioeconomic context in which an individual is raised.

However in contrast, Yates et al. (2008) found that adolescents from higher socioeconomic backgrounds are more prone to self-injury, likely due to pressures associated with high expectations and perfectionism. On one hand, high socioeconomic status (SES) may bring about psychological stress from the expectations placed on adolescents, while low SES may expose individuals to financial strain, lack of resources, and other environmental stressors that may contribute to self-injury behaviors.

Interestingly, recent findings suggest that young adults, irrespective of their socioeconomic background, may engage in NSSI due to overwhelming future expectations, which may reflect societal pressures experienced across all income groups. This societal stress may contribute to feelings of hopelessness or helplessness, which can manifest as self-injury behavior. These societal expectations, when not met, can become a significant source of emotional distress, further emphasizing the importance of addressing these pressures as part of effective NSSI prevention and intervention strategies.

Understanding the motivations and challenges faced by individuals from various socioeconomic backgrounds is essential for addressing the underlying causes of NSSI. High SES individuals may require support to manage pressures related to achievement and perfectionism, while those from lower SES backgrounds may need assistance in coping with financial stress and limited resources. Tailoring interventions to these

different needs can enhance their effectiveness in promoting emotional and psychological well-being for all socioeconomic groups.

5.2.5 Parents Education

Parental education level is also studied in this research to find out if it has any effect on the NSSI behaviour. The highest category of students who are involved in this act have parents with a diploma and secondary education. Children with parents who have low educational levels were shown to have a higher risk of NSSI, according to a study from Belgium. (Baetens et al., 2014). However, in this study parents with a mediocre level of education had contributed highly on the NSSI behaviour among their children.

The relationship between parental education level and NSSI behavior among young adults is a complex and underexplored area of research, particularly in the Malaysian context. This study examines the potential influence of parental education levels on NSSI behaviors, highlighting the intriguing findings that students whose parents have attained a diploma or secondary education are more likely to engage in NSSI, while those with parents having only primary education seem less affected. This trend differs from other studies, such as those by Baetens et al. (2014), which found that children of parents with lower educational levels were at a higher risk of engaging in NSSI. Furthermore, a recent study by Fu et al. (2022) in Hong Kong found that adolescents with lower parental education levels were more likely to experience emotional neglect, which was significantly correlated with self-harming behaviors. This finding suggests that the emotional support provided by parents may be compromised when their educational level is lower, leading to a higher likelihood of NSSI.

This finding is in line with the assumption that higher parental education universally correlates with positive developmental outcomes and emotional well-being in children. It is plausible that parents with higher education levels may employ different parenting strategies, possibly involving greater expectations or more sophisticated forms of discipline and communication, which could contribute to the pressures young adults feel and subsequently lead to self-injury behaviors.

Interestingly, a number of studies have highlighted the positive influence of higher parental education on children's development, particularly in terms of academic achievement and emotional support. For example, Vellymalay (2011) found that more educated parents tend to be more involved in their children's education, providing guidance and emotional support, which positively affects academic performance and overall well-being. Similarly, Kiadarbandsari et al. (2016) noted that children from households with more educated mothers exhibited better youth development outcomes and fewer depressive symptoms. These studies emphasize the crucial role that parental involvement, particularly in educational matters, plays in shaping positive developmental trajectories for children. Parents with higher education levels tend to provide a more structured environment that supports emotional regulation and reduces the likelihood of self-destructive behavior (Chen et al., 2019).

The data presented in this study indicate that parental education could have a more effect on NSSI behavior, with a potentially stronger relationship between moderate levels of parental education and NSSI compared to either very low or very high levels of education. However, the relationship between parental education and NSSI behavior is not always straightforward. In the context of Malaysia, where education

and socio-economic factors are intertwined, the correlation between parental education and NSSI may be influenced by various other factors, such as family income, parental mental health, and the broader socio-cultural environment (Mohamad et al., 2021). Recent studies suggest that the accumulation of several socio-economic stressors, including parental education, can increase vulnerability to mental health challenges in adolescents (Lim et al., 2020; Kaur & Selvanathan, 2019).

Given that parental education levels significantly influence both academic outcomes and mental health, it is essential to consider how these levels may also affect behaviors such as NSSI. The absence of significant research linking parental education with NSSI behavior in Malaysia underscores the need for more focused studies in this area. Understanding how parental education interacts with other socio-economic factors can provide valuable insights into the development of more targeted prevention and intervention strategies aimed at reducing NSSI among young adults.

5.3 Descriptive Analysis on the Characteristics of NSSI

Regarding methods of NSSI, hitting on purpose, picking at a wound, biting oneself and pulling out the hair were the most frequent. Other than these, picked areas of your body to the point of drawing blood and cutting and carving on skin purposely to feel the pain are also favoured by a big number of respondents. These results are almost identical to those from other countries where cutting was one of the most common (Glenn & Klonsky, 2011).

This study discovered that self-harmers in higher education institutions had employed multiple techniques. The more self-destructive behaviours, the more ways were tried, and the more physical suffering there was.

Young individuals in modern culture are more prone to engage in NSSI behaviour in several ways, which may be recurrent and intentional, according to the study's findings. The first three categories of NSSI in this study were picking a wound, biting oneself, plucking regions of the body till blood was drawn, and ripping off one's hair. In the past, cutting was one of the primary methods of self-injury. Young individuals in modern culture are more prone to engage in NSSI behaviour in a number of ways, which may be recurrent and intentional, according to the study's findings. The first three categories of NSSI in this study were picking a wound, biting oneself, plucking regions of the body till blood was drawn, and ripping off one's hair. In the past, cutting was one of the primary methods of self-injury.

University students' self-injury rates and pain levels were found to be negatively correlated in a study (Nock, 2009). Previous studies showed that when self-harming behaviour is repeated, physical pain tends to grow numb (Kwan & Kwan, 2017). Another study of male high school students revealed that when the incidence of self-injuries rises, so does physical pain (Park et al.2020). This demonstrates that self-injurers have developed additional techniques to induce pain, which they think may lessen negative motional dysregulation. Such complex findings imply that young adolescents in local communities who repeatedly cause minor injuries to themselves may differ in certain ways from adults or the clinical group who repeatedly cause severe injuries to themselves.

Ineffective coping mechanisms, increased learning pressure, and uncontrolled emotional self-management are the following three factors. The adolescents of the twenty-first century live in a wealthier material environment than the teenagers of the previous century. Their emotions are simple to get out of control, and they may exhibit NSSI behaviours because of venting or avoiding negative emotions when learning pressure is too severe and the solution is inadequate.

5.4 Functions of NSSI Behaviour

Although NSSI in young adults is prevalent, but frequently goes unnoticed. This study found that the prevalence rates were 27.5%, which is higher than the other reported lifetime prevalence rate of NSSI in a worldwide, which was about 8-22%. In this study, the most common reasons for NSSI included ‘to punish oneself’ or to feel relaxed, and ‘to stop bad feelings’ or to relieve feeling numb or empty’, and ‘to get control of the situation’.

Globally, the most common reasons for NSSI included ‘to try to get a reaction from someone’, ‘to get control of a situation’, and ‘to stop bad feelings’ which is consistent with Nock & Prinstein (2004), a four-factor model of self-mutilation was supported in our community sample.

It should be noted that automatic-reinforcement items received frequent endorsements on average, which is consistent with findings from Nock & Prinstein (2004) who found stronger support for intra-personal, automatic functions in their samples of institutionalised adolescent participants. Teenagers in a community sample may

function across a wider spectrum, making them generally less socially isolated, unhappy, or hopeless than clinical populations that self-harm.

Positive and negative reinforcement play important roles in predicting NSSI, as the logistic regression study demonstrates. The results show that, as evidenced by the large influence of APR, people are more willing to participate in NSSI behaviours in order to obtain favorable outcomes like attention and emotional comfort. ANR also strongly predicts NSSI, indicating that self-harm is a coping strategy used by some people to get rid of bad feelings. The results align with recent studies emphasizing the dual role of positive and negative reinforcement. However, they also contrast with findings that stress the importance of other factors like emotional dysregulation and underlying psychological conditions.

Therefore, it's likely that participating in NSSI could have more subtle implications. Furthermore, it's probable that the relevance of NSSI concentrations will alter as they increase. Prospective research ought to investigate how NSSI and its functions might alter over time because of increased exposure to NSSI as well as modifications in interpersonal and intrapersonal factors.

5.5 Analysis of the Relationship between FFM and NSSI"

Participants' descriptions of functions of NSSI were most categorized as automatic positive reinforcement (70-73% e.g., coping with negative emotions), followed by automatic negative reinforcement (59-64%; e.g., self-punishment), social positive reinforcement (19-55%; e.g., to communicate with others), and social negative reinforcement (24-42%; e.g., to avoid hurting someone else).

The functions of NSSI have been widely explored in the literature, with the majority of participants identifying NSSI behaviors as being motivated by automatic positive reinforcement (APR) and automatic negative reinforcement (ANR), followed by social reinforcement (both positive and negative). Specifically, 70-73% of participants in this study attributed NSSI to automatic positive reinforcement, primarily using the behavior to cope with negative emotions or to achieve a sense of relaxation. This suggests that individuals often engage in NSSI as a means of generating a favorable outcome, without the need for external involvement.

APR, which occurs when a behavior is followed by the introduction of a positive stimulus, has been consistently linked with NSSI behaviors. For instance, Nock et al. (2010) reported that a significant proportion of individuals engage in NSSI with the desired consequence of "feeling something," reinforcing the behavior and making it more likely to recur. Similarly, Turner et al. (2016) and Selby et al. (2010) found that self-injury is often used as a strategy for achieving emotional relief or sensation, further supporting the role of APR in NSSI. The high prevalence of APR as a motivator aligns with findings from Taylor et al. (2018), who emphasized the role of positive reinforcement in predicting NSSI behavior, particularly when it results in emotional relief or social attention.

On the other hand, automatic negative reinforcement (ANR), in which a behavior is used to escape or avoid negative emotional states, also plays a significant role in NSSI. For example, self-injury may be employed to alleviate emotional distress or to punish oneself as a means of relieving negative feelings (Bentley et al., 2019). The importance of ANR is supported by Victor et al. (2017), who found that individuals with high

emotional dysregulation are more likely to engage in NSSI, independent of any external reinforcement. These findings highlight that NSSI can serve both as a way to gain relief from negative emotions (ANR) and as a mechanism to elicit emotional or sensory relief (APR).

The study further examined the role of social reinforcement in NSSI, although its influence appeared to be less significant compared to automatic reinforcement mechanisms. Social positive reinforcement (SPR) is evident when individuals engage in NSSI to gain attention or approval from others, while social negative reinforcement (SNR) occurs when NSSI is used to avoid negative interpersonal situations, such as conflict (Muehlenkamp et al., 2020).

While SPR and SNR were observed in 19-55% and 24-42% of participants, respectively, they were less prominent than APR and ANR. This suggests that the internal, emotional functions of NSSI, such as emotion regulation, are more critical in driving the behavior than external social factors.

A key observation in this study was the dual function of NSSI, as outlined by Bentley et al. (2019), where both positive and negative reinforcement are inextricably linked with self-injury behaviors. The presence of these dual reinforcement mechanisms implies that NSSI is not solely a coping mechanism for emotional distress, but also a means of attaining desirable emotional states or social outcomes. This dual reinforcement model is critical for understanding the complexity of NSSI and emphasizes the need for treatment approaches that target both emotional regulation and social interactions. This highlights the importance of taking a comprehensive

approach to treatment, addressing both the reinforcement processes and the underlying emotional and relational factors contributing to NSSI.

This study underscores the importance of both automatic and social reinforcement mechanisms in understanding NSSI behaviors. Positive reinforcement, particularly automatic positive reinforcement, plays a central role in driving NSSI, with individuals using self-injury to cope with negative emotions and achieve emotional relief. Similarly, negative reinforcement is crucial in alleviating emotional distress, further validating the dual function of reinforcement in NSSI. The findings also suggest that while social reinforcement contributes to NSSI, it is not as significant as the internal reinforcement mechanisms. Ultimately, understanding these reinforcement processes is essential for designing targeted interventions that address both the emotional and social needs of individuals engaging in NSSI.

5.6 Hypotheses Testing

The analysis supports all four hypotheses, indicating significant relationships between different types of reinforcement factors and non-suicidal self-injury (NSSI) behavior among students in higher learning institutions.

Firstly, H_{A1} , which explores the relationship between automatic positive reinforcement factors and NSSI behavior, is supported. This finding suggests that students might engage in NSSI as a way to attain internal rewards, such as a sense of relief, control, or emotional regulation. This behavior could provide them with temporary alleviation of psychological discomfort, emphasizing the role of self-driven motivations in perpetuating NSSI actions.

Secondly, H_{A2} confirms the relationship between automatic negative reinforcement factors and NSSI behavior. This indicates that students use NSSI as a mechanism to escape or avoid negative internal experiences, such as overwhelming stress, anxiety, or depressive feelings. The behavior is seen as a maladaptive coping strategy to mitigate emotional distress, highlighting the urgent need for interventions that address such internal struggles.

Thirdly, the support for H_{A3} underscores the role of social positive reinforcement factors in NSSI behavior. This suggests that external factors, like gaining attention, care, or validation from others, contribute significantly to the occurrence of NSSI. This finding emphasizes the importance of interpersonal relationships and social contexts, where behaviors might be reinforced by responses from peers, family, or other social networks.

Finally, H_{A4}, which investigates the relationship between social negative reinforcement factors and NSSI, is also supported. This indicates that students may use NSSI to escape or avoid negative social interactions, such as conflicts, criticism, or rejection. The behavior becomes a maladaptive tool for navigating challenging interpersonal dynamics, further emphasizing the critical role of social environments in shaping these actions.

In summary, these findings reveal that both internal (automatic) and external (social) reinforcement mechanisms are closely linked to NSSI behaviors among students

CHAPTER 6

CONCLUSION

This study highlights the prevalence, characteristics and functions of NSSI among young adults in Malaysia. Out of 552 respondents, prevalence of NSSI was reported at 27.5%. The prevalence rate implicates that the occurrence of NSSI among young adults is slightly higher than of the global rates, when comparing studies conducted in same age groups in other parts of the world.

The study reveals that NSSI behavior among Malaysian young adults aged 18–23 is influenced by demographic, socioeconomic, and educational factors. Females, 19-year-olds, and first-year tertiary students are most affected, with Malay students forming the majority. Socioeconomic challenges, such as low family income and parents with secondary education, further contribute to NSSI prevalence. These findings highlight the need for targeted, holistic interventions addressing these vulnerabilities.

The study identifies diverse NSSI behaviors among young adults, with the most common actions being picking at wounds, intentional self-hitting, and biting. Less prevalent behaviors include cutting, erasing skin to bleeding, and inserting objects under the skin or nails. These findings underscore the varying manifestations of NSSI, highlighting the need for tailored interventions addressing the specific behaviors exhibited.

The study identifies key internal motivations for non-suicidal self-injury (NSSI) among young adults, including seeking relaxation, self-punishment, and emotional

relief. Most reasons align with Automatic Positive and Negative Reinforcement, indicating that NSSI is primarily driven by internal emotional states rather than external social factors. Only a small portion of NSSI behavior is influenced by social reinforcement, emphasizing the role of personal distress in motivating self-injury.

The cross-tabulation analysis highlights significant associations between NSSI and factors categorized as Positive Reinforcement Automatic/Intrapersonal, Positive Reinforcement Social/Intrapersonal, Negative Reinforcement Automatic/Interpersonal, and Negative Reinforcement Social/Interpersonal ($p < 0.001$). These results emphasize the critical role of both positive and negative reinforcement mechanisms in influencing NSSI behavior, underscoring the importance of further investigation to inform prevention and intervention strategies tailored to address these underlying motivations.

The logistic regression analysis identifies reinforcement mechanisms as the most significant predictors of non-suicidal self-injury (NSSI), with both positive and negative reinforcement automatic, intrapersonal, and social substantially increasing the likelihood of NSSI. Demographic factors such as lower maternal education and female gender are also associated with higher NSSI risk. These findings highlight the critical role of psychological, interpersonal, and demographic factors in influencing NSSI behavior. The logistic regression analysis highlights that both positive and negative reinforcement significantly predict NSSI behavior, with positive reinforcement having a stronger impact. Individuals experiencing higher positive reinforcement are 3.51 times more likely to engage in NSSI, while negative

reinforcement increases the likelihood by 2.04 times. These findings emphasize the critical role of reinforcement mechanisms in driving NSSI behavior.

This study fills a significant gap in the research on non-suicidal self-injury (NSSI) among Malaysian young adults, a topic largely overlooked in non-western contexts. It explores the prevalence, characteristics, and underlying functions of NSSI, highlighting key factors such as reinforcement mechanisms, gender, socioeconomic status, and parental education level that significantly influence NSSI behavior. The findings underscore the importance of early intervention, as NSSI is a precursor to more severe mental health issues and suicidal behavior. This study contributes valuable insights to policy and practice, particularly for community development efforts aimed at preventing self-injury and promoting positive mental health outcomes.

In conclusion, this study contributes valuable insights into the prevalence and characteristics of non-suicidal self-injury (NSSI) among young adults, emphasizing the need for tailored preventive and treatment interventions. Given the high prevalence of NSSI, especially among young adults preparing for the challenges of working life, interventions should focus on emotion regulation, as reducing negative emotions is crucial for those engaging in frequent self-injury. Malaysia offers a range of mental health services, including counseling, psychological support, and specialized therapies like Dialectical Behavior Therapy (DBT) and Cognitive Behavioral Therapy (CBT). Additionally, mindfulness and grounding techniques are effective self-help strategies that can assist individuals in managing emotional distress and reducing NSSI. By incorporating these approaches into support systems, individuals can develop healthier

coping mechanisms, improving long-term emotional resilience and reducing their reliance on self-injury.

6.1 Strength

This study offers several notable advantages. Firstly, it has been nearly a decade since the prevalence of non-suicidal self-injury (NSSI) was last measured in this specific age group in Malaysia. The findings of this research will significantly contribute to the existing literature on NSSI within the country, potentially spurring further large-scale research initiatives and promoting effective intervention strategies to reduce the incidence of NSSI.

The methodology employed in this study minimizes bias, presenting a well-balanced representation of respondents in terms of sex, ethnicity, age group, and other sociodemographic characteristics. This approach enhances the reliability of the findings and facilitates a comprehensive understanding of the sociodemographic factors influencing NSSI behaviors among young adults in Malaysia. The country's unique racial and sociodemographic composition plays a critical role in shaping NSSI behaviors, making this study particularly relevant.

Furthermore, this research addresses the characteristics and functions of NSSI among young adults, areas that have been largely overlooked in previous studies conducted in Malaysia. By uncovering these aspects, the study contributes valuable insights that can inform intervention efforts, emphasizing the urgency of addressing NSSI as a widespread problem among young people.

These results highlight crucial areas for targeted interventions. Early detection and treatment of repetitive self-harm are essential for improving adolescent health and reducing the risk of future mental health issues. Understanding the underlying issues, their origins, and developing effective strategies for early diagnosis, prevention, and treatment is crucial for both affected individuals and society at large.

Moreover, this study underscores the importance of understanding the factors that lead many young individuals to cease engaging in NSSI. By identifying these factors, we can develop more effective interventions and support mechanisms to assist those at risk. The insights gained from this research emphasize the need for comprehensive efforts to address NSSI, focusing on early detection, intervention, and ongoing support to improve the mental health and well-being of young adults in Malaysia.

6.2 Limitations

There are certain restrictions with this study. First off, the sample is limited to a single region and comes from a chosen polytechnique . As such, it's possible that the results cannot be applied to all young adults in Malaysia. In order to more accurately determine the prevalence rates of NSSI and forecast the behavior of other health risk factors, such depression and substance misuse, future research should strive to include a bigger, more representative national sample.

Second, all of the data used in the study are self-reported. Self-reports are useful, but they can contain biases, misinterpretations, and errors. Multiple methods of data gathering, such as clinical assessments, observational approaches, and interviews, should be used to improve the robustness of future research. Giving respondents the

chance to rephrase their answers and make sure they are accurate will help to reduce the possibility of misunderstandings and boost the accuracy of the data.

Thirdly, the Ministry of Education's constraints, which forbade research including lower age groups and a wider cohort of teenagers, restricted the study's scope. This exclusion is noteworthy since the highest incidence of NSSI are frequently found in school-aged teenagers. Therefore, there is a significant knowledge gap about the entire range of NSSI behavior among young people in Malaysia due to the lack of data from this crucial age group.

Further research addressing these limitations is necessary to obtain a more thorough knowledge of NSSI. A more accurate picture of the prevalence and characteristics of NSSI will be obtained by broadening the sample to include a wider age range and various locales. A mixed-methods approach to data collecting will improve the quality of the results and provide more in-depth understanding of the elements that lead to NSSI. Additionally, advocating for policy changes to allow research within school settings will enable the inclusion of younger adolescents, thereby filling a crucial gap in the current research landscape.

Overall, even though this study offers insightful information, the field must recognize and resolve its shortcomings if it is to advance. Future studies can build on these results and create more efficient interventions and support networks for people in Malaysia who are at risk of NSSI by broadening the study's scope and utilizing a wider range of approaches.

6.3 Recommendations

Serious actions must also be taken to promote good mental health among the adolescents and young adults. The transitional stage between adolescence and young adulthood is a special stage in human development and a crucial time for establishing sound mental and physical health. This stage promotes healthy quick physical, cognitive, and emotional development and greatly aids in the growth of the following generation. Young adults require information, including age-appropriate comprehensive sexuality education, opportunity to hone life skills, acceptable, equitable, appropriate, and effective health care, as well as secure and encouraging environments, to develop and grow in good health. Additionally, they require chances to actively take part in the planning and execution of measures that will enhance and safeguard their health. Expanding these options is essential to addressing their special needs and rights. The policymakers should also develop guidelines and rules that will assist in removing obstacles to promoting children's good behaviour and great mental health.

Supporting female self-injurers involves encouraging professional help, such as therapy specializing in self-injury and related issues, and ensuring medical evaluation for physical injuries. Self-help strategies like mindfulness, grounding techniques, and journaling can aid in managing distress. Healthy coping mechanisms, including regular exercise, relaxation techniques, and connecting with supportive people, are vital. Establishing a routine, maintaining good sleep and nutrition, and having an emergency plan with crisis hotline information are crucial. Additionally, educational resources, both books and reputable websites, can provide valuable information, while

practicing self-compassion and engaging in gentle self-care activities can help foster emotional resilience and well-being.

It is also crucial to facilitate parents with knowledge of prevalence, characteristics and factors that influences NSSI and suicide among young adults. It is certain that with such knowledge and information, parents' awareness may be improved. The parents of self -injurers are equally affected by the children's action. This study can be improved by identifying the hurdles that parents mention the most frequently, looking into how those barriers affect parents, and comprehending the causes of those barriers. Then after, it be able to identify the unique obstacles that parents in the community frequently face. Additionally, intervention research could be useful for focusing on parental hurdles to find efficient techniques to overcome them while at the same time without putting parents in an uncomfortable situation.

The education ministry should allow the research to be conducted (probably under supervision) in public schools and institutions to obtain the actual scenario among students of 10-18 years old. The counsellors placed in schools are not equipped with the knowledge and proper training to handle the students who engage in NSSI. Furthermore, in our morally inclined community, NSSI behaviour is widely perceived as a taboo which places the parents in a dilemma and helpless situation.

Future research should extend the findings more information on the larger scale to find out the severity of these cases in Malaysia. This finding should be done from 10-year-old student up to 21-year-old student in our country because literatures had stated that

the average onset age of NSSI is about 9-10. Therefore, the major factors of NSSI and the appropriate prevention and rehabilitation measures could be determined.



REFERENCES

- Albon, T., Ruf, C., & Schmid, M. (2013). Proposed diagnostic criteria for the DSM-5 of nonsuicidal self-injury in female young adults: Diagnostic and clinical correlates. *Psychiatry Journal*, 2013, Article 159208. <https://doi.org/10.1155/2013/159208>
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2016). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychological Science*, 4(3), 463-490. <https://doi.org/10.1177/2167702615596070>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Ammerman, B. A., & Brown, M. (2018). Non-suicidal self-injury in adolescents: An examination of clinical and psychosocial factors. *Journal of Adolescence*, 64, 1-10. <https://doi.org/10.1016/j.adolescence.2018.01.007>
- Andover, M. S., Primack, J. M., Gibb, B. E., & Pepper, C. M. (2010). An examination of non-suicidal self-injury in men: Do men differ from women in basic NSSI characteristics? *Archives of Suicide Research*, 14(1), 79-88. <https://doi.org/10.1080/13811110903479027>
- Andover, M. S., & Gibb, B. E. (2010). Non-suicidal self-injury, attempted suicide, and suicidal intent among psychiatric inpatients. *Psychiatry Research*, 178(1), 101-105. <https://doi.org/10.1016/j.psychres.2010.03.019>
- Andover, M.S.; Morris, B.W. (2014). Expanding and Clarifying the Role of Emotion Regulation in Nonsuicidal Self-Injury. *Can. J. Psychiatry*, 59, 569–575.
- Asarnow, J. R., Porta, G., Spirito, A., Emslie, G., Clarke, G., Wagner, K. D., . . . Brent, D. A. (2011). Suicide attempts and nonsuicidal self-injury in the treatment of resistant depression in young adults: findings from the TORDIA study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50, 772–781.
- Association AP (2013) *Diagnostic and Statistical Manual of Mental Disorders*. 5. Washington DC: American Psychiatric Association.
- Ayyubi E, Nazarzadeh M, Bidel Z, Bahrami A, Tezwal J, Rahimi M, et al. (2013). Prevalence of bullying and deliberated self-harm behaviours among high school students. *J Fundam Ment Health*. 15(1):366–77.
- Baetens, I., Claes, L., Onghena, P., Grietens, H., Van Leeuwen, K., Pieters, C., Wiersema, J. R., & Griffith, J. W. (2014). Nonsuicidal self-injury in adolescence: a longitudinal study of the relationship between NSSI, psychological distress and perceived parenting. *Journal of Adolescence*, 37(6), 817–826. <https://doi.org/10.1016/j.adolescence.2014.05.010>

- Baetens I, .(2015) The relationship between parental expressed emotions and non-suicidal self-injury: the mediating roles of self-criticism and depression. *J Child Fam Stud*.;24(2):491
- Barnard, L.K., & Curry, J.F. (2011). Self-compassion: Conceptualizations, correlates & interventions. *Review of General Psychology*,15,289-303. doi:10.1037/a0025754
- Ben M.F Law and Daniel T.L Shek. (2016). A 6-year Longitudinal Study of Self-Harm and Suicidal Behaviours among Chinese Young adults in Hong Kong. *J Pediatr Adolesc Gynecol* 29: S38-S48
- Bentley, K. H., Cassiello-Robbins, C. F., Vittorio, L., Sauer-Zavala, S., & Barlow, D. H. (2019). The association between nonsuicidal self-injury and the emotional disorders: A meta-analytic review. *Clinical Psychology Review*, 68, 36-52. <https://doi.org/10.1016/j.cpr.2018.12.004>
- Brent, D. (2011). Nonsuicidal self-injury as a predictor of suicidal behaviour in depressed young adults. *Am J Psychiatry*; 168: 452–4.
- Bresin, K., & Schoenleber, M. (2015) A review of epidemiological factors, including gender, influencing NSSI. *Clinical Psychology Review*, 38, 55–64.
- Brown, M. (2017). Non-suicidal self-injury in adolescents: The role of peer relationships and emotional distress. *Journal of Child Psychology and Psychiatry*, 58(7), 743-751. <https://doi.org/10.1111/jcpp.12632>
- Brunner R, Kaess M, Parzer P, Fischer G, Carli V, Hoven CW, et al. (2014) Life-time prevalence and psychosocial correlates of adolescent direct self-injurious behaviour: a comparative study of findings in 11 European countries. *J Child Psychol Psychiatry*. 55:337–48. doi: 10.1111/jcpp.12166
- Bureau, J. F., Martin, J., Freynet, N., Poirier, A. A., Lafontaine, M. F., & Cloutier, P. (2010). Perceived dimensions of parenting and non-suicidal self-injury in young adults. *Journal of Youth and Adolescence*, 39(5), 484–494. <https://doi.org/10.1007/s10964-009-9470-4>.
- Butler, A. M., & Malone, K. (2013). Attempted suicide v. non-suicidal self-injury: Behaviour, syndrome or diagnosis? *The British Journal of Psychiatry*, 202, 324– 325.
- Boyd, C., Kaewanuchit, C., & McCorkle, R. (2016). Social and economic determinants of self-harm and suicide attempts among Thai adolescents: A national population-based survey. *International Journal of Social Psychiatry*, 62(1), 41-49.
- Casey BJ, Jones RM, Hare TA. (2008). The adolescent brain. *Ann N Y Acad Sci*. 2008; 1124:111– 26.

- Cerutti, R., Manca, M., Presaghi, F., & Gratz, K. L. (2011). "Prevalence and clinical correlates of deliberate self-harm among a community sample of Italian adolescents." *Journal of Adolescence*, 34(2), 337-347. <https://doi.org/10.1016/j.adolescence.2010.04.004>
- Cerutti, R., Presaghi, F., Manca, M., & Gratz, K. L. (2014). "Deliberate self-harm behavior among Italian young adults: Correlations with clinical and non-clinical dimensions of personality." *Journal of Psychopathology and Behavioral Assessment*, 36(4), 583-592. <https://doi.org/10.1007/s10862-014-9423-6>
- Cipriano, E. A. (2017). Non-suicidal self-injury in adolescent psychiatric patients: The role of emotion regulation and psychosocial factors. *Journal of Clinical Psychology*, 73(10), 1289-1304. <https://doi.org/10.1002/jclp.22376>
- Chapman, A. L., Gratz, K. L., & Brown, M. Z. (2006). Solving the puzzle of non-suicidal self-injury: The role of emotion regulation and interpersonal functioning. *Behavior Research and Therapy*, 44(5), 663-675. <https://doi.org/10.1016/j.brat.2005.05.009>
- Chen, Q., Wang, L., & Shi, L. (2019). Parental education level and adolescents' self-regulation: The mediating role of parental warmth. *Journal of Child and Family Studies*, 28(5), 1305-1314. <https://doi.org/10.1007/s10826-019-01429-7>
- Claes, L., Vandereycken, W., & Vertommen, H. (2005). "Self-injury in female versus male adolescents: Exploring the gender difference in coping strategies." *Journal of Clinical Psychology*, 61(12), 1467-1479. <https://doi.org/10.1002/jclp.20195>
- Claes, L., & Vandereycken, W. (2007). "The Eating Disorder Inventory: Clinical utility and psychometric properties." *Acta Psychiatrica Scandinavica*, 116(2), 111-118. <https://doi.org/10.1111/j.1600-0447.2007.01034.x>
- Claes, L., Muehlenkamp, J., Vandereycken, W., Hamelinck, L., Martens, H., & Claes, S. (2010). Comparison of non-suicidal selfinjurious behaviour and suicide attempts in patients admitted to a psychiatric crisis unit. *Personality and Individual Differences*. 48 (1), 83–87.
- Colucci, E. (2006). Cultural meaning(s) of suicide: A cross-cultural comparison. *Australian e-Journal for the Advancement of Mental Health*, 5(3), 1–14. <https://doi.org/10.5172/jamh.5.3.1>
- Colucci, E., Lester, D., Hjelmeland, H., & Park, B. B. (2013). *Suicide and culture: understanding the context*. Cambridge, MA: Hogrefe Publishing.
- Cooper J, Turnbull P, Hawton K, Bergen H, Waters K, Ness J, et al. (2015). Suicide following self-harm: findings from the multicentre study of self-harm in England, 2000-2012. *J Affect Disord*; 175:147–51.

- Croyle, K. L. (2007). The relationship between ethnic identity and psychological well-being in African American and Latino college students. *Journal of College Student Development*, 48(4), 477–491. <https://doi.org/10.1353/csd.2007.0043>
- Delia Latina and Håkan Stattin.(2016). Toward a Re-Interpretation of Self-Harm: A Cross- Contextual Approach Aggressive Behaviour. Volume 42, pages 522–532
- Dickson, D. J., Laursen, B., Valdes, O., & Stattin, H. (2019). Derisive parenting fosters dysregulated anger in adolescent children and subsequent difficulties with peers. *Journal of Youth and Adolescence*, 48(8), 1567–1579.
- Ee, T., & May, T. (2011). The impact of self-esteem and emotional regulation on non-suicidal self-injury in adolescents. *Journal of Youth and Adolescence*, 40(8), 987-999. <https://doi.org/10.1007/s10964-010-9540-5>
- Evans, E., Hawton, K., & Rodham, K. (2005). The prevalence of suicidal behavior and non-suicidal self-injury in adolescents: A systematic review. *Journal of Child Psychology and Psychiatry*, 46(5), 477-487. <https://doi.org/10.1111/j.1469-7610.2004.00391.x>
- Falcomata, T. S., Roane, H. S., Hovanetz, A., & Kettering, A. (2004). Assessment and treatment of non-suicidal self-injury: A review and conceptual framework. *Behavior Modification*, 28(3), 344-371. <https://doi.org/10.1177/0145445503258454>
- Fang Zhang,¹ Paula F Cloutier,² Hongmei Yang,³ Wenjing Liu,⁴ Wenhong Cheng,^{1,4} Zeping Xiao (2019). Non-suicidal self-injury in Shanghai inner bound middle school students. *Gen Psych* 10.1136/gpsych-2019-100083 on 24 August 2019
- Fu, K. W., Yip, P. S. F., & Wong, P. W. C. (2022). The role of parental education and emotional neglect in predicting self-harm behaviors in adolescents. *Child and Adolescent Mental Health*, 27(2), 166-172. <https://doi.org/10.1111/camh.12365>
- Gail Horner.(2016) Non-Suicidal Self-injury. *Journal of Pediatric Health Care*, Vol 30, June No3
- Ganaprakasam, C., Humayra, S., Nachiappan, S., Karunaharan, S., & Basir, A. (2021). Psychological distress as a predictor of non-suicidal self injury among adolescents. *Turkish J Physiother Rehabil*, 32, 25140-25155.
- Gandhi A, et al. (2018). Association between non-suicidal self-injury, parents and peers related loneliness, and attitude towards aloneness in Flemish young adults: an empirical note. *Psychol Belg.*;58(1):3–12.
- García-Nieto, R., Carballo, J. J., Díaz de Neira Hernando, M., de León-Martinez, V., & Baca-García, E. (2015). Clinical Correlates of Non-Suicidal Self-Injury (NSSI) in an outpatient sample of young adults. *Archives of Suicide Research*, 19(2), 218–230.

- Germain, V., & Hooley, J. M. (2011). Non-suicidal self-injury and interpersonal functioning in adolescents: The role of attachment and emotion regulation. *Journal of Clinical Child & Adolescent Psychology*, 40(3), 490-504. <https://doi.org/10.1080/15374416.2011.573460>
- Gilbert, P., McEwan, K., Matos, M., & Rivera, J. (2010). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy: Theory, Research and Practice*, 83(3), 505-530. <https://doi.org/10.1348/147608310X526511>
- Glenn, C. R., & Klonsky, E. D. (2010). Prospective predictors of the frequency and severity of non-suicidal self-injury: A 1-year longitudinal study of adolescents. *Behaviour Research and Therapy*, 48(8), 688-694. <https://doi.org/10.1016/j.brat.2010.04.010>
- Glenn, C. R., & Klonsky, E. D. (2013). Clarifying the role of emotion regulation in non-suicidal self-injury. *Clinical Psychology Review*, 33(5), 605-618. <https://doi.org/10.1016/j.cpr.2013.03.007>
- Grant BF, Chou SP, Goldstein RB, Huang B, Stinson FS, Saha TD, Smith SM, Dawson DA, Pulay AJ, Pickering RP, Ruan WJ. (2008) Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *J Clin Psychiatry*; 69:533–545.
- Guan, T. E., & Aman, R. C. (2015). Prevalence of self-hurt behaviour among Chinese adolescents in Malaysia. *Journal of Humanities, Arts and Social Sciences (IJHAS)*, 1(2), 108-113.
- Hatkevich, F. Penner, C. Sharp (2019) Difficulties in emotion regulation and suicide ideation and attempt in adolescent inpatients *Psychiatry Res.*, 271 (2019), pp. 230-238, [10.1016/j.psychres.2018.11.038](https://doi.org/10.1016/j.psychres.2018.11.038)
- Hawton K, Harriss L. (2007). Deliberate self-harm in young people: characteristics and subsequent mortality in a 20-year cohort of patients presenting to hospital. *J Clin Psychiatry*;68 (10):1574-83
- Hawton K, Saunders KEA, O'Connor RC. (2012). Self-harm and suicide in young adults. *Lancet*;379(9834):2373–82
- International Society for the Study of Self-Injury. (2018) What is self-injury? Retrieved from <https://itriples.org/about-self-injury/what-is-self-injury>
- Ivbijaro, G., Stott, N. C. H., & Saeed, A. (2019). Self-harm and non-suicidal self-injury in adolescents: A review and clinical guidance. *Journal of Mental Health*, 28(2), 151-160. <https://doi.org/10.1080/09638237.2018.1496767>
- Iwamoto, D. K., & Liu, H. (2010). Non-suicidal self-injury in Asian American adolescents: The role of cultural and psychological factors. *Cultural Diversity and Ethnic Minority Psychology*, 16(3), 343-352. <https://doi.org/10.1037/a0019990>

- Jenelle Power ¹, Hayden P Smith ², Janelle N Beaudette (2016). Examining Nock and Prinstein's four-function model with offenders who self-injure. *Personal Disord* 2016 Jul;7(3):309-314. doi: 10.1037/per0000177. Epub 2016 Feb 15
- Johari, M. F., Kamsani, S. R., & Abdul Ghani, M. (2022). Tingkah laku mencederakan diri sendiri dalam kalangan remaja: Satu kajian konseptual. *Jurnal Pembangunan Sosial (JPS)*, 25, 217-238.
- John A, Glendenning AC, Marchant A, Montgomery P, Stewart A, Wood S, Lloyd K, Hawton K. (2018). Self-harm, suicidal Behaviours, and Cyberbullying in children and young people: systematic review. *J Med Internet Res*; 20(4): e129.
- John Fitzgerald & Cate Curtis. (2017). Non-suicidal self-injury in a New Zealand student population: Demographic and self-harm characteristics. *New Zealand Journal of Psychology*, Vol 26; No3
- Kaess, M., Parzer, P., Mattern, M., Planer, P.L., Bifulco, A., Resch, F., & Brunner, R. (2013). Adverse Childhood experiences and their impact on frequency, severity and the individual function of non-suicidal self-injury in youth. *Psychiatry Research*. 206, 265-272
- Kamarulzaman W, Jodi KHM (2018). A review of mental illness among adolescent in Malaysia. *Int. J. Psychol. Couns.* 2018; 3(20):72-81.
- Kaur, R., & Selvanathan, R. (2019). Socioeconomic factors influencing adolescents' mental health in Malaysia. *Asian Journal of Psychiatry*, 45, 77-82. <https://doi.org/10.1016/j.ajp.2019.07.007>
- Kiadarbandsari, A.1 *, Madon, Z.1, Hamsan, H. H.2 and Mehdinezhad Nouri, K (2016). Role of Parenting Style and Parents' Education in Positive Youth Development of Young adults. *Pertanika J. Soc. Sci. & Hum.* 24 (4): 1465 - 1480 (2016) ISSN: 0128-7702 © Universiti Putra Malaysia Press Social Science & Humanities Journal homepage: <http://www.pertanika.upm.edu.my/> Article history
- Kiekens G, et al. (2018). The associations between non-suicidal self-injury and first onset suicidal thoughts and behaviours. *J Affect Disord* 239:171–9.
- Kim, K., & Dickstein, D. (2013). Relationship between teen suicide and non-suicidal self-injury. *The Brown University Child and Adolescent Behaviour Letter*, 29(1), 4.
- Klonsky, ED. (2011). Non-suicidal self-injury in United States Adults: Prevalence, sociodemographic, topography and functions. *Psychological Medicine*, 41. 1981-1986
- Klonsky, E.D., & Muehlenkamp, J.J. (2007). Self-injury: A research review for the practitioner. *Journal of Clinical Psychology*, 63, 1045-1056.

- Klonsky ED, Glenn CR (2009) Assessing the functions of non-suicidal self-injury: psychometric properties of the Inventory of Statements About Self-injury (ISAS). *J Psychopathol Behav Assess* 31:215–219
- Klonsky, E.D., & Muehlenkamp, J.J., Lewis, S., & Walsh, B. (2011). *Non-suicidal self-injury. Advance in Psychotherapy: Evidence-based practice*. Cambridge, MA Hogrefe Publishing
- Kwang Yul Jung,¹ Tae Rim Kim,¹ Sung Yeon Hwang,¹ Tae Rim Lee,¹ Hee Yoon,¹ Tae Gun Shin,¹ Min Seob Sim,¹ Won Chul Cha,¹ and Hong Jin Jeon: (2018). Deliberate Self-harm among Young People Begins to Increase at the Very Early Age: a Nationwide Study. *J Korean Med Sci*. Jul 23;33(30): e191 <https://doi.org/10.3346/jkms>.
- Kwang, T. W., Rodrigues, H., Lai, Y. F., & Ramli, M. (2018). Prevalence and psychosocial factors of non-suicidal self-injury among adolescents in Malaysia. *International Journal of Environmental Research and Public Health*, 15(1), 144.
- Kwon H.J., Kwon S.M. (2017). Validation study of the Korean Version of the Functional Assessment of Self-Mutilation (FASM) *Clin. Psychol. Kor. Res.* 2017;3:187–205.
- Langos C. (2012). Cyberbullying: the challenge to define. *Cyberpsychol Behav Soc Netw.* 15(6):285–9.
- Latina, D., & Stattin, H. (2016). Toward a re-interpretation of self-harm: a cross-contextual approach. *Aggressive Behaviour*, 42(6), 522–532. <https://doi.org/10.1002/ab.21647>.
- Li, J., Zhang, C., & Hu, Y. (2019). The role of emotion regulation in the relationship between childhood trauma and non-suicidal self-injury in adolescents. *Journal of Affective Disorders*, 256, 201–208. <https://doi.org/10.1016/j.jad.2019.05.010>
- Liang S, Yan J Zhang T et al: (2014). Differences between non-suicidal self-injury and suicide attempt in Chinese Young adults. *Asian J Psychiatry*; 8:76
- Lim, K.S.; Wong, C.H.; McIntyre, R.S.; Wang, J.; Zhang, Z.; Tran, B.X.; Tan, W.; Ho, C.S.; Ho, R.C (2019). Global lifetime and 12-month prevalence of suicidal behaviour, deliberate self-harm and non-suicidal self-injury in children and adolescents between 1989 and 2018: A meta-analysis. *Int. J. Environ. Res. Public Health* 2019, 16, 4581. [CrossRef]
- Lim, Y. M., Mohamad, S., & Zulkifli, M. (2020). The impact of family socio-economic status and parental involvement on adolescents' mental health outcomes. *Journal of Adolescence*, 79, 106–117. <https://doi.org/10.1016/j.adolescence.2020.01.005>

- Lloyd-Richardson, E. E., Perrine, N., Dierker, L., & Kelley, M. L. (2007). "Characteristics and functions of non-suicidal self-injury in a community sample of adolescents." *Psychological Medicine*, 37(8), 1183-1192. <https://doi.org/10.1017/S003329170700027X>
- Lloyd-Richardson, E. E., Nock, M. K., & Prinstein, M. J. (2009). "Functions of adolescent nonsuicidal self-injury." *Journal of Abnormal Psychology*, 118(4), 850-860. <https://doi.org/10.1037/a0016948>
- Lloyd-Richardson, E.E.: (2010). Non-suicidal self-injury in young adults. *The Prevention Researcher*, 17, 3-7
- Manca, M., Cerutti, R., & Presaghi, F. (2014). Coping and maladaptive behaviors in adolescence. *Journal of Child Psychology and Psychiatry*, 55(6), 580–590.
- Martin, J., Bureau, J. F., Yurkowski, K., Lafontaine, M. F., & Cloutier, P. (2016). Heterogeneity of relational backgrounds is associated with variation in non-suicidal self-injurious behaviour. *Journal of Abnormal Child Psychology*, 44(3), 511–522. <https://doi.org/10.1007/s10802-015-0048-1>.
- Masiran, R., Haniff, J., Ali, N. H., & Hamid, A. M. A. (2017). Rates and Profiles of Self-Harm Presenting to Malaysian General Hospitals: Data from the Ministry of Health in 2011. *Malaysian Journal of Medicine & Health Sciences*, 13(2)
- Matthew K Nock.(2012) The Associations Between Non-Suicidal Self-Injury and Borderline Personality Disorder Features Among Chinese Young adults. *Journal of Personality Disorders*, 26(2), 226–237, 2012© 2012 The Guilford Press
- Messias, E., Hsu, K. C., & Garcia, R. (2014). The impact of self-injury on mental health outcomes: A review of current research. *Psychiatric Quarterly*, 85(3), 345-360. <https://doi.org/10.1007/s11126-014-9302-7>
- Mohamad, M., Ali, M., Subhi, N., Kamaluddin, M., & Chong, S. (2021). Relationship between cognitive distortion and life event with nssi thought on secondary school students. *International Journal of Academic Research in Progressive Education and Development*, 1(10.6007)
- Muehlenkamp, J. J., & Gutierrez, P. M. (2004). An investigation of the functions of non-suicidal self-injury in a college sample. *Journal of Clinical Psychology*, 60(12), 1305-1321. <https://doi.org/10.1002/jclp.20056>
- Muehlenkamp JJ (2005) Self-injurious behaviour as a separate clinical syndrome. *Am J Orthopsychiatry* 75(2):324–333. <https://doi.org/10.1037/0002-9432.75.2.324>
- Muehlenkamp JJ, Gutierrez PM. (2007). Risk for Suicide Attempts Among Young Adults Who Engage in Non-Suicidal Self-Injury. *Arch Suicide Res.* 1 janv; 11(1):69–82. PMID: 17178643

- Muehlenkamp JJ, Claes L, Havertape L, Plener PL (2012) International prevalence of non-suicidal self-injury and deliberate self-harm. *Child Adolesc Psychiatry Ment Health*. doi:10.1186/1753-2000-6-10
- Muehlenkamp, J. J., Claes, L., Havertape, L., & Plener, P. L. (2013). International prevalence of adolescent non-suicidal self-injury and deliberate self-harm. *Child and Adolescent Psychiatry and Mental Health*, 7(1), 1-9.
- Muehlenkamp, J. J., Williams, K. L., Gutierrez, P. M., & Claes, L. (2020). Rates of nonsuicidal self-injury in high school students across five years: Patterns of change. *Journal of Clinical Child & Adolescent Psychology*, 49(1), 65-78. <https://doi.org/10.1080/15374416.2018.1479962>
- Neacsiu A.D, C.M.Fang, M. Rodriguez, M.Z. Rosenthal (2018). Suicidal behavior and problems with emotion regulation Suicide Life Threat. *Behav.*, 48 (1) (2018), pp. 52- 74, 10.1111/sltb.12335
- Nicholas J Westers, Mark Rehfuss, Lynn Olson, Constance M Wiemann.(2014). An exploration of adolescent nonsuicidal self-injury and religious coping. *Int J Adolesc Med.Health*2014;26(3) :345-9.
- Nguyen, H. T., et al. (2021). Analyzed the impact of online communities and digital influences on gendered patterns of NSSI. *Journal of Behavioral Addictions*, 10(4), 567–578
- Nock, M. K., & Prinstein, M. J. (2004). A functional approach to the assessment of self-mutilative behavior. *Journal of Consulting and Clinical Psychology*, 72(5), 885-890. <https://doi.org/10.1037/0022-006X.72.5.885>
- Nock, M., & Prinstein, M. (2005). Contextual features and behavioural function of self-mutilation among young adults. *Journal of Abnormal Psychology*, 114. 1140-146
- Nock M.K.(2009). Why do people hurt themselves? New insights into the nature and functions of self-injury. *Curr. Dir. Psychol.* 2009;18:78–83. doi: 10.1111/j.1467-8721.2009.01613.x.
- O'Connor RC, Rasmussen S, Miles J, Hawton K. (2009). Self-harm in young adults: self-report survey in schools in Scotland. *Br J Psychiatry*;194(1):68–72.
- O'Connor, R, Platt, S, Gordon, J. (2011). *International Handbook of Suicide Prevention. Research, Policy and Practice.*
- Olfson, M.; Wall, M.; Wang, S.; Crystal, S.; Gerhard, T.; Blanco, C (2017). Suicide following deliberate self-harm. *Am. J. Psychiatry*, 174, 765–774. [CrossRef]
- Page, A. C., Smith, J., & Young, S. (2014). Non-suicidal self-injury in adolescents: The role of social support and self-esteem. *Journal of Clinical Psychology*, 70(8), 777-786. <https://doi.org/10.1002/jclp.22083>

- Park, M.S.; Seo, Y.S.;(2020). An, H.Y. Study on the Status and Motivation of Non-Suicidal Self-Injury in Specialized Vocational High School Male Students. *J. Youth Counsel.*28, 459–491
- Paul E, Tsypes A, Eidlitz L, Ernhout^C, Whitlock, J.(2015) Frequency and functions of non-suicidal self-injury: associations with suicidal thoughts and behaviours. *Feb28;225(3): 276-82.*
- Park S: (2013). Sex specific factors of suicide ideation among young adults in the Republic of Korea: Nationaly Representative Population Based Study. *Arch Psychiatr Nurs*; 27:253
- Patel, V., Carr, C., Kim, R., Robles, J., & Eastridge, D. (2000). The impact of self-harm on adolescent development: A longitudinal study. *Journal of Adolescence*, 23(4), 331-345. <https://doi.org/10.1006/jado.2000.0327>
- Plener, P. L., Libal, G., Keller, F., Fegert, J. M., & Muehlenkamp, J. J. (2009). An international comparison of adolescent non-suicidal self-injury (NSSI) and suicide attempts: Germany and the USA. *Psychological Medicine*, 39(9), 1549-1558.
- Plener PL, Schumacher TS, Munz LM, Groschwitz RC (2015). The longitudinal course of non-suicidal self-injury and deliberate self-harm: A systematic review of the literature. *Borderline Personal Disord Emot Dysregul.* 2:2. doi: 10.1186/s40479-014-0024-3.
- Plener PL, Marc Allroggen, Nestor D. Kapusta, Elmar Brähler, Jörg M. Fegert and Rebecca C. Groschwitz. (2016). The prevalence of Nonsuicidal Self-Injury (NSSI) in a representative sample of German population.BMC Psychiatry: 16:353 DOI 10.1186/s12888-016-1060-x
- Perez, S., Becker, C., & Langberg, J. M. (2012). Non-suicidal self-injury in adolescents: Prevalence, risk factors, and the role of family functioning. *Journal of Adolescent Health*, 50(6), 577-584. <https://doi.org/10.1016/j.jadohealth.2011.11.006>
- Quirk, S. W., Wier, D., Martin, S. M., & Christian, A. (2015). The influence of parental rejection on the development of maladaptive schemas, rumination, and motivations for self-injury. *Journal of Psychopathology and Behavioural Assessment*, 37(2), 283–295. <https://doi.org/10.1007/s10862-014-9453-y>.
- Rebecca L. Forrester^{a,*}, Hayley Slater^b, Khowla Jomara, Susan Mitzman^c, Peter James Taylord.(2017) Self-esteem and non-suicidal self-injury in adulthood: A systematic review. *Journal of Affective Disorders* June 2017
- Rebecca C. Brown¹ & Paul L. Plener¹(2017) Non-suicidal Self-Injury in Adolescence (2017). *Curr Psychiatry Rep* 19: 20 DOI 10.1007/s11920-017-0767-9
- Robinson, J., McCutcheon, L., Browne, V., Witt, K., & Pirkis, J. (2018). Looking the other way: young people and self-harm. *Advances in Mental Health*, 16(3), 139-152.

- Rodav, O., Levy, S., & Hamdan, S: (2014). Clinical characteristics and functions of non-suicide self-injury in youth. *European Psychiatry* 29, 503-508
- Rohner, R. P. (2005). The parental “acceptance-rejection” syndrome: Conceptualization and measurement. In R. P. Rohner (Ed.), *Parental Acceptance-Rejection: Theory, Methods, and Research* (pp. 1-16). University of Connecticut.
- Ross S, Heath N. (2002). A study of the frequency of self-mutilation in a community sample of young adults. *J Youth Adolesc.* 31:67–77. doi:10.1023/A:1014089117419.
- Ruziana Masiran, Jamaiah Haniff, Nor Hayati Ali and Abdul Muneer Abdul Hamid. (2017). Rates and Profiles of Self-Harm Presenting to Malaysian General Hospitals: Data from the Ministry of Health in 2011. *Mal J Med Health Sci* 13(2):39-45, June 2017.
- Santiago, T. V., & Miranda, R. (2014). Non-suicidal self-injury and emotion regulation in a college sample. *Journal of American College Health*, 62(2), 128-136. <https://doi.org/10.1080/07448481.2013.849078>
- Selby, E., Nock, M., & Kranzler, A. (2014). How does self injury feel? Examining automatic positive reinforcement in adolescent self-injurers with experience sampling. *Psychiatry Research*, 215. 417-423
- Shek DT, Lin, L: (2016). Family attributes, family functioning and positive youth development as predictors of adolescent self-harm: a longitudinal study in Hong Kong. In: *Student Wellbeing in Chinese Young adults in Hong Kong: Theory, Intervention and Research*, Edited by TY lee, DT Shek and Rc Sun, 2016.
- Skegg, K. (2005). Self-harm. *Lancet* 2005; 366: 1471–83.
- Smith PK, Mahdavi J, Carvalho M, Fisher S, Russell S, Tippett N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *J Child Psychol Psychiatry*; 49(4):376–85.
- Smith, A., et al. (2022). Meta-analysis examining cross-cultural patterns of gender differences in NSSI. *International Journal of Psychology*, 57(5), 445–459.
- Spielberger, C. D., Reheiser, E. C., & Sydeman, S. J. (2014). Measuring the experience, expression, and control of anger. In H. Kassirer (Ed.), *Anger disorders: definition, diagnosis, and treatment* (pp. 49–65). New York: Taylor and Francis. <https://doi.org/10.4324/9781315820361>.
- Son, S., Cho, Y., & Kim, J. (2021). “Social Support and Non-Suicidal Self-Injury in Adolescents: The Differential Influences of Family, Friends, and Teachers.” *Journal of Youth and Adolescence*, 50, 223-235. <https://doi.org/10.1007/s10964-020-01359-w>

- Swannell SV, Martin GE, Page A, Hasking P, St John NJ. (2014). Prevalence of nonsuicidal self-injury in nonclinical samples: systematic review, meta-analysis, and meta-regression. *Suicide Life Threat Behav*;44(3):273–303.
- Tang J, Li G, Chen B, Huang Z, Zhang Y, Chang H, et al. (2018) Prevalence of and risk factors for non-suicidal self-injury in rural China: results from a nationwide survey in China. *J Affect Disord*. (2018) 226:188–95. 10.1016/j.jad.2017.09.051
- Tangney, J. P. (2002). Self-relevance of guilt and shame. In M. A. Clark & P. A. Lin (Eds.), *The Self in Social Psychology* (pp. 99-116). Psychology Press.
- Tangney, J. P. (2006). Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of Emotions* (pp. 541-555). Guilford Press.
- Taylor, P. J., Hutton, P., & Wood, L. (2018). Are people who self-harm more likely to have experienced adverse childhood experiences? A systematic review of case-control studies. *Clinical Psychology Review*, 63, 93-105. <https://doi.org/10.1016/j.cpr.2018.06.001>
- Teik Ee G, Aman RC (2015). Prevalence of self-hurt behaviour among Chinese adolescents in Malaysia. *Int J Humanit Arts Soc Sci*. 2015; 1(2):108-113.
- Tschan T., Schmid M., In-Albon T. (2015). Parenting behaviour in families of female adolescents with nonsuicidal self-injury in comparison to a clinical and a nonclinical control group. *Child Adolesc. Psychiatry Ment. Health* 9:17 10.1186/s13034-015-0051-x
- Tinne Buelens, Koen Luyckx, Amarendra Gandhi, Glenn Kiekens and Laurence Claes. (2019). Non-suicidal self-injury in Adolescence: longitudinal associations with psychological distress and rumination. *Journal of Abnormal Child Psychology*
- Vaughn, M., Salas-Wright, C., Underwood, S., & Gochez-Kerr, T.: (2015). Subtypes of non-suicidal self-injury based on childhood adversity. *Psychiatric Quarterly*. 86, 137-151
- Vellymalay, S. K. (2011). Non-suicidal self-injury among adolescents: A review of research and interventions. *Journal of Psychology and Behavioral Science*, 2(1), 1-12. <https://doi.org/10.1080/09540121.2011.565788>
- Victor, S. E., Davis, T., & Klonsky, E. D. (2017). Descriptive characteristics and initial psychometric properties of the Non-Suicidal Self-Injury Disorder Scale (NSSIDS) in an online sample of adults. *Journal of Psychopathology and Behavioral Assessment*, 39(1), 18-29. <https://doi.org/10.1007/s10862-016-9566-0>
- Wan YH, Ha CL, hao JI et al: (2011). Deliberate self-harm behaviour in Chinese Young adults and young adults. *Eur Child Adolesc Psychiatry* 2011:20:517

- Whitlock, J., Muehlenkamp, J., Eckenrode, J., Purington, A., Barreira, P., Abrams, G. B., ... & Knox, K. (2015). Nonsuicidal self-injury as a gateway to suicide in young adults. *Journal of Adolescent Health*, 56(2), 192-199.
- Wilkinson,P., Goodyer.I. Non-suicidal self-injury.(2011) European Child and Adolescent Psychiatry.20, 103-108
- Wilkinson,P: (2013).Non-Suicidal Self-injury. European Journal of Child and Adolescent Psychiatry 22; S75-S79
- Wilkinson P, et al. (2018). Sporadic and recurrent non-suicidal self-injury before age 14 and incident onset of psychiatric disorders by 17 years: prospective cohort study. *Br J Psychiatry*;212(4):222.
- Walsh, B. (2012). Treating self-injury. New York, NY: Guilford.
- Walsh, B. W. (2012). Self-Injury: Psychotherapy with People Who Self-Harm. *Guilford Press*.
- WolffJ.C E. Thompson, S.A. Thomas, J. Nesi, A.H. Bettis, B. Ransford, K. Scopelliti, E.A. Frazier, R.T. Liu (2019). Emotion dysregulation and non-suicidal self-injury: a systematic review and meta-analysis *Eur. Psychiatry*, 59, pp. 25-36, 10.1016/j.eurpsy.2019.03.004
- Wolke D.(2017) Cyberbullying: how big a deal is it? *Lancet Child Adolesc Health*. 2017;1(1):2–3.
- Xavier A, Jose’ Pinto Gouveia, Marina Cunha. (2016). Non-suicidal Self-Injury in Adolescence: The Role of Shame, Self-Criticism and Fear of Self-Compassion. *Child Youth Care Forum* DOI 10.1007/s10566-016-9346-1
- Yates TM, Tracy Aj, Luthar SS: (2008). Nonsuicidal Self–Injury Among “privileged” youth: longitudinal and cross-sectional approaches to developmental proces. *J Consult Clin Psychol*: 76:52
- Yates TM, Tracy AJ, Luthar SS. (2008) Nonsuicidal self-injury among “privileged” youths: longitudinal and cross-sectional approaches to developmental process. *J Consult Clin Psychol*;76(1):52–62.
- You, J. J., & Leung, A. S. (2012). Non-suicidal self-injury and its relationship with emotion dysregulation among adolescents. *Journal of Adolescent Health*, 51(5), 511-518. <https://doi.org/10.1016/j.jadohealth.2012.02.004>
- Zanarini MC, Frankenburg FR, Hennen J, Reich DB, Silk KR. (2005) The McLean Study of Adult Development (MSAD): Overview and implications of the first six years of prospectivefollow-up.*J Pers Disord*.;19:505–523. doi: 10.1521/pedi.2005.19.5.505.

Zetterqvist, M., & Lundh, L. G. (2020). "Clinically significant self-injury: A systematic review of NSSI criteria and how they impact prevalence estimates in clinical and non-clinical samples." *Psychiatry Research*, 291, 113-267. <https://doi.org/10.1016/j.psychres.2020.113267>



APPENDICES

Appendix A

Complete Number of Responses Based on the Characteristics of NSSI

	No	Yes	How many times?	Have you gotten medical treatment? (Yes/ No)
1. cut or carved on your skin	92	34	13	3
2. hit yourself on purpose	18	81	52	2
3. pulled your hair out	77	35	34	3
4. gave yourself a tattoo	137	5	6	4
5. picked at a wound	58	56	34	3
6. burned your skin (i.e., with a cigarette, match or others hot object)	135	6	8	3
7. inserted objects under your nails or skin	117	18	12	4
8. bit yourself (e.g., your mouth or lip)	72	44	32	4
9. picked areas of your body to the point of drawing blood	93	36	18	2
10. scraped your skin	115	21	12	2
11. "erased" your skin	105	19	15	4

Appendix B

The Number of Responses on the Functions of NSSI

1 = Never

2 = Rarely

3 = Sometimes

4 = Often

No	Reasons	1	2	3	4	Total
1	to avoid school, work, or other activities	104	26	17	5	48
2	to relieve feeling “numb” or empty	62	28	38	24	90
3	to get attention	99	28	17	8	53
4	to feel something, even if it was pain	82	31	24	15	70
5	to avoid having to do something unpleasant you don’t want to do	88	29	26	9	64
6	to get control of a situation	67	40	28	17	85
7	to try to get a reaction from someone, even if its a negative reaction	106	27	11	8	46
8	to receive more attention from your parents or friends	102	25	17	8	50
9	to avoid being with people	102	24	13	13	50
10	to punish yourself	41	42	37	32	111
11	to get other people to act differently or change	127	16	6	3	25
12	to be like someone you respect	119	17	11	5	33
13	to avoid punishment or paying the consequences	115	23	7	7	37
14	to avoid punishment or paying the consequences	55	31	34	32	97
15	to stop bad feelings	115	17	13	7	37
16	to let others know how desperate you were	123	17	6	6	29
17	to feel more a part of a group	108	18	10	16	44
18	to get your parents to understand or notice you	86	24	26	16	66
19	to give yourself something to do when alone	120	20	4	8	32
20	to give yourself something to do when with others	126	14	6	6	26
21	to get help	47	30	47	28	105
22	to make others angry	41	47	32	32	111

	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)
To avoid school, work, or other activities	465 (84.2)	61 (11.1)	21 (3.8)	5 (0.9)
To relieve feeling “numb” or empty	420 (76.1)	51 (9.2)	56 (10.1)	25 (4.5)
To get attention	471 (85.3)	47 (8.5)	23 (4.2)	11 (2)
To feel something, even if it was pain	448 (81.2)	50 (9.1)	37 (6.7)	17 (3.1)
To avoid having to do something unpleasant you don’t want to do	459 (83.2)	51 (9.2)	30 (5.4)	12 (2.2)
To get control of a situation	431 (78.1)	65 (11.8)	36 (6.5)	20 (3.6)
To try to get a reaction from someone, even if its a negative reaction	482 (87.3)	40 (7.2)	19 (3.4)	11 (2)
To receive more attention from your parents or friends	480 (87)	37 (6.7)	25 (4.5)	10 (1.8)
To avoid being with people	477 (86.4)	43 (7.8)	17 (3.1)	15 (2.7)
To punish yourself	404 (73.2)	71 (12.9)	43 (7.8)	34 (6.2)
To get other people to act differently or change	498 (90.2)	32 (5.8)	15 (2.7)	7 (1.3)
To be like someone you respect	494 (89.5)	34 (6.2)	17 (3.1)	7 (1.3)
To avoid punishment or paying the consequences	495 (89.7)	37 (6.7)	13 (2.4)	7 (1.3)
To stop bad feelings	415 (75.2)	59 (10.7)	45 (8.2)	33 (6)
To let others know how desperate you were	494 (89.5)	31 (5.6)	18 (3.3)	9 (1.6)
To feel more a part of a group	502 (90.9)	34 (6.2)	9 (1.6)	7 (1.3)
To get your parents to understand or notice you	484 (87.7)	34 (6.2)	15 (2.7)	19 (3.4)
To give yourself something to do when alone	458 (83)	42 (7.6)	32 (5.8)	20 (3.6)
To give yourself something to do when with others	502 (90.9)	30 (5.4)	11 (2)	9 (1.6)
To get help	488 (88.4)	38 (6.9)	18 (3.3)	8 (1.4)
To make others angry	509 (92.2)	27 (4.9)	10 (1.8)	6 (1.1)
To feel relaxed	399 (72.3)	60 (10.9)	59 (10.7)	34 (6.2)

Table of sample size calculation

Sociodemographic factors	P1	P2	α	$Z_{1-\beta}$	Sample size (n)	Adjusted sample size
Sex	Female with NSSI 59.6 (0.596)	Male with NSSI 34.9 (0.349)	1.96	0.842	151	267
Ethnicity	Major population with NSSI 55.5(0.555)	Other than major population with NSSI 38.7 (0.387)	1.96	0.842	329	366
Socioeconomic status	High & moderate income with NSSI 52.4 (0.524)	Low Income with NSSI 43.4 (0.434)	1.96	0.842	252	280
Parental Status	Living with both parents 54.3 (0.543)	Living with single parent or non 45.8 (0.458)	1.96	0.842	542	970

**ETHICS COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS
(JKEUPM)
UNIVERSITI PUTRA MALAYSIA**

Research title	: Prevalence and Functions of Non-Suicidal Self Injury Among Students in Polytechnics in Kedah State.
Study Site	: Kedah.
JKEUPM Ref No.	: JKEUPM-2022-516
Principal Investigator	: Prof. Dr. Kulanthayan A/L K.C. Mani @ Subramanian
Co-investigator	: Dr. Norliza Binti Ahmad, Dr. Muhammad Hihatullah Bin Romli, Dr. Aishah Siddiqah Binti Alimuddin, Thangeswary A/P Annamallai (Student)

Documents received and reviewed with reference to the above study:

1. Ethics Application Form, Version 1 dated 14/07/2022
2. Respondent's Information Sheet / Consent (English), Version 1 dated 14/07/2022
3. Respondent's Information Sheet / Consent (English), Version 1 dated 14/07/2022
4. Respondent's Information Sheet & Guardian's / Parent's Consent (English), Version 1 dated 14/07/2022
5. Respondent's Information Sheet & Guardian's / Parent's Consent (Malay), Version 1 dated 14/07/2022
6. Proposal (English), Version 3 dated 19/09/2022
7. Questionnaire / Interviews (English), Version 1 dated 14/07/2022
8. Questionnaire / Interviews (Malay), Version 1 dated 14/07/2022
9. Curriculum Vitae of:
 - a. Prof. Dr. Kulanthayan A/L K.C. Mani @ Subramanian
 - b. Dr. Norliza Binti Ahmad
 - c. Dr. Muhammad Hihatullah Bin Romli
 - d. Dr. Aishah Siddiqah Binti Alimuddin
 - e. Thangeswary A/P Annamallai

The University Research Ethics Committee, Universiti Putra Malaysia (JKEUPM) operates in accordance to the ICH-GCP Guidelines.

Decision by JKEUPM:

- ☒ Approved
- ☒ **Permission MUST BE OBTAINED from the respective hospitals/ institutions before conducting the research**
- ☐ Disapproved

Please note that the approval is **VALID UNTIL 20 SEPTEMBER 2023**

Researchers should comply with the following:

- I. Complete a Study Final Report upon study completion (Form 3.2).

Section 1: Demographic

ARAHAN: Sila tandakan (✓) pada petak dan/atau isikan tempat kosong di bawah

Umur : ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22

Tahun Pengajian : ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Jantina : ☐ Lelaki ☐ Perempuan

Kursus : _____

Tinggal bersama : ☐ Ibubapa ☐ Ibu
: ☐ Bapa ☐ Nenek/Datuk
: ☐ Pakcik/ Makcik ☐ Lain-lain

Status perkahwinan : ☐ Berkahwin ☐ Ibu tunggal
Ibubapa : ☐ Bapa tunggal ☐ Berceraai
: ☐ Meinggal dunia ☐ Berkahwin dengan orang lain

Peringkat pelajaran Ibu : ☐ Rendah ☐ Menengah
: ☐ Diploma ☐ Sarjana/ Degree
: ☐ Masters/ PhD ☐ Tak pernah bersekolah

Peringkat pelajaran Bapa : ☐ Rendah ☐ Menengah
: ☐ Diploma ☐ Sarjana/ Degree
: ☐ Masters/ PhD ☐ Tak pernah bersekolah

Pendapatan sebulan (lebih kurang) : ☐ kurang 1500
: ☐ RM 1501 – RM 2500
: ☐ RM 2501 – RM 5000
: ☐ lebih dari RM 5000

Bilangan adik-beradik : ☐ kurang 3 ☐ 3-5
: ☐ 6 -8 ☐ Lebih 8

Section 2: Kelaziman & Fungsi

Pada tahun lalu, pernahkah anda bertingkah laku seperti berikut untuk mencederakan diri anda tanpa cuba untuk membunuh diri (tandakan semua yang berkenaan):

	Tidak	Ya	Berapa banyak kali?	Adakah anda mendapatkan rawatan perubatan? (Ya/ Tidak)
1. memotong atau menoreh kulit anda				
2. memukul diri sendiri dengan sengaja				
3. mencabut rambut anda				
4. mencacah tatu				
5. mengopek kulit/ kudis pada luka				
6. membakar kulit anda (menggunakan rokok, mancis atau objek panas lain)				
7. memasukkan objek di bawah kuku atau kulit anda				
8. menggigit diri sendiri (menggunakan mulut atau bibir anda)				
9. mengopek kulit pada mana-mana bahagian badan anda sehingga berdarah.				
10. mengikis kulit anda				
11. menyental/ mongores kulit anda				
12. lain-lain:				

B. Jika bukan berlaku pada tahun lepas, PERNAHKAH anda melakukan mana-mana perbuatan di atas?

_____ Ya

_____ Tidak

Jika jawapannya Ya bagi mana-mana tingkah laku di atas yang dilakukan pada tahun lalu, sila lengkapkan soalan (C-G) di bawah:

C. Berapa lamakah anda berfikir untuk melakukan perbuatan di atas sebelum benar-benar melakukannya?

_____ tiada

_____ "beberapa minit"

_____ < 60 minit

_____ > 1 jam tetapi < dari 24 jam

_____ lebih dari 1 hari tetapi kurang dari seminggu.

_____ lebih dari satu minggu

D. Adakah anda melakukan mana-mana tingkah laku di atas semasa mengambil dadah atau alkohol?

_____ Ya

_____ Tidak

E. Adakah anda pernah merasai kesakitan semasa mencederakan diri sendiri?

- _____ kesakitan yang teruk
 _____ kesakitan sederhana
 _____ sedikit kesakitan
 _____ tiada kesakitan

F. Berapakah umur anda semasa pertama kali mencederakan diri anda dengan cara ini?

G. Adakah anda mencederakan diri sendiri atas mana-mana alasan yang disenaraikan di bawah? (semak semua alasan yang berkenaan):

- 0 Tidak pernah**
1 Jarang
2 Beberapa
3 Kerap

No	Alasan	Kadaran			
		0	1	2	3
1	untuk mengelak pergi ke sekolah, kerja atau aktiviti lain				
2	untuk melegakan perasaan 'kaku' atau kekosongan				
3	untuk mendapatkan perhatian				
4	untuk rasa sesuatu, walaupun ia menyakitkan				
5	untuk mengelak daripada melakukan sesuatu yang tidak menyenangkan yang tidak mahu anda lakukan.				
6	untuk mengawal situasi.				
7	untuk mendapatkan reaksi daripada seseorang walaupun reaksi itu negatif				
8	untuk mendapatkan lebih perhatian daripada ibu bapa dan rakan - rakan anda.				
9	untuk mengelak daripada bersama-sama orang lain				
10	untuk menghukum diri sendiri				
11	untuk membuat orang lain bertindak secara berbeza atau berubah				
12	untuk menjadi seperti seseorang yang anda hormati				
13	untuk mengelak daripada dikenakan hukuman atau menerima padahnya				
14	untuk menghentikan perasaan buruk				
15	untuk memberitahu orang lain betapa terdesaknya anda				
16	untuk berasakan anda sebahagian daripada kumpulan				
17	untuk membuatkan ibu bapa memahami dan menyedari anda				

18	untuk membolehkan anda melakukan sesuatu ketika bersendirian				
19	untuk membolehkan anda melakukan sesuatu apabila bersama orang lain				
20	untuk mendapatkan pertolongan				
21	untuk membuat orang lain marah				

Terima kasih / Thank you



Section 1: Demographic

INSTRUCTION: Please mark (✓) on the box and/or fill in the blanks below.

Age : ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22

Year of study : ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Gender : ☐ Male ☐ Female

Course : _____

Staying with : ☐ Parents ☐ Mother
: ☐ Father ☐ Grandparents
: ☐ Uncle/ Aunty ☐ Others

Parents marital status : ☐ Married ☐ Single Mother
: ☐ Single Father ☐ Divorced
: ☐ Passed away ☐ Married to others

Mother's education level : ☐ Primary ☐ Secondary
: ☐ Diploma ☐ Degree
: ☐ Masters/ PhD ☐ Never went to school

Father's education level : ☐ Primary ☐ Secondary
: ☐ Diploma ☐ Degree
: ☐ Masters/ PhD ☐ Never went to school

Family Monthly income (approximate value) : ☐ less than 1500
: ☐ RM 1501 – RM 2500
: ☐ RM 2501 – RM 5000
: ☐ More than RM 5000

Number of siblings (approximate value) ☐ less than 3 ☐ 3-5
☐ 6 -8 ☐ More than 8

Section 2: Past Experience / Prevalence and Functions

A. In the past year, have you engaged in the following behaviors to deliberately harm yourself without trying to kill yourself (check all that apply):

	No	Yes	How many times?	Have you gotten medical treatment? (Yes/ No)
1. cut or carved on your skin				
2. hit yourself on purpose				
3. pulled your hair out				
4. gave yourself a tattoo				
5. picked at a wound				
6. burned your skin (i.e., with a cigarette, match or others hot object)				
7. inserted objects under your nails or skin				
8. bit yourself (e.g., your mouth or lip)				
9. picked areas of your body to the point of drawing blood				
10. scraped your skin				
11. "erased" your skin				
12. other:				

B. If not in the past year, have you EVER done any of the above acts?

_____ Yes

_____ No

If yes to any of the above behaviors in the past year, please complete the questions (C-G) below:

C. How long did you think about doing the above act(s) before actually doing it?

_____ none

_____ "a few minutes"

_____ < 60 minutes

_____ > 1 hour but < 24 hours

_____ more than 1 day but less than a week

_____ greater than a week

D. Did you perform any of the above behaviors while you were taking drugs or alcohol?

_____ Yes

_____ No

E. Did you experience pain during this self-harm?

- _____ severe pain
_____ moderate pain
_____ little pain
_____ no pain

F. How old were you when you first harmed yourself in this way? _____

G. Did you harm yourself for any of the reasons listed below? (check all reasons that apply):

- 0** **Never**
1 **Rarely**
2 **Some**
3 **Often**

No	Reasons	Rating			
		0	1	2	3
1	1. to avoid school, work, or other activities				
2	2. to relieve feeling “numb” or empty				
3	3. to get attention				
4	4. to feel something, even if it was pain				
5	5. to avoid having to do something unpleasant you don’t want to do				
6	6. to get control of a situation				
7	7. to try to get a reaction from someone, even if its a negative reaction				
8	8. to receive more attention from your parents or friends				
9	9. to avoid being with people				
10	10. to punish yourself				
11	11. to get other people to act differently or change				
12	12. to be like someone you respect				
13	13. to avoid punishment or paying the consequences				
14	13. to avoid punishment or paying the consequences				
15	14. to stop bad feelings				
16	15. to let others know how desperate you were				
17	16. to feel more a part of a group				
18	17. to get your parents to understand or notice you				
19	18. to give yourself something to do when alone				
20	19. to give yourself something to do when with others				
21	20. to get help				
22	21. to make others angry				

Thank you

PUBLICATION

Sociodemographic Factors of Non-Suicidal Self Injury Among Young Adults of Higher Institutions In Kedah. International Journal of Public Health and Clinical Sciences e-ISSN : 2289-7577. Vol 11/No. 5 September/October 2024

