

# **CAUSES & CONSEQUENCES OF SUICIDAL BEHAVIOUR AMONG TEENAGERS IN MAURITIUS**



**CENTRE FOR APPLIED SOCIAL RESEARCH  
(CASR)**

**A Centre of**

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**MAURITIUS RESEARCH COUNCIL**

## **PREFACE**

The Mauritius Research Council through its Centre for Applied Social Research (CASR) was solicited by the Ministry of Social Security, National Solidarity and Reform Institutions to conduct this much-warranted investigation on the causes and consequences of teenage suicidal behaviour.

In line with its multidisciplinary mandate, including its continued appreciation of the need to keep abreast an understanding of on-going societal dynamics, the MRC was pleased to take this study on board and add to its long portfolio of social research projects whose findings have been instrumental to policy-makers in a wide range of areas.

I would like to thank the Ministry of Social Security, National Solidarity and Reform Institutions for entrusting us with this study. My thanks also go to the steering committee members for their precious inputs at all stages in this study. My gratitude also goes to the numerous participants in the study who have generously given us their time and shared their precious insights and experiences with the study team. Last but not least, I also thank my team at CASR and our resource persons including the psychologists recruited to conduct the interviews, for implementing this project with high methodological and ethical standards.

The findings and policy implications of this study will no doubt be useful to decision makers in combatting the phenomenon of teenage suicidal behaviour.



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## EXECUTIVE SUMMARY

This study on the causes and consequences of suicidal behaviour among teenagers in Mauritius has been solicited by the Ministry of Social Security, National Solidarity and Reform Institutions and entrusted to the Centre for Applied Social Research (CASR) of the Mauritius Research Council (MRC). The primary data collection process for the study was carried out over period May 2014 to February 2015. The overarching objectives of this study were to determine the causes of suicide and attempted suicide among teenagers as well as to explore the consequences of suicidal behaviour on family and friends of attempters and completers of suicide.

The need for such a study stems from an ever-increasing concern with trends in terms of actual and attempted suicides locally, more particularly among teenagers. The phenomena of suicide and suicidal behaviour are global public health concerns, across developed and developing countries alike, and certainly not confined to Mauritius alone. The study aimed to fill a gap thus far in terms of the limited scientific data, particularly from a sociological perspective on what are the causal factors attributed to the phenomenon of teenage suicide as well as what the consequences of these acts are for the family and friends of suicide victims or the survivors of suicide attempts. Likewise, scant academic attention has been hitherto given to questions such as whether there are more specific trends and patterns in teenage suicidal behaviour in the local context at present. In fact, it is precisely in this context that this research study has been commissioned and it is anticipated that its findings will be of utmost importance for policy-makers to use in the fight against this phenomenon.

## **Methodological Approach and design**

In terms of the methodological approach and design of the study, this study adopted a mixed-methods approach and was conducted over two main phases to meet its objectives. In particular, it has relied on an essentially qualitative data set based on a multiple case study design constructed from semi-directive interviews with 30 teenagers (including 20 girls and 10 boys) who have attempted suicide during the reference period earmarked for the study 2011 and 2013. Moreover, it has also involved 10 retrospective case studies of completed suicides from the perspective of close relatives of deceased. All the interviews were administered by trained psychologists and within strict observation of ethical and technical procedures required of such studies. In addition, this phase of the study has also been complemented with other research techniques including key informant interviews and Focus Group Discussions with relevant stakeholders.

A distinct but related aspect of this study involved a quantitative phase which consisted of a pilot run of a survey questionnaire a sample of secondary school students from Form III to Upper VI. The main objective of this aspect of the study was to identify the extent to which secondary school students are exposed to, or are engaged in risky behaviours at the level of the school, as well as their knowledge, attitudes and practices related to risky behaviours, including but not limited to suicidal behaviour. Fifty students from each of three secondary schools, randomly identified by the Ministry of Education (1 Boys only; 1 Girls only and 1 Mixed school) took part in the survey (actual n=131) In accordance with the terms of reference of this study, this survey was designed to be a small-scale pilot survey conducted prior to potentially engaging in a nationwide survey.

## **Case study Findings**

The main findings of the qualitative phase of the study highlight the main causes and consequences which emerged first-hand from the interviews with teenagers who have attempted suicide. The findings are complemented with retrospective accounts of suicide

victims from close relatives. It is clear that across the interviews, it is generally clusters of factors rather than clear-cut singular factors, that tend to compound the individual's inability to cope thereby prompting depression and suicidal behaviour. The main causes identified from the interviews involve the following often intersecting factors:

(a) Conflicts or inadequacies in the participant-parental relationship (difficult communication between parent and teen, dysfunctional families and history of abuse, inability of the family to stabilise teenage personality), at times further compounded with material deprivation and which bring up issues of hopelessness, burdensomeness or thwarted belongingness, appears to be the leading cause among the cases interviewed.

(b) Intimate relationship problems including rejection, teen dating violence and family objections are also a prominent cause of suicidal behaviour among both boys and girls alike.

(c) Adverse peer pressure particularly at the level of school, including the impacts of emotional bullying but also getting caught in a downward spiral of deviant behaviour, including problems with authority, substance abuse, poor educational attainment etc... which also bring about a sense of low self-esteem and hopelessness for the future.

(d) Another important cluster of related factors - which may be both cause and effect of suicidal behaviour given its cyclical nature - involves psychiatric disorders including a vicious cycle of depression including self-focus and self-blame, depressed mood, cognitive and behavioural consequences and negative experiences. These severely restrict problem-solving and coping strategies of the individual.

The qualitative interviews also revealed some gender differences in the methods used to commit the act. Boys were more likely to use hanging, while the method of choice for girls was predominantly ingestion of chemicals and noxious substances. Another important gender imbalance in the sample is the over-representation of girls in the number of suicide attempts. These results corroborate with literature on suicidal behaviour.

The consequences of suicidal behaviour differ depending on whether the suicide act has resulted in death or not. In cases of suicide attempts, it was found that victims are left with physical damage, whose extent was dependent on factors which include how serious the intent was and the method used. Moreover, it was noted that following a suicide attempt, victims suffer from acute trauma and since their mental health impairment is further amplified, a relapse is possible. Evidently, the need for both emotional and psychological support is crucial after such an event. An interesting finding is that a number of suicide attempters have reported experiencing a wake-up call and having no intention to die or reciprocate following their attempt. They also report that their relationships with their kins have improved significantly after their attempt. Moreover, those who have reported peer pressure as a cause for their attempt, have revealed to have taken distance from their peers following their attempt.

The aftermath of completed suicides can be particularly devastating for relatives left behind. Our findings revealed that in cases of completed suicide, the main consequences on family members include an intense feeling of despair and guilt experienced, which has led in some cases to shattered families. This can, in turn, give rise to serious psychological problems, including depression and post-traumatic stress disorder. It is, therefore, unequivocal that psychological help be provided as a natural recourse to close family of suicide victims, especially parents and siblings, after such an event. At this stage, there is a clear gap in intervention in this area.

### **Pilot Survey Findings**

Based on the results of the pilot survey, it is clear that the phenomenon of suicidal behaviour is indeed a source of concern at the level of secondary schools given that a non-negligible percentage of students admitted to have had suicidal ideation or attempted to commit suicide. As high as 13% of the students surveyed in this study have at least once thought of committing suicide. It is also interesting to note that girls are nearly twice as many as boys

in terms of having ever thought of committing suicide. The survey also reveals that a total of 4 students out of the 131 surveyed have affirmed having ever made a suicide attempt.

The thought of harming oneself intentionally is a possible precursor to suicidal ideation. Another revealing finding of the survey is that slightly above 15% of the sample have had such thoughts. An analysis of this response by gender of respondents indicates that slightly more boys (55%) than girls (45%) have ever thought of hurting themselves intentionally. It is also a matter of concern that even in lower Forms such as Forms III and IV, there are on aggregate 6 out of the 20 students who have had such thoughts. Moreover, it is widely acknowledged that thinking about harming oneself does not necessarily lead to the act of intentionally harming oneself. Thus, 8 students compared to the initial of 20 students have actually done so. These findings show that there is need for intervention from relevant stakeholders to address this concern.

Reasons provided first-hand by the students as to why they have thought of or indeed hurt themselves tend to cluster around issues such as adolescent turmoil, existential issues, conflicts with parents, victimisation by peers and also relationship difficulties which potentially lead to problems of belongingness, burdensomeness and possibly even depression which tend to corroborate the case study findings.

The study also sought to explore the level of knowledge, conceptions or misconceptions, as well as attitudes with respect to the phenomenon of suicide. Findings show that there is room for further sensitisation and education of students about this phenomenon, although there also seem to be some misconceptions and possibly an undercurrent of apprehension to the idea that talking about suicide in schools may not be favourable.

As part of this survey, other risky behaviours of teenagers were also assessed. Once again it is noted that there are certain bleaker sides to the process of adolescence and schooling

which warrant attention from all quarters. For instance, aside from alcohol and cigarette consumption, a minority of students, more specifically boys, have indicated that they have engaged in drug consumption. The percentage of respondents who currently consume alcohol, smoke cigarettes and consume drugs are 20%, 17.1% and 4.6% respectively with the majority being boys.

Another area of concern which this study has uncovered pertains to the presence of different forms of bullying at school. It is worthwhile to note that 29% of students have reported having ever been victims of physical abuse, 48.9% of students have reported having ever being a victim of verbal abuse, 29% of respondents have reported ever being a victim of victimised social bullying (excluded from a group, made to look dumb, gossiped about, rumoured about) and 19% of respondents have reported electronic forms of bullying i.e. harassed by mail or on social networking sites.

Another important finding, which is a source of concern, pertains to forms of physical and sexual abuse which some respondents have argued they have been victims of at the level of the domestic arena. While for the grand majority, such forms of abuse are not a concern, a single case of abuse is one too many. As such, more particularly in the case of sexual abuse, it is a matter of serious concern that no less than 6 students out of the 131 surveyed have been victims of sexual abuse.

Sexual orientation has been a debated risk factor of suicidality in adolescents. The findings reveal that the majority are heterosexual individuals, as expected. For females, 17% report having bisexual tendencies, 5% lesbian tendencies and 12% are unsure of their sexual orientation. As for males, 8% of the male respondents claim to have a preference for males, 5% claim to be attracted to both sexes and 6% are unsure about their sexual orientation. Although 15.3% of the sample having a normal sexual orientation also report harm ideation, it is also interesting to note that those having alternative sexual orientations seem to have

‘ever thought of harming themselves intentionally’. Another noteworthy point is that an analysis of sexual orientation and emotional health status reveals that those who report gay tendencies seem to have a disproportionately ‘poor’ emotional health status.

It is also worth noting that somewhat in line with the afore-mentioned findings, there is a majority (of slightly above 80%) who consider that their future ranges from good to very good, there are others who as from this tender age feel that they are either uncertain or not quite optimistic about their future. But worse, some 5.3% of the students are rather pessimistic about their future.

In many ways these findings both supplement and complement the findings from the qualitative phase of the study. It has given an indicative picture of the prevalence of suicidal behaviour at the level of those three secondary schools and has highlighted certain forms of abuse and practices which take place at the school level. There is strong suspicion that this phenomenon of teenage suicidal behaviour can be much more prevalent among school population than this study reveals. However, from our findings, it is clear that the picture which emerges is one which invites concerted action. The next step would be to expand the study into a comprehensive nation-wide survey.

### **Recommendations/Pointers towards intervention**

From the main findings which emerge from this study, there are some policy implications which can be inferred to ensure effective suicide prevention at all levels. One preventive strategy is the adoption of a multi-sectoral approach that allows stakeholders in the education, family, health, social welfare, youth and gender sectors, among others, to share practices and collaborate. In practice this could take the form of a National Platform or Longstanding Committee with all relevant stakeholders to coordinate and work in concert to address this phenomenon and its variants. In particular cases where there is possibility of contagion at the level of schools, there may be a need to adopt a predefined protocol for containment purposes.



There is a need to reinforce existing institutional support infrastructures around suicide prevention in Mauritius given that Life Plus and NGOs working in this area are under-resourced to combat this phenomenon.

Also given the prominence of adverse family dynamics and conflict with parents as an important element in the causal explanations for teenage suicide, there is a dire need for wider educational and communication campaigns about parenting skills, as well as to sensitise and empower parents about the handling of teenagers with coping difficulties.

Adequate training of gate keepers namely youth club/community leaders, teachers, school personnel, school/regional psychologists is another recommended preventive strategy. Training should also be extended to health and social workers to recognise external signs of suicidal ideation. There is a need to empower teenagers with the coping and communication skills required when faced with situations which could lead to stressful, depressive and anxious states such as parental divorce, bullying, suicide or unforeseen death of family members, peers, etc. Close monitoring and support provided to teenagers who have attempted suicide/parasuicide by peers and gatekeepers alike is crucial for effective suicide prevention.

Stigmatisation instigates a feeling of shame which is experienced by both suicide victims, family of victims and further prevents the measurement of the problem by those in charge of treatment and prevention. This in turn, is likely to reduce the effectiveness of policies and programmes on suicide. Given that suicide is still taboo in Mauritius and suicide victims and survivors are highly stigmatised, another recommended strategy would be to launch a national campaign to demystify the causes of suicide, tackle stigma and raise awareness on

services available. Moreover, vulnerable groups at the population level, community (neighbourhood, family, school) and individual level should be primarily targeted.

The creation of a centralised data collection system, which makes use of ethical considerations, is essential to effectively monitor the extent of suicide and teenage suicide and ensure proper suicide prevention. This will ensure that resources are not wasted and efforts not duplicated.

In terms of suicide reporting, this study has shown that more ethical reporting of suicide in the papers, as per WHO guidelines, is necessary. It is recommended that proper training support be provided to media professionals in terms of reporting on suicide cases.

A final recommendation is to upscale this present study to a nationwide survey in order to validate the current findings. Moreover, as it is notorious in the victimisation literature that what comes to official attention may only be the tip of the iceberg, there is room to argue that there is a need for more regular nationwide studies in order to ascertain the prevalence, as well as to monitor and evaluate this phenomenon at the level of secondary schools.

# CHAPTER ONE - INTRODUCTION

## 1.0 Background

This study on the causes and consequences of suicidal behaviour among teenagers in Mauritius has been solicited by the Ministry of Social Security, National Solidarity and Reform Institutions and entrusted to the Centre for Applied Social Research of the Mauritius Research Council. The implementation of the study has been carried out over period May 2013 to April 2015. The need for such a study stems from an ever-increasing concern with recent trends in terms of cases of suicide and attempted suicides in general but more particularly among teenagers.

The phenomena of suicide and suicidal behaviour are public health concerns globally, across developed and developing countries alike (Wasserman, Cheng & Jiang, 2005) and certainly do not pertain only to Mauritius. Yet it is unequivocal that each and every case of suicide or attempted suicide is a case too many.

In the last 45 years, suicide rates have increased by 60% worldwide and suicide is now among the three leading causes of death among those aged between 15 and 44 years old, both male and female (Buglow, 2012). According to the World Health Organisation (WHO), official cases of suicide in the world amounted to 782, 000 in the year 2008 (Värnik, 2012). Researchers estimate that each year approximately one million people die from suicide, which represents a global mortality rate of 16 people per 100,000 or one death every 40 seconds and it is predicted that by 2020 the rate of death will increase to one every 20 seconds (Buglow, 2012). One million suicide deaths in the world per year is an alarming figure that gives a clear indication about the magnitude of the phenomenon.

One significant dimension of this problem concerns an escalation of youth suicide (Wasserman, Cheng & Jiang, 2005; National Center for Injury Prevention and Control CDC, 2010). Indeed, suicide among young people continue to be a serious problem since it is “the third leading cause of death for 15-to-24-year-olds, and the sixth leading cause of death for 5-to-14-year-olds” (Cohen, 2007), following unintentional injuries and homicide. Teen suicide statistics for youths 15-19 years of age indicate that from 1950-1990, the frequency of suicides increased by 300% (Dryden-Edwards, 2011). A far greater number of youths attempt suicide each year. Suicide attempts are difficult to count because many may not be treated in a hospital or may not be recorded as self-inflicted injury.

It is widely accepted that teenage suicide is a devastating trauma for the surviving family and the lack of sustainable explanations for the suicide is a predominant issue in the grief process (Lindqvist *et al.*, 2008). There are various possible explanations for the rising suicide trends among teenagers. Indeed for some teens, suicide may appear to be a solution to their problems and stress (Caruso, 2007). Apart from the normal pressures of teen life, specific circumstances can contribute to an adolescent's consideration of suicide. According to (Wasserman, Cheng & Jiang, 2005), it is especially difficult when adolescents are confronted with problems that are out of their control such as loss of social cohesion, breakdown of traditional family structure, growing economic instability and unemployment and rising prevalence of depressive disorders.

The consequences of suicide and suicidal behaviour are not the same in all cases and can be broadly categorised into different aspects namely on the individual himself or herself, on their family as well as the wider community.

The vast majority of people who attempt suicide do not actually die by suicide and most of them are often left in bad shape (Caruso, 2007). Indeed, serious injury can occur from a suicide attempt. People have been known, not only to break bones, but to suffer serious

injuries to their brain or other organs or become paralysed. Fear of this happening has made some people think twice about the attempt (World Federation for Mental Health, 2009).

The effects of suicidal behaviour or completed suicide on friends and family members are often devastating (Dryden-Edwards, 2011). Shock and disbelief are common in the early stages following a loved one's suicide. Naturally, most survivors experience a sense of numbness and disbelief (Lopez, 2011). In fact, the aftermath of teenage suicide is the beginning of a painful journey of intense and complex grief for family, friends, classmates, the neighbourhood, and the school community (Lopez, 2011). According to the Canadian Mental Health Association, it takes time to heal the grief after a loved one's suicide and the family members and friends may need help to cope with the changes in their lives. Symptoms of grief that may be experienced by suicide survivors include intense emotion and longings for the deceased, severely intrusive thoughts about the lost loved one, extreme feelings of isolation and emptiness, avoiding doing things that bring back memories of the departed, new or worsened sleeping problems, and having no interest in activities that the sufferer used to enjoy (Dryden-Edwards, 2011).

According to the American academy of experts in traumatic stress, impact of suicide not only affects a family but it rocks the community-at-large. Moreover, suicide has a dramatic impact on the workplace in both human and financial terms, whether it is an employee, family member or friend. A study carried out by Research America (2009) showed that for each suicide prevented, the United States could save an average of \$1,182,559 in medical expenses (\$3,875) and lost productivity (\$1,178,684).

### **Teenage Suicidal Behaviour in Mauritius**

In Mauritius, the rate of suicide among adolescents is a matter of concern (Gheeseewonee, 2012). For the years of 2012, 2013 and 2014, the number of **completed** teenage suicide (13-19 years) recorded by the Ministry of Health and Quality of Life are 11 cases (5 for males and 6 for females), 14 cases (7 for both males and females) and 11 cases (8 for males and 3 for

females) respectively as opposed to a total of 8 cases in 2011(Government Information Service, 2012).

It is nonetheless important to note that there is a widespread concern that the number of **attempted** suicides has been increasing consistently over the same period. For instance, according to available official figures, 90 cases of suicide attempts have been recorded among teenagers in 2011. However, figures from the Ministry of Health and Quality of Life, from 2012 and 2013, indicate that these attempts involve 271 cases and 263 cases respectively. It is also noteworthy that in these attempts, there is a clear gender imbalance with girls systematically being over-representative of such cases.

There is so far limited scientific data, particularly from a sociological perspective on what are the causal factors attributed to the phenomenon of teenage suicide as well as what the consequences of these acts are for the significant others of suicide victims or the survivors of suicide attempts. Also, little is known about how far the common causes of teenage suicide as seen elsewhere are pertinent to contemporary Mauritius. Scant academic attention has been hitherto given to questions such as whether there are more specific trends and patterns in teenage suicidal behaviour in the local context at present. In fact, it is precisely in this context that this research study has been commissioned and it is anticipated that its findings will be of utmost importance for policy-makers to use in the war against this phenomenon.

Thus, far in Mauritius, two studies on suicide have been carried out and date back to 1997 and 2005 respectively, with different terms of reference and scope to this proposed study. Nonetheless, what can be retained from those studies is that when they touched upon the reasons why teenagers commit suicide they found multiple causes. The findings of the study published in the year 1997 were that 76% of teenage suicides were diagnosed with depressive disorders and anxiety state with panic reaction and 12% of adolescent suicide suffered from personality disorder. It was also found in this study that 14% of suicide

victims had experienced suicide in their family members or friends. Besides, poor familial support, parents who have themselves been abused as children, illness leading to incapacity of one or both parents, and lack of close and intimate relationship with parents have been found to be high risk factors.

Several other causes of teenage suicide have been observed in the second study namely; youth unemployment, adolescent victims of physical and sexual abuse, conflicts of parents with the law and physical disability of the teenagers. In addition, failure in examination and the feeling of being despised by friends and blood relations can also lead to teenage suicide.

There were also some causes of teenage suicide which are present in both studies including the separation of parents, divorce leading to break up of family, intimate relationships with partners against parental wishes, loss of intimate partner or close relative in the family, alcoholism and frequent quarrels in the family.

Given the ever-changing nature of adolescent behaviour which is itself prone to fast-evolving contexts with an acceleration of the exposure to globalisation processes including ICTs, mass media and their impacts upon mindset and behaviour of teens in particular, and given the need to pinpoint in a more specific manner at the key causes or clusters of causes which lead to teenage suicidal behaviour, this study is, therefore, warranted and can potentially inform more precise policy intervention in addressing this problem.

## **1.1 Aims and objectives of the study**

Set against the above background therefore, this study aims to elicit the causes of suicide and attempted suicide among teenagers as well as to explore its consequences on family and friends of victims/survivors of attempted suicide. A rigorous and systematic investigation for a better understanding of the causes and consequences of teenage suicide will be

instrumental in informing policy making and point towards precise initiatives that can address this public health issue.

In order to address the broad objectives mentioned above, this study will address more specifically the following related research objectives with the overall intention to contribute by way of systematic evidence towards measures to address suicide and suicidal behaviour among teenagers.

- Identification of the causal factors/clusters of factors which have motivated suicidal behaviour among victims/survivors of attempted suicide.
- Identification of patterns (e.g. in terms of methods used to commit suicide, behavioural change, etc...).
- Investigate if there is a characteristic profile of teenage victims of suicide and teenage survivors of attempted suicide.
- Explore and examine the consequences of suicide/ attempted suicide on significant others of the victims particularly immediate family.
- Review of the institutional support services available to address teenage suicide.

## **1.2 Conceptual Approach**

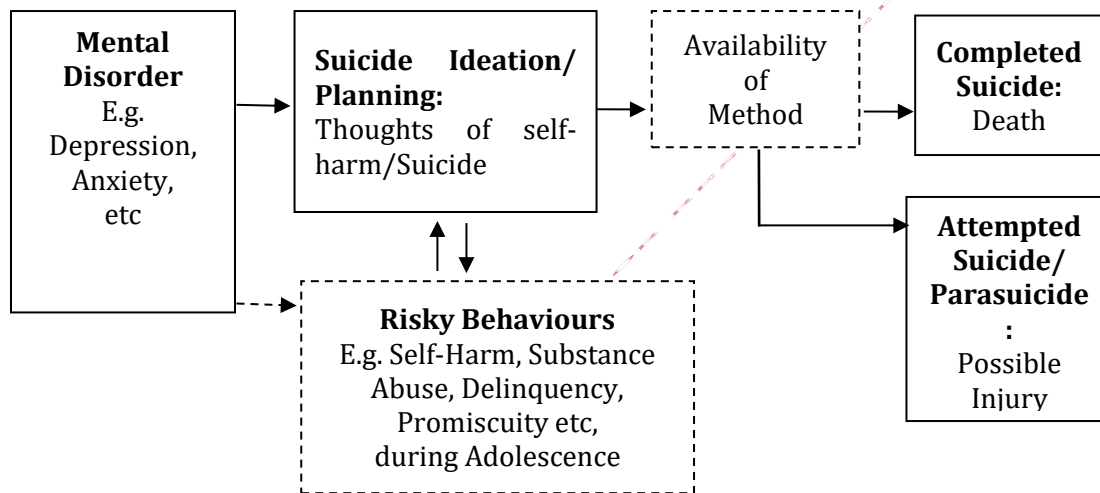
For conceptual clarity, it is useful to lay out the operational definitions and uses made of the terms suicide, attempted suicide and suicidal behaviour in this study. At its most basic, the word suicide is derived from two latin words: “sui” (of oneself) and “cidium” (killing) and can thus be defined as the deliberate killing of oneself.

Suicide is consequently defined by the Centre for Disease Control (CDC) as: “Death caused by self-directed injurious behaviour with any intent to die as a result of the behaviour” (CDC,



2013). However, as seen in the literature, suicide is the endpoint of something bigger referred to as “suicidal behaviour” which also encompasses “mental disorders”, “suicide ideation/planning” and “attempted suicide/parasuicide”.

For conceptual clarity, this study borrows from Miller (2010), to use ‘suicidal behaviour’ in terms of the occurrence of four separate but frequently overlapping conditions that exist on a continuum: suicidal ideation, suicide related communications, suicide attempts and suicide (Figure 1).



*Figure 1: Suicidal behaviour – a simplified view*

The links between the concepts encountered in the literature under the umbrella term “suicidal behaviour” are illustrated in Figure 1: which also shows how the concept is adopted in the present study.

The term mental disorder, as used here, is only a generic term used to refer to both psychological and psychiatric disorders.

**'Attempted suicide'** is defined in an expansive manner to refer to any intentional and potentially lethal effort to complete suicide (See e.g. Segen's medical dictionary). Rather similarly, the CDC defines a **suicide attempt** as "a non-fatal self-directed potentially injurious behaviour with any intent to die as a result of the behaviour. A suicide attempt may or may not result in injury" (Center for Disease Control, 2013). A suicide attempt accordingly should possess the following: self-inflicted harm, presence of the intent to die and a non-fatal outcome.

It is useful to distinguish a suicide attempt on the one hand with the concept of **'parasuicide'**, on the other hand. **Parasuicide** is defined by Welch (2001) as "deliberate self-harm and suicide attempts with no intention to die" which usually aims to attract attention. Although the non-fatal outcome is usually the same i.e.: medical care, parasuicide is difficult to clearly delineate from attempted suicide which often results in statistics gluing both behaviours together.

**Suicidal ideation** is seen by Response Ability (Commonwealth of Australia, 2005) as "having thoughts about suicidal acts which can encompass a range of degrees of intent and detail in regard to those thoughts" and may include plans.

On the other hand, **self-harm**, which is part of problem or **"risky behaviours"** in teenagers is believed to be one of the most important predictors of suicide among young people according to Moran *et al.* (2011), refers to the "deliberate self-infliction of damage to body tissue" via self-mutilation or ingesting toxic substances. It may or may not include suicidal intent but is believed to be a mainly adolescent phenomenon according to Hagell, Coleman & Brooks (2013).

### 1.3 Methodological Approach and Design of the Study

Recent remarks about why suicide remains without an adequate or accepted general theory, that incorporates multiple disciplines and perspectives, have pinpointed the over-reliance on quantitative approaches to study the phenomenon which limits an understanding of the complexity of suicide.

Many suicide scholars now argue for the use of mixed methods for suicide research. Mixed methods will expand knowledge of suicide by integrating theory-based variables and subjectivity as objects of inquiry. Mixed methods including qualitative components associated with interpretive research techniques (Interviews/Focus Group Discussions/Case Studies) combined with more quantitative components (survey research) as well as secondary sources of data (official statistics/administrative data, etc...) will allow for a broadening of research questions, more substantive understanding, and are necessary for a multidimensional and multidisciplinary understanding of suicidal behaviour.

This study seeks to proceed in this direction by adopting a mixed approach to meet the above-mentioned objectives and proposes to carry out the following primary and secondary research work. It is also worthy of note that for this study, the reference age group will involve specifically the 12-19 years old.

- 10 retrospective case studies of suicide victims (over period 2011-2013) – using lightly-structured interviews of families and friends administered by trained psychologists.

- 30 case studies of victims of attempted suicide (over period 2011-2013) including 20 girls and 10 boys administered by trained psychologists using lightly-structured interview schedules.
- Pilot survey<sup>1</sup> of risky behaviour and more particularly suicidal ideation and behaviour at school level. (3 schools- boys only/girls only/mixed).
- Map and Review of institutional support to address suicidal behaviour through one-to-one interviews and FGDs with key informants/policy makers and use of secondary sources of data.

In addition to the above sources of primary data, this study also seeks to undertake a review of existing programmes and good practices in addressing suicidal behaviour among teenagers in other countries in order to propose solutions which can be of use to address this phenomenon in the country.

Further elaboration and justification for the design of the study and the research techniques adopted as well as participant selection and ethical considerations are provided in Chapter Four.

## **1.4 Report Structure**

After this introductory chapter, the next chapter provides an empirical background about the trends in suicide and suicidal behaviour globally with a focus on teenagers. It then unfolds to provide a brief review of the literature on the causes and consequences of this phenomenon with emphasis on the sociological literature pertaining to the above. As mentioned earlier, while it is widely acknowledged that the study of suicide is by no means the province of a single discipline but instead it also draws from other social and natural

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<sup>1</sup> Survey (e. g.: using similar methodology as adopted in the UK Office for National Statistics) to gauge deliberate self-harm and suicidal thinking in adolescents) that can be piloted and developed further to become a regular monitoring instrument based at school-level which can be part of the national strategy to combat suicide.

sciences, the present study has been designed and implemented mainly albeit not exclusively along sociological lines.

Chapter Three locates the phenomenon of suicide and suicidal behaviour in the local context by providing findings of a desk research of its trends over the last few years, as well as from a comparative perspective. It also provides a review of available data and official reports on this issue in Mauritius. This chapter serves as an empirical background to the research questions raised and addressed in this study.

Chapter Four elaborates on the methodological approach and design of the study. It explains and justifies the adoption of the case-study method using a lightly structured interview schedule administered by trained psychologists as well as the selection procedures for the study participants. It also provides methodological details about the design and implementation of the pilot survey at the level of 3 secondary schools. Ethical and practical considerations in the implementation of these research methods are also explained.

Chapter Five provides the main findings of the qualitative phase of the study. It brings together the findings of the interviews with teenagers who have attempted suicide and those with relatives of those who have committed suicide. These findings are organised thematically and guided by the study objectives. In a nutshell they highlight the main causes and consequences which emerge first-hand from the interviews with teenagers who have attempted suicide and complemented with retrospective accounts of suicide victims from close relatives. While it is clear that across the interviews, rather than clear-cut singular factors, it is generally clusters of factors which tend to compound the individual's inability to cope thereby prompting depression and suicidal behaviour, there are nevertheless clear indications that point towards inadequacies within the participants' immediate families as causal agents (dysfunctional families, difficult communication between parent and teen,

inability of the family to stabilize teenage personality), intimate relationships problems as well as peer pressure.

Chapter Six provides the main findings of the pilot survey administered to a sample of 131 students in 3 secondary schools. It reveals that the phenomenon of suicidal behaviour is indeed a source of concern at the level of secondary schools given that a non-negligible percentage of students admitting to have had suicidal ideation or attempted to commit suicide.

Lastly, Chapter Seven provides a synthesis and discussion of the study findings and draws out the policy implications of these findings. Some examples of good practices and recommendations are also laid out for the authorities to address this phenomenon more effectively.

## **CHAPTER TWO - UNDERSTANDING SUICIDE & SUICIDAL BEHAVIOUR AMONG TEENAGERS INTERNATIONALLY: AN OVERVIEW OF EMPIRICAL & THEORETICAL LITERATURE**

### **2.0 Introduction**

Official statistics paint a very grim picture of the problem posed by suicide as a worldwide phenomenon. According to the WHO (2014), more than 804,000 people die from suicide every year. This implies that at least one person dies from taking their own life every 40 seconds and implies a crude suicide rate of 11.4 deaths per 100,000 population in 2012 (fifteen for males and eight for females). In some countries suicide is among the three leading causes of death among those aged 15-44 years and the second leading cause of death in the 10-24 years age group, which includes teenagers. Thus, suicidal behaviour also appears to be a growing societal concern in relation to that particular age group.

While the act of taking one's own life appears to be common to almost all cultures, experts agree that there is no simple way of understanding this phenomenon since the reasons and ways people choose to take their own lives vary greatly across countries and cultures. The WHO (2014) has pointed out that mental disorders (particularly depression and alcohol use disorders) appear to be major risk factors for suicide in Europe and North America; however, in Asian countries impulsiveness is seen as playing an important role. Suicide is, thus, a multi-factorial phenomenon whose complexity includes, but is not limited to: psychological, social, economic, biological/psychiatric, cultural and environmental factors.

The purpose of this chapter is, therefore as follows: first, to provide a brief overview of how suicide has been perceived throughout history; second, to highlight recent worldwide trends; third, to outline the main theoretical explanations which can be used to understand suicidal behaviour, particularly teenage suicide; and fourth the consequences of suicidal behaviour and teenage suicide will also be examined.

## **2.2 Brief History on Perception of Suicide**

According to Radhakrishnan, & Andrade (2012), the history of suicide is quite possibly as old as that of humanity itself. Suicide at various stages of mankind's evolution, has been glorified, romanticised, bemoaned, condemned and criminalised. Examples, thus, given to support this claim include Greek heroes Aegeus, Lycurgus, Cato, Socrates, Zeno, Domesthenes or Seneca; or the Roman figures Brutus, Cassius, Mark Anthony or the Egyptian princess Cleopatra; or Samson, Saul, Abimelech and Achitophel of the Old Testament; as well as suicide bombers nowadays. Since such records exist from such diverse times and cultures, suicide as phenomenon appears to be universally acknowledged as part of human behaviour.

During ancient times, suicide was not regarded as a cultural taboo. The Ancient Egyptians saw suicide as a means of dying to end both physical and emotional suffering. Socrates was the first individual to discuss the morality surrounding suicide. No specific judgment was attached to this form of death. The increasing social stigma tied to suicide was more obvious as a result of religious, civil and criminal persecutions, during the middle ages. The proper burial of a person who committed suicide was not allowed and the custom of disgracing the body of the deceased was a common practice. Other practices included dragging the body in the streets, placing the head on a pole outside the city as warning to others, or for animals to feed. The property and the possessions of the family, in addition to the belongings of the deceased, would be seized. During the next era of the Renaissance, as well as during the 17<sup>th</sup>



and 18<sup>th</sup> centuries, the rise of intellectual currents challenged the ancient views and attitudes towards suicide. Suicide became a matter of interest and many writers like Shakespeare reminded society that suicide was a part of everyday life.

The early 19<sup>th</sup> century saw the development of a new approach to the study of society. It should be highlighted that systematic social analysis and sociology itself are thought to have begun with a study of suicide through the publications of Emile Durkheim. The latter proposed that society at large was a factor contributing to suicide. Durkheim equally established both the fields of sociology and suicidology and recognised that outside pressures contribute to suicidal behaviour. The development of psychology (psychoanalysis) also brought major changes to the beliefs surrounding suicide and helped fight stigma, since Sigmund Freud suggested that some mental disorders were truly medical conditions. Consequently, many countries started abolishing laws that made suicide a crime. These developments were influential in changing attitudes about suicide in the modern era.

Today, many organisations are working together to prevent and reduce the impact of suicide in society. Even political leaders are being educated on suicide and form part of large networks on suicide prevention. Many countries such as the U.S., Norway, U.K., Canada, Australia, New Zealand, South Africa, have now decriminalised both completed attempted suicide. However, attempting suicide is still prosecuted and treated as a criminal offense to this day in countries such as India and Singapore. Changing reforms on the decriminalisation of suicide require a long and arduous process of social evolution and change.

## 2.3 International Trends in Suicidal Behaviour

The following three sub-sections provide an overview of worldwide recent trends in completed suicides according to region, age, sex and method. The last three sub-sections discuss international trends on suicide ideation and international trends in teenage suicide as well as the reliability of the international suicide data.

### Regional distribution of suicide

Table 1 shows the Regional WHO Estimates available for completed suicides/Deaths by Intentional Self-Harm or Injuries for 2000, 2008 and 2012, respectively.

*Table 1: Regional estimates available for suicide/death by intentional self-harm or injuries in 2000, 2008 & 2012 (Source: WHO, 2002)*

Year	2000	2008	2012
WHO Region	Deaths (000s)	Deaths (000s)	Deaths (000s)
South-East Asia Region	287	274	314
Western Pacific Region	287	225	182
European Region	170	125	125
Region of the Americas	66	72	85
African Region	45	51	62
Eastern Mediterranean Region	23	32	31
<b>GLOBAL</b>	<b>883</b>	<b>782</b>	<b>804</b>

Based on the above, since 2000, a decrease in the total number of completed suicides observed annually, appears to have occurred. This also implies a decrease in the global suicide rate from 14.4 to 11.4 per 100,000 of the world population from 2000 to 2012. Nonetheless, despite evidence of a steady decline in cases estimated for the South East Region and the Western Pacific Region, the figures presented suggest that these two regions still witness more cases of completed suicides annually than other parts of the world. On the other hand, the African Region and the Americas show a steady annual increase in the number of cases estimated when compared to the European and the Eastern Mediterranean Regions.

## Age & Sex

Table 2 shows the WHO Estimates available for completed suicides/Deaths by Intentional Self-Harm or Injuries disaggregated by Age-Group in 2000, 2008 and 2012 respectively.

*Table 2: WHO estimates available for completed suicides by suicide/death by intentional injuries disaggregated by age-group, for 2000, 2008 & 2012 (Source: WHO, 2012)*

Sex		Male						
Age group	Year	5-14 years	15-29 years	30-49 years	50-59 years	60-69 years	70+ years	Total
	2000	9,809	156,856	184,942	66,349	57,338	60,647	535,941
	2008	5,961	136,532	128,196	117,916	52,222	43,984	506,487
	2012	7,699	143,930	170,194	74,926	52,883	67,956	517,587
Sex		Female						
Age group	Year	5-14 years	15-29 years	30-49 years	50-59 years	60-69 years	70+ years	Total
	2000	9,575	131,299	97,387	31,712	31,322	46,254	347,548
	2008	5,764	94,959	60,378	48,413	24,791	41,222	275,527
	2012	6,921	98,974	73,776	32,528	30,313	43,801	286,313

As seen in Table 2, a total of 535,941 males and 347,548 females died from suicide in 2000. This represented a ratio of male to female of almost 3:2, implying that men were more likely to die from suicide than women. The global suicide rate for males has decreased from 17.4 to 14.4, per 100,000 population, from 2000 to 2012. The global suicide rate for females has decreased from 11.4 to 8.16, per 100,000 population, from 2000 to 2012.

With an estimated number of annual cases varying from 128,196 to 184,942, the 30-49 age-group consistently accounts for almost 30% of all cases of completed suicides among males, except in 2008 where there were more cases in the 15-29 age group. The second and third most affected groups among males appear to be the 15-29 and the 50-59 age groups, respectively. The most affected age-group in females appears to be the 15-29 age group, usually accounting for 30% or more of all cases, with annual figures varying from 94,959 to 131,299. The second and third most affected groups in females were the 30-49 and the 70 + age-groups.

### **Method Used**

While no single source or statistics were available to provide a recent global overview of preferred methods for completed suicide, the work carried out by Hepp *et al.* (2012) did provide some insight into the matter. The study found that violent and highly lethal methods such as suicide by firearm and hanging are more frequent among men, whereas women often choose poisoning or drowning, which are less violent but sometimes less lethal as well.

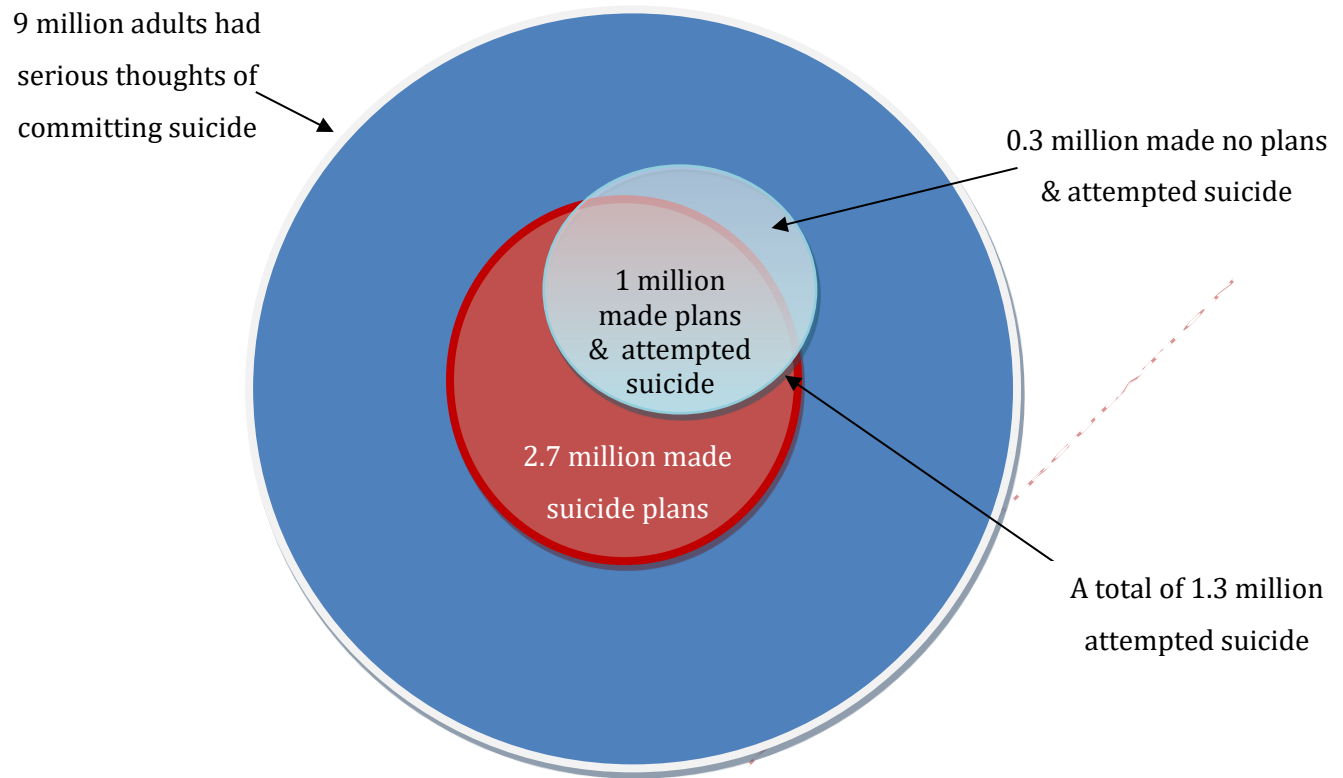
Hanging was observed as the major method of suicide in most countries. The highest proportions were around 90% in men and 80% in women, observed in Eastern Europe in countries such as Estonia, Latvia, Lithuania, Poland and Romania. Firearm suicide was the most common method in the United States, but was also observed in Argentina, Switzerland and Uruguay. Jumping from a height was noted in Hong Kong, Luxembourg and Malta.

Pesticide poisoning was found to be a major problem in rural Latin American countries such as El Salvador, Nicaragua and Peru as well as in Asian countries such as the Republic of Korea and Thailand, in addition to Portugal. Poisoning or overdose on prescription drugs was common in both men and women from Canada, Nordic countries and the United Kingdom. New methods such as charcoal burning were also noted in urban Taiwan, China and Hong Kong.

However, the most important observation from this study was that methods vary more from country to country, than between genders. Thus, both culture and the availability of technical means to cause death play a major role in determining the acceptability of a specific method and, indirectly, on suicide in general. Therefore, the higher the obstacles in using a particular method, the lower the acceptability of the method and the greater the proportion of suicides associated with psychosis and other severe mental disorders. This would, hence, suggest that the use of fire or self-immolation, for instance, could be associated with severe mental disorders, depending on the context or country.

### **International Trends in Suicide Ideation**

While there are no reliable cross-national studies on suicide ideation, findings from different studies throughout the world do show both the magnitude and resulting risk to society stemming from suicidal behaviour. Figure 2 shows some of the results of the National Survey on Drug Use and Health carried out by the U.S. Department of Health and Human Services on suicidal thoughts and behaviour among adults aged 18 or older in 2012.



*Figure 2: Suicidal thoughts and behaviour in the past year among adults aged 18 or older in 2012 in the U.S. (Source: U.S. Department of Health and Human Services, 2012)*

Thus, according to this national survey, out of the nine million Americans who had serious thoughts to commit suicide, 2.7 million made plans. Among these, 1.3 million Americans, attempted suicide and 0.3 million made attempts without making plans. While the U.S. may not be the most representative country for international trends, such alarming numbers can lead to the safe inference that existing cross-national data on completed suicides understates the real picture of suicidal behaviour worldwide.

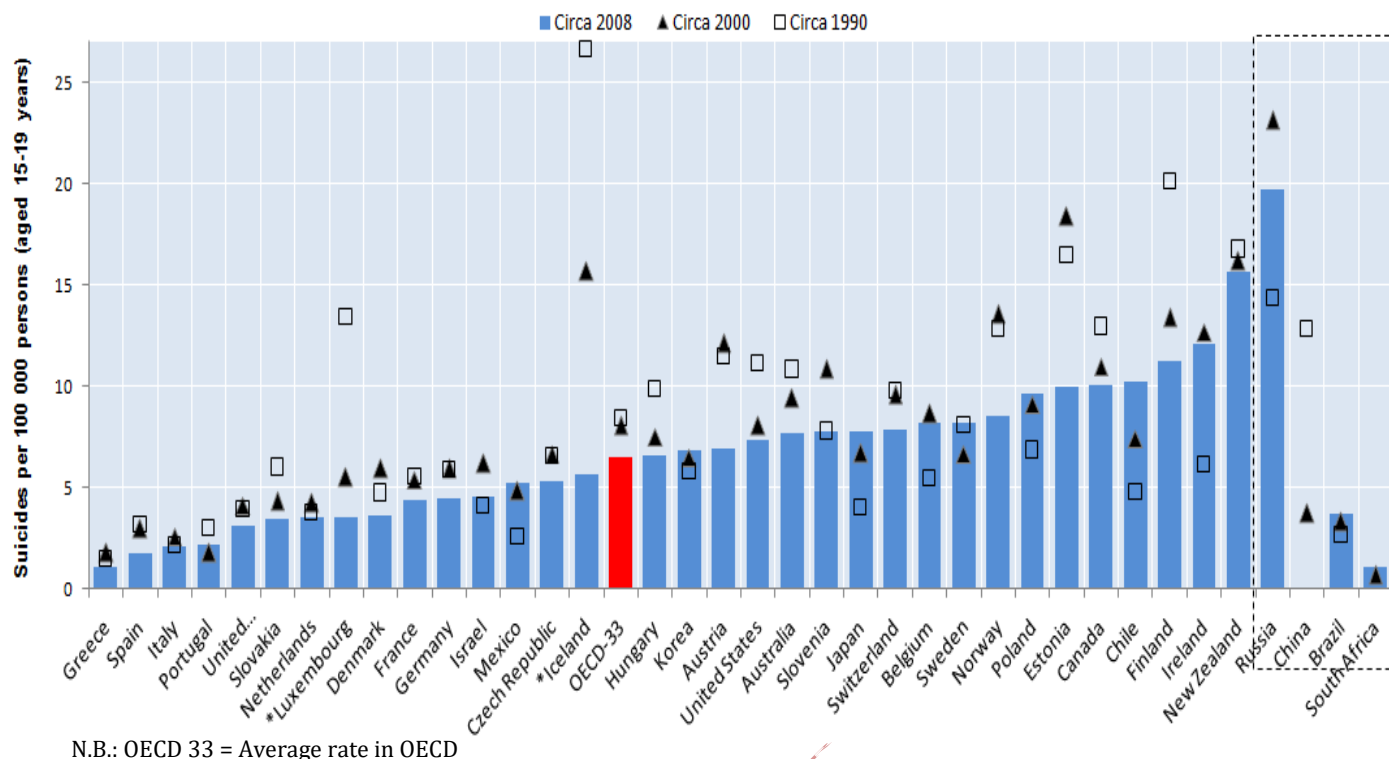
According to Nock *et al.* (2008), the course of suicidal behaviours is rarely investigated comprehensively. Consequently, data systematically reviewed from studies on suicide from 1997 to 2007 suggested that 34 % percent of lifetime suicide ideators make a suicide plan

and that 72 % percent of persons with a suicide plan go on to make a suicide attempt, while 26 % of “ideators” without a plan make an unplanned attempt (Kessler, Borges & Walters, 1999). Furthermore, according to researchers, suicidal behaviour can occur within the first year after the onset of suicide ideation. These findings would, thus, indicate that suicide ideation and a suicide plan significantly increase the risk of a suicide attempt.

Although the earliest onset ever reported for suicidal behaviours is in children as young as 4–5 years (Bridge *et al.*, 2006, cited in Nock *et al.*, 2008) other studies have suggested that children at such an age would not be able to act. International trends seen in the next section, however, do show that the risk of first onset for suicidal behaviour increases in general in a significant manner at the start of adolescence (12 -13 years), peaks at age 15-16 years, and remains elevated into the early 20s.

### **International Trends in Teenage Suicide**

As per the existing methodology used by the Organization for Economic Cooperation and Development (OECD), international teenage suicide rates are calculated as the total number of deaths due to intentional self-harm for the population between 15-19 years old in a given year, divided by the total population of 15-19 years old for each country in that given year, and multiplied by a factor of 100 000. The result is expressed in units of deaths per 100 000 individuals (aged 15 - 19), per year, as seen in Figure 3 for 1990, 2000 & 2008.



*Figure 3: Teenage suicide rates in OECD countries as well as China, Russia, Brazil, South Africa and China for 1990, 2000 & 2008, (Source: OECD, 2014)*

As it can be seen from Figure 3, between 1990 and 2008, the OECD experienced a small decline in teenage suicide rates. 8.4 suicides per 100 000 teenagers were observed, in 1990, compared to 6.2 in 2008. Over the 1990-2008 period, two distinct trends have emerged. From 1990-2000, the average suicide rate was relatively stable at 8.1 teenage suicides per 100 000 persons. From 2000-2008 onwards, though, suicide rates have been slightly falling, averaging 6.9 suicides per 100 000 persons. The greatest decrease in suicide rates were experienced in Luxembourg, Iceland, Estonia and Finland. The teenage suicide rates in countries such as New Zealand and Russia remained relatively high compared to the rest of OECD countries.



While South Korea, which was not part of the above OECD study, is consistently acknowledged as one of the countries having the highest suicide rates in the world among the youth. Teenage suicide was deemed to be potentially more serious in Southern India, when compared to the rest of the world, with rates in the 10-19 year age-group reaching 148 cases in females and 58 cases in males, per 100,000 population, according to Radhakrishnan, & Andrade (2012).

### **Reliability & Accuracy of International Data on Suicide**

As pointed out by the CDC (2014), a large body of literature about suicide and suicide prevention exists. However, the accuracy of this information and the resulting interpretations made and, hence, comparability, are often questionable since data on suicidal behaviour is collected and compiled following different definitions. The reliability of statistics on completed suicides is often questioned by most research papers looking at the epidemiology of suicide in one way or the other. According to Response Ability/Commonwealth of Australia (2005), deaths are classified as suicides following three criteria:

1. The death must be due to unnatural causes, such as injury, poisoning or suffocation rather than an illness;
2. The actions which result in death must be self-inflicted; and
3. The person who injures himself or herself must have had the intention to die.

However, in some cases it can be extremely difficult for the police, coroner or other medical professionals to determine whether some “accidents” or individual acts of self-injury were intended to result in death, especially if mental illness is involved. In some cases where victims survive their attempt, the person themselves may not be able to explain in a rational manner why they performed the act. Besides the misclassification of an intentional death or attempt as an accident because of human error, sometimes, both completed suicides and attempts are intentionally covered up because of the taboo and stigma associated with the

act. For instance, Tollefsen, Hem, & Ekeberg (2012) noted that out of 31 studies on completed suicides reviewed during a 46-year period (between 1963 and 2009), inclusive of the US, Europe, Asia and Oceania, 91% of all studies were unreliable. Thus, 52% of the studies included 10% under-reporting, and 39% included more than 30% under-reporting or put simply: poor suicide statistics. Moreover, this is in part the reason why the statistics presented in the present chapter do not include suicide attempts which can be much more frequent than completed suicides (by 10, 20, or more times) according to some studies, as noted by the WHO (2014).

## 2.4 Explanations of Suicidal Behaviour

### 2.4.1 Different Academic Perspectives on Suicide

Theoretical perspectives on suicide have historically ranged from biological perspectives to psychodynamic, behavioural, cognitive and humanistic perspectives. The different, but complementary, theories which follow are summarised to enable a brief overview of suicide as seen from different academic angles.

**Biological Perspectives:** have examined the role of serotonergic, noradrenergic, and dopaminergic systems in suicidal behaviour as well as the HPA axis stress-response system (Carballo *et al.*, 2009). Results, according to this study, conclude that suicidal behaviour in teens stems from the interaction of the diathesis (which includes the clinical, neurobiological, neurocognitive, genetic, behavioural and personality domains) or predisposition for suicidal behaviour and the occurrence of triggers. These together with the evidenced influence of mental health associated, generally with feelings of helplessness

and hopelessness resulting from a range of associated factors, have been linked to suicidal behaviour.

**Psychodynamic Perspectives:** touch upon personal experiences of individuals as well as apprehension and inner conflict influencing the way the brain functions. A person's deepest emotions and feelings must be explored. Sigmund Freud was considered to be the pioneer of the psychodynamic approach.

**Behavioural Perspectives:** examine how structures shape behaviour of individuals. Psychologists advocate this perspective based on people respond to situations they find themselves in.

**Cognitive Perspectives:** draw on how individuals solve problems and suggests that abnormal behaviour gives space to unreasonable ways of solving issues. It focuses on already known mental processes than inner feelings. The personal history of individuals is, therefore, not relevant for supporters of this perspective.

**Humanistic-Existential Perspective:** relates to the uniqueness of individuals and freedom to make desired choices. Free will of individuals is beyond structural forces.

**Community-Cultural Perspectives:** combine the social causation theory and social selection theory. The social causation theory finds a relationship between persisting conditions of poor housing, lack of educational facilities in disadvantaged areas and increased stress levels. Social selection theory, on the other hand, assumes that people from lower strata of society are more likely to express maladaptive behaviour because "people who do not function well tend to experience downward social mobility".

**Developmental Theories:** Erik Erikson contributed significantly as a developmentalist in the area of suicide. His writings focused on adolescent suicide where he explained the presence of identity crisis in the 13-22 year age group. The work of Erikson is characterised by the transition into adulthood through two stages namely; “industry vs. inferiority” and “intimacy vs. isolation”. The transition represents a huge emotional process. If their inner-feelings do not match with the image they project of them, this will result in failure to move from one stage to the other and, hence, accentuate suicidal behaviour.

**The Interpersonal Theory of Suicide:** Van Orden *et al.* (2010) developed ‘The Interpersonal Theory of Suicide’ to provide a better understanding of the etiology (set of causes) of suicide. The theory’s two pillars are thwarted belongingness and perceived burdensomeness. It is further geared towards two aspects: the capability to engage in suicidal behaviour and the desire to engage in suicidal behaviour. The theory encompasses a vast number of issues known as the factors to suicide such as physical illness, social isolation and unemployment. The base of this theory is that people die by suicide because they are capable of and willing to.

## **2.4.2 Causes of Suicidal Behaviour**

As mentioned previously, suicide is a multi-factorial problem which cannot be viewed unidimensionally for e.g. mental disorders equal suicidal behaviour or tragic life events equal the same. While suicidal behaviour can be viewed from different academic/disciplinary angles, as seen in the previous sub-section, there appears to be some established causes of suicide termed “risk factors” to which the theories seen previously give different weights when trying to account for suicidal behaviour. Based on the factors suggested by the WHO (2002), these can be grouped according to: societal/stressful events or “psychosocial problems”, psychiatric problems, access to means and a history of past attempts.

## **1. Social/Psychosocial problems**

Psychosocial problems are events with the potential to act as triggers of stress and/or induce mental disorders such as depression, anxiety, etc. Such events can put individuals at increased risk of harming themselves and, thus, act as risk factors for suicidal behaviour. Examples of psychosocial problems and interpersonal factors include living in poverty, unemployment, loss of loved ones, arguments with family or friends, breakdown in relationships, financial, legal or work-related problems. While such events are common experiences, only a minority of people are driven to suicide because there are also other factors which appear to protect people against suicidal feelings or acts referred to as “protective factors”. They include personality traits such as constant high self-esteem and good social networks and relations with close ones, (family and friends) allowing for social support. A stable and happy marriage and commitment to a religion, are believed to form part of such protective factors.

## **2. Psychiatric and biological problems**

To act as precipitating factors, or “triggers” to suicide, the stressful events seen must happen to someone who is predisposed, or otherwise especially vulnerable to self-harm. Predisposing risk factors include alcohol and drug abuse, a history of physical or sexual abuse in childhood, as well as social isolation. Psychiatric problems, such as depression and other mood disorders, schizophrenia and a general sense of hopelessness also play important roles. Physical illnesses, especially those which are painful or disabling, are also important factors (Mpiana *et al.*, 2004).

## **3. Access to means**

Having access to the means to kill oneself (most typically guns, medicines and agricultural poisons) is both an important risk factor in itself and an important determinant of whether an attempt will be successful or not.

#### **4. Previous Suicide Attempts**

Having made a previous suicide attempt is a powerful predictor of subsequent fatal suicidal behaviour, particularly in the first six months after the first attempt according to the WHO (2004).

## **2.5 Explanations of Suicidal Behaviour among Teenagers**

Several studies report suicide as an increasingly important cause of death among both teenagers and young people worldwide (Mpiana *et al.*, 2004; Wasserman, Cheng, Jiang, 2005; Hur, Kim, & Kim, 2011). Wasserman, Cheng, Jiang (2005) estimated that suicide was the fourth leading cause worldwide of death among those aged 15-19, with 9.5% of all the 132,423 deaths reported for that particular age group, and is currently the third leading cause of death for those aged 10-24 in the U.S. according to the CDC (2014). As far as gender differences are concerned, girls are believed to be more likely to attempt suicide than boys who go for more violent methods (hence, more effective ones), as seen in adults.

Some of the risk factors mentioned previously would apply to teenagers, as well as to adults, as seen by some of the risk factors identified by the CDC:

- History of previous suicide attempts;
- Family history of suicide;
- History of depression or other mental illness;
- Alcohol or drug abuse;
- Stressful life event or loss;
- Easy access to lethal methods; and
- Exposure to the suicidal behaviour of others.

However, it would appear based on existing research, that the 13-19 age group does have some distinct risk factors which are more focused in the social/psychosocial and psychiatric/biological categories.

Adolescence is also a period where children experience some significant physical and mental changes as a result of puberty. It is also a time of self-discovery and experimentation which take several forms and can go several ways, including risky behaviour ranging from substance abuse to promiscuity, violence, self-harm and suicide. Moran *et al.*, (2012) did note the same risk factors usually associated with suicide among young people reporting self-harm during their teens such as symptoms of depression and anxiety, anti-social behaviour, high risk alcohol use, smoking cannabis etc. When danger is not an issue, most experts view adolescent experimentation and environmental exploration as integral to the development of a healthy and individuated sense of self (Hazen, Scholzman, & Beresin, 2008). While self-destructive behaviour is not universal among teenagers, a potential explanation for this may lie in differential brain development during adolescence.

The next sub-section will present the various theories of youth suicide, while the following ones will attempt to shed some light on the causes or risk factors linked to teenage suicide, starting with biological changes occurring in adolescence, especially at the cognitive level.

### **2.5.1 Brief Overview of Main Theories of Teenage Suicide**

Cutler, Glaeser & Norberg (2001) put forward four theories that attempt to explain suicide among the youth. These theories have been devised based on two basic facts: the variability

of youth emotions and the lack of resources available to youth as a means of influencing others.

**The rational-suicide theory**, being the most conventional one, describes suicide as “a means of “rationally” ending one’s life when the expected value of the future utility of being alive is below the value of death. This theory, originally developed by Hamermesh and Soss (1974), uses the intuition that “suicide is more likely when the variability of happiness is high, when unhappiness is correlated over time, and when people have high discount rates. If there is hyperbolic discounting, then individuals may want to precommit not to kill themselves”. As this theory suggests, suicide is closely linked to depression for youths. An increase in discount rate for the youth is possible over time as a result of changes in family structure or social environment that may have impacted on the youth’s capacity to regulate his/her impulse. Another possibility is the decrease in the youth’s mean utility levels over time or that the variance of utility is greater. As such, the result is that more youth fall below the utility level at which suicide is a rational action.

Cutler, Glaeser & Norberg (2001) further explain that the factors leading to depression in youth pertain to changes in family relations (divorce, single-parenting, remarriage and conflict), romantic problems and lack of social connections. These events are associated with unhappiness, “they need not be rationally undertaken for the suicide itself to be rational”. A youth who discounts hyperbolically will prefer to take actions that bring short-term pleasure but long-term costs and he/she will find it more difficult to moderate present pain with the hope for future pleasure. Similarly, he/she will have problems moderating present exuberance with the anticipation of future pain.

**The strategic-suicide theory** explains that suicidal behaviour in youth may be geared not towards death but to signal unhappiness in the hope of shifting the distribution of family resources. As such, this theory is more applicable to attempted suicide than completed ones.



The redistribution of resources (time and/or monetary) from the parent(s) to the youth following a suicide attempt may be direct or indirect. Often the signal is only credible when it is repeated and in cases where parents possess sufficient power, suicidal behaviour might be the only option left for youth. One of the main feature of the strategic-suicide theory is that suicide attempts are more likely in situations where parental resources are greater and thus more available for redistribution. This feature differs for the pure-depression theory where the lack of parental resources is a trigger for unhappiness in youth which eventually leads to suicide attempts.

The third youth suicide theory formulated by Cutler, Glaeser & Norberg (2001) is the **contagion theory**. It is based on Durkheim explanations for suicides being imitative. In fact, studies have suggested that teen suicidal behaviour bear a stronger contagion factor than suicide behaviour in adults (Gould *et al.*, 1994). Cutler, Glaeser & Norberg (2001) give two examples of how contagion operates in youth. The suicide of a group member causes stress and grief which may affect the ability of other group members to moderate the problems faced by other members of the group. This can in turn make suicide for certain group members more rational. The second example is that a suicide can provide information for youth about how to effectively accomplish such an act. The authors also state that the signal value of the suicide may increase if certain aspects are stylized, such that the receiver is more attentive and sensitive to the signal. A fifteen-year-old boy will be more receptive to the suicide of a boy of the same age. An increase in the sensitivity to the signal reception can lead to the minimum effective signal being less intense. The result may be that social contagion may become more frequent, however, the suicide attempts may decrease in severity.

Moreover, it is also possible that at a certain point, reactions to the stylized attempts lead to less severe attempts as the environment start to give less attention to those events. Suicide attempts reduce among those who have less desire to commit suicide, however, it may be the case that members of a group “collude (covertly) to provoke an escalation of tactics

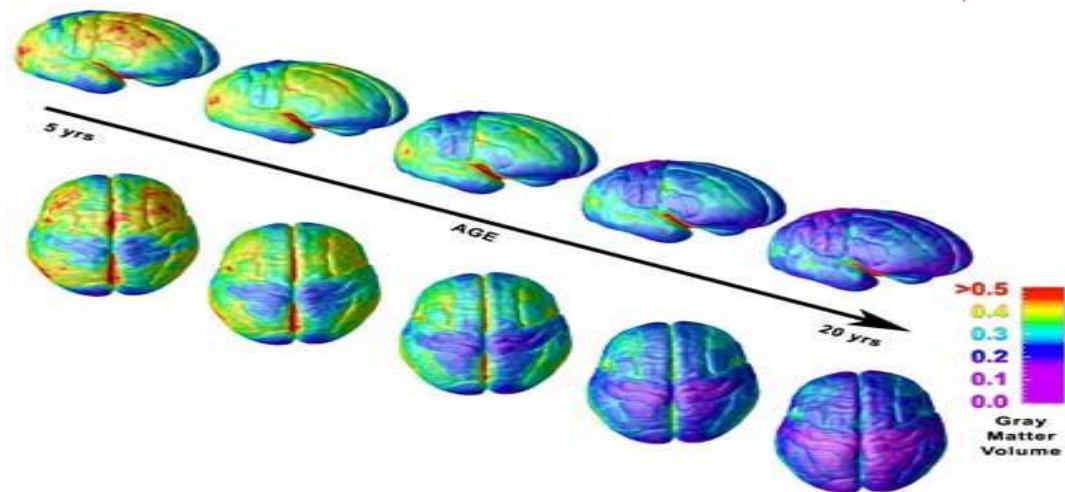
leading to the martyrdom of at least one member of the group. One successful suicide (especially if widely advertised) may greatly refresh the credibility of the less lethal threats made by other members.”

Another theoretical explanation known in the literature as the **instrumentality hypothesis**, simply put, states that suicide increases as access to lethal means increases. Contrary to other models, this theory puts more emphasis on the immediate costs and benefits of suicide and not the long-term forward-thinking behaviour. As such, this theory views suicide as an impulsive action whereby suicide occurs with access to the right means at the right time. Most often, the right means pertains to guns. In fact studies show that teenage suicides are more likely to occur in homes that possess a gun, especially if the gun is loaded (Brent *et al.*, 1991 & Brent *et al.*, 1993). However, any other lethal means (hanging or jumping from a height) are so widely accessible that a suicidal person will chose a method or substitute form one method to the next depending on which one is more accessible.

The authors finally observe that, in cases where the instrumentality theory is contradicted by statistics, the reason indicate the presence of a link of this theory with the contagion theory. For instance, in the U.S., the increase in youth suicide in rural areas where guns have always been in high numbers, is in contraction with what the instrumentality hypothesis would have predicted. The latter theory would have assumed that urban areas would have an important rise in youth suicide rate as a result of poverty and the rise in the number of guns. An explanation might be that there has been an increase in non-lethal suicide attempts accentuated by an increase in the availability of nonlethal method such as psychotropic medications. These could have been the result of contagion as the use of those drugs became more popular.

## Neurobiological explanations

In addition to the above explanations, there are also those coming from other disciplines including the neurosciences. For instance, on the basis of structural brain-imaging studies conducted during the past decade, Jensen & Urion (2008) have gathered physical evidence from Magnetic Resonance Imaging (MRI), that the adolescent brain is only about 80 % as developed as an adult brain. This can be seen in figure 4 which shows brain development from childhood to young adulthood, via adolescence.



*Figure 4: Brain tissue development from childhood to young adulthood, via adolescence (Source: Neuroanthropology, n.d.)*

Hazen, Scholzman, & Beresin (2008) explain that during adolescence, the brain's frontal lobe or pre-frontal cortex, which is the part responsible for reasoning, planning and judgment, is not as well-connected to the rest of the brain by myelin, or "white matter". Consequently, this particular part of the brain is also responsible for estimating risk, consequences and, hence, decision making. This connection is achieved later in older individuals as myelin increases during adolescence and enables nerve signals to flow more easily from one part of

the brain to another. When the frontal lobe is fully connected to the rest of the brain, later in life, the brain is more capable of processing more complex notions such as consequences of actions and danger to others and to the self. These observations, thus, have implications for the risky behaviours observed in teens by showing that the thinking region of the brain might not always be fully functional in teenagers. This may result in poor decision making when assessing consequences of risky behaviours such as self-harm and suicide. Such findings may also complement observational studies of risk-taking behaviour observed during adolescence, where teenagers have been seen as taking significantly greater risks than adults.

Other research undertaken on the neurobiology of teenage suicide victims, has suggested that abnormalities in serotonin (a neurotransmitter which helps to relay messages from one area of the brain to another and which is believed to influence a variety of psychological and other body functions) levels for appropriate neurological transmission within the brain. (Pandey *et al.*, 2002). However, such research is still in its early stages and cannot provide any definitive answer to the biological reasons for suicide.

### **2.5.2 Common Causes of Suicidal Behaviour in Teenagers**

As mentioned previously, while suicide can be found across almost all cultures, the reasons for self-annihilation cannot be understood unidimensionally. This, is further proved by the plethora of theories and risk factors reviewed so far in relation to suicidal behaviour and teenage suicidal behaviour. Teenage suicide is, therefore, no exception. Based on the literature review, it would appear that those aged 13 to 19 years are faced with some distinct challenges.

Despite all those potential factors which do contribute in making teenage years much more challenging than one would expect, there seems to exist cross-cultural risk factors for teenage suicide. Such factors can be categorised according to psychosocial and psychiatric problems. Psychosocial problems can be further broken down into two sub-categories: those internal and external to the individual.

### **Internal Psychosocial Problems of Suicidal Teenagers**

Internal psychosocial problems, or psychological components, include dominant personality components such as high or low self-esteem, hopelessness, hostility, etc. These may lead to depression, excess stress and anxiety as well as other mental disorders. Consistent with other studies, four psychosocial factors were found among a study of 100 adolescents aged from 17 to 19 years. This study conducted by Rutter & Behrendt (2004) focused on the overall suicide risk in New York. The study examined suicidal ideation, suicidal behaviour, and history of attempt among the adolescents and found hopelessness, hostility, negative self-concept, and isolation as the root causes of attempts. Hur, Kim, & Kim (2011) reported self-esteem, defined as the evaluation of one's personal traits, as being the strongest predictor for attempts. Research has shown that self-esteem shows a negative correlation with suicide attempts, and researchers have identified that low self-esteem predicts attempting suicide, usually when related to depression. (Wilburn & Smith, 2005, cited in Hur, Kim, & Kim, 2011). Hur, Kim, & Kim (2011) confirmed that positive self-esteem, coupled with social resources (for social support), mediated the relationship between depression anxiety and suicidal probability from a sample of 1586 secondary school students in South Korea, where the importance placed on academic achievement can be extremely stressful for teenagers.

## **Social and Psychosocial Problems of Suicidal Teenagers**

Back in 1996, Gould *et al.* noted that there was a significant independent impact of social and psychosocial factors on increasing suicide risk among children and adolescents beyond the risks linked to psychiatric illnesses. Some of the examples given included school problems, a family history of suicidal behaviour, poor parent-child communication, etc. Such stressful events, consist of events having either occurred in the past, or happening in the present, which may act as triggers and lead vulnerable teenagers to feel depressed and develop suicidal thoughts. Thus, Lewisonh *et al.* (1994) found that besides a history of past attempt and current suicidal ideation, other predictors of suicide included attempts by a friend (exposure to suicide leading to potential copycat behaviour) and having been born to a teenage mother (single parent family unit). Results, which were obtained from a sample of 1,508 high school students aged 14-18 years old, suggested that teenagers who are depressed and those who attempt suicide share many psychosocial risk factors. Such risk factors are, however, not universal and are likely to vary from culture to culture and, thus, to change over time. Besides the risk factors previously identified by the CDC for young people, other more recent risk factors for teenagers noted during the literature review include:

- Violence & Bullying, including cyber or online-bullying;
- Sexual Orientation;
- Online media and social networking sites impacting on risky behaviours;
- Self-harm (mutilation, ingesting toxic substances, self-beating, etc);
- The breakup of a relationship with a girlfriend or boyfriend;
- Humiliation;
- Parental divorce;
- Victim of Sexual Abuse;
- Dating Violence;
- Problems with the law;
- An unplanned pregnancy;
- Causing injury or death to another person; and
- Anniversary of a tragic event.

Depending on the context and how vulnerable the individual is, such factors could potentially lead to mental disorders and suicidal behaviour.

### **Psychiatric Problems of Suicidal Teenagers**

As noted by Hur, Kim & Kim (2011), many researchers have pointed to depression as a crucial factor in suicide and described depression symptoms among young suicide attempters (Kandel, Ravies, & Davies, 1991). It has, thus, been observed that depressed teenagers may use avoidant and affect-oriented coping behaviours, as opposed to problem-oriented behaviours, as a means to escape from their problems. Hence, it is not unlikely for such teenagers to choose suicide as a method to escape problematic situations that make them depressed (Kandel, Ravies, & Davies, 1991). In some cultures adolescents experience life stress associated with peer relationships and achievement that has vast and intense effects. It is, thus, not unheard of that the constant pressure in such contexts causes teenagers to develop mental pathologies, besides depression, such as anxiety and other personality disorders. While mood disorders such as depression, bipolar disorder, and dysthymia are the disorders most commonly associated with suicide and serious suicide attempts. The Clinical Advisory Services Aotearoa (CASA, 2009) from New Zealand has noted the presence of the following additional mental disorders among teenage victims of completed suicide/attempted suicide:

- Substance use disorders: alcohol, cannabis and other drug abuse and dependency, are also linked with suicidal behaviour. Substance use disorders often occur with mood disorders, anxiety disorders, and antisocial disorders. Additionally, the disinhibiting and facilitating effects of alcohol increase the likelihood of impulsive suicide attempts.
- Anxiety disorders, schizophrenia, and eating disorders are also associated with elevated risks of suicide.

- Personality disorders and traits, especially antisocial and borderline, are also associated with higher risks of suicide.
- High rates of co-morbidity, co-occurrence of two or more mental disorders, are also found in those engaging in suicidal behaviour.

## 2.6 Consequences of Suicidal Behaviour

Suicide is a serious health and social issue whose aftermath can be particularly devastating for those left behind. The latter are usually referred to as “survivors”, and are intimately and severely affected by it (Davis & Hinger, 2005). For every suicide that takes place, there are several other individuals who are impacted by it. Among those survivors, members of immediate family, extended family, friends, colleagues and acquaintances can be found. Campbell (1997) has estimated that there are about 28 different survivor relationships for every suicide occurring in the U.S. This does not even take into consideration larger families, extended families and social networks existing in some Asian and African countries where the remaining survivor relationships could potentially be much higher. Moreover, research has shown that the trauma inflicted upon survivors can increase the risk of complicated grieving, which can potentially lead to greater morbidity in terms of physical illness, depression, anxiety, Post-Traumatic Stress Disorder (PTSD), substance abuse, family and work disruption, as well as further suicide in some cases (Campbell, 1997).

It is important to note that the consequences of suicidal behaviour may differ depending on whether the attempt made has resulted in death or not. In broad terms, the consequences of attempted suicide appear to be more concentrated on the surviving victim. The consequences of successful attempts, or completed suicides, on the other hand, affect survivors the most. Subsequently, according to the existing literature the consequences of suicidal behaviour can be classified according to the following categories:



- Physical health impairment of victims (in cases of attempted suicide);
- Mental health impairment of victims (in cases of attempted suicide);
- Mental health impairment of survivors (in cases of completed suicide);
- Financial implications (in cases of both attempted and completed suicide);
- Stigmatisation of victims and family members (in cases of both attempted and completed suicide); and
- Societal impact (in cases of both attempted and completed suicide).

## **2.7 Consequences of Teenage Suicidal Behaviour**

Research shows that victims of suicide attempts themselves suffer from the severe consequences of their act(s), even years afterwards. In cases where there was a significant desire to die, very often the after effects are irreversible. In this case, the impact of the attempt would be milder for family, friends etc. as compared to cases of completed suicides. To make matters worse, in the case of both attempted and completed teenage suicide, the greatest consequence of all would be the loss of a potentially better, if not more promising future, because of a temporary lapse in judgment. The sub-sections that follow, therefore, examine the impact of attempted suicide and completed suicides.

### **Attempted Suicide: Physical Health Impairment**

As mentioned in earlier, “suicide attempts” usually includes parasuicides and real attempts to die. The former is mostly done to attract attention, with no real intention to die, while the purpose of the latter is to end life. In the two cases, the method used, and as such the extent of the damage caused to the individual’s health, will differ. In the former case, the most prevalent, suicide method used is swallowing pills whilst for the latter one, an “attempter” can go as far as using a shot gun.

A primary consequence of suicide attempts is the harm caused to the body or physical health impairment, following the method used. Following the absence of data on the direct physical consequences of suicide attempts in teenagers, the potential health consequences of these acts are summarised as follows:

**Overdosing on pills:** internal organ damage such as kidney, stomach and liver.

**Wrist cutting:** blood loss, infection, tendon and nerve damage, sensory loss, brain damage and the possibility of permanent loss of motor function.

**Firearm:** traumatic brain injury, damage to internal organs, massive blood loss, loss in motor function, possibility of life-long physical and mental handicaps.

**Jumping from height:** spinal injury, traumatic brain injury, shattered bones, paralysis, possibility of life-long physical and mental handicaps.

**Hanging:** damage to the neck and/or spine, arteries resulting in brain damage and loss of motor function.

**Absorbing noxious substances:** sometimes irreversible internal organ damage to the kidney, stomach and liver, among others.

While initial emergency treatment may work in the short-term, victims may still die of complications at a later stage.

### **Attempted Suicide: Mental Health Impairment of Victims**

In most cases, a mental health disorder is a common condition in individuals with suicidal tendencies. Following the suicide attempt, mental health impairment is further amplified and the risk is recurrent or relapse is possible. A failed suicide attempt can potentially affect an individual in many different ways, ranging from a sense of shame, helplessness and failure, as well as making the initial reason, and/or related mental disorder, for attempting appear even worse. Such emotions can potentially lead to further attempts, or relapse, if the appropriate help is not provided or available. Moreover, a previous suicide attempt has been found to be a leading cause of suicide. Evidently, the need for both emotional and psychological support are crucial after such an event.

### **Attempted Suicide: Mental Health Impairment of Kins**

Following a suicide attempt, guilt and blame are often experienced by the close family circle. When the motive of the attempt is poorly understood, or when the act was not expected, the issue of blame is heightened and is coupled by a strong sense of perplexity. It is common that family members and close friends feel that they could have prevented the act. This mixture of feelings can give rise to serious psychological problems including depression and Post-Traumatic Stress Disorder (PTSD). Moreover, it is believed that exposure to suicidal behaviour whether in form of suicide attempts or completed suicide, is linked to increased risk of depression and similar suicidal behaviour in the long term (Brent et. al., 1996). Hence, this is why it is recommended that after such an event, not only the victim, but his/her close entourage, seek psychological help.

### **Attempted Suicide: Financial Implications**

In cases of attempted suicide, the financial cost incurred is both the medical, physical and mental care required for victims. Such costs are usually incurred by the immediate family as

opposed to the victim herself/himself and can range from just a few months to being lifelong financial commitments for health and social care.

### **Attempted Suicide: Stigmatisation**

In certain societies, stigmatisation associated with suicide is present to such an extent that victims of suicide attempts and their families prefer to pass the attempt off as an accident. Rejection as well as avoidance by friends and society are feared, since victims of suicide attempts are often regarded as weak and selfish individuals instead of an individual in need of medical care. Stigmatisation, thus, instigates a feeling of shame which is experienced by both suicide victims and the family of victims.

As seen previously, in some countries, stigmatisation by society is reflected through the fact that suicide is considered as a crime and attempters are fined and penalised. However, in recent years, suicide appears to be less and less stigmatised than before (cited in Cerel *et al.*, 2008).

### **Attempted Suicide: Consequences on Society**

The substantial economic burden of suicide attempts significantly affects any society. For this reason, the costs associated with suicide and suicide attempts cannot be ignored (Platt *et al.*, 2006).

Direct costs to society are health care costs, in instances where these costs are incurred by the government. Indirect costs to society are productivity losses as a result of disability or premature death of those who have attempted suicide. As per the Centre for Suicide Prevention (2010) indirect costs are classified as: (1) human capital, which quantifies the value of time lost due to absence from work or reduced productivity; (2) friction cost which

estimate the cost of replacing workers temporarily or permanently disabled with other existing workers; (3) willingness-to pay which estimates what individuals are willing to pay either (a) to avoid being victimised or (b) the cost preventive measures to avoid exposure to or mitigation of the effects of injury (Butchart *et al.*, 2008).

The media-related impact of suicide concerns the unethical and sensationalistic reporting of attempts, depending on how it is done, such reporting can negatively influence the stigma and taboo surrounding such acts for victims and the public at large. In some cases, the consequences of such reporting may go even further than that and can potentially impact culture in other ways by contributing to the exposure of suicide and making an acceptable option.

### **Completed Suicides: Mental Health Impairment of Survivors**

Barrett & Scott (1990) makes reference to the 'parent survivor' in their study. This term describes parents who lost a child as a result of suicide and who are left with intense feelings of guilt arising from not protecting their child. Parents, siblings and friends suffer tremendously from their loss. When the suicidal act happens unexpectedly and suddenly, the survivors are brutally faced with a harsh and unexpected reality. In the US, there are 36,000 suicides every year and it is estimated that for every suicide there are at least six survivors. It is believed that this number of survivors varies depending on who defined themselves as a survivor (Berman, 2011).

These survivors of suicide also represent "the largest mental health casualties related to suicide" (Edwin Shneidman, Ph.D., Founding President of the American Association of Suicidology (AAS)). Family members and close friends of the victims are deeply impacted by the tragic event, and experience a range of complex grief reactions including, guilt, anger, abandonment, denial, helplessness, and shock (Jordan, 2001; AAS, 2008), which often lead

to psychological stress. Survivors may face the added psychological stress of societal blame and reduced social support (Cerel *et al.*, 2008). During the bereavement process which is often painful, psychological help and support are highly recommended. Moreover, as for suicide attempts, exposure to completed suicide, is linked to the risk of personal suicidal attempt in the long term (Brent *et al.*, 1996)

### **Completed Suicides: Impact of Suicide on Social Relationships**

Suicide can have a profound effect on the social network of survivors (Cerel *et al.*, 2008). Blame for the death of the victim can be expressed through social withdrawal and results in the rupturing of the cohesion in a family or a social network, (Barlow & Coleman, 2003). Another factor responsible for the distortion of communication, and eventually to the disruption of family networks, is the secrecy surrounding the cause of death. The long term effects of secrets (or lies) in families and other social systems can cause dysfunctions and impact on the psychological development of all family members, particularly children (Jordan, Kraus & Ware, 1993; Walsh & McGlodrick, 1991). Both blame and secrecy after suicides, in turn, give rise to further social ostracism and self-isolation of survivors, which are forms of communicational distortion (Cerel *et al.*, 2008).

### **Completed Suicides: Financial Implications**

Direct costs associated with suicide and its aftermath include funeral or cremation costs (Butchart *et al.*, 2008). Costs of psychological care of survivors may also need to be factored in. Indirect costs are productivity losses or earnings loss due to mortality.

### **Completed Suicides: Stigmatisation**

Suicide has long been stigmatised in Western countries and the family of suicide survivors are often punished and ostracised by their communities (Colt, 1991; van Hooff, 2000).

Stigmatisation increases the secrecy around suicide and, in turn, contributes to disruption of the family cohesion in the long term (Jordan, Kraus & Ware, 1993; Walsh & McGlodrick, 1991).

### **Completed Suicides: Consequences on Society**

The direct economic costs to society may include cost of police or coroner investigations (Butchart *et al.*, 2008). Suicide costs society approximately \$34.6 billion a year in combined medical and work loss costs in the US. The average suicide costs are \$1,061,170 (CDC, 2005).

Another consequence of suicide is a type of media coverage which often leans towards sensationalism instead of being informative or preventive. Such misreporting of suicide also happens to be an ethical breach. Moreover, exposure to suicide or publicity about suicide, particularly celebrity suicide, leads to contagion and imitation. It has been shown that such reporting may trigger other suicides, which is term as 'copycat' or the 'werther effect' (The Hong Kong Jockey Club, n.d.). Guidelines exist to reduce sensational media coverage of suicide (WHO, 2008; The Hong Kong Jockey Club, n. d.).

## **CHAPTER THREE - TEENAGE SUICIDE IN MAURITIUS: AN OVERVIEW OF OFFICIAL DATA**

### **3.0 Introduction**

The aim of this chapter is to locate the trends in the phenomenon of teenage suicidal behaviour as part of the wider social problem of suicide in Mauritius. It presents an overview of suicide and suicidal behaviour among teenagers in Mauritius and worldwide, taking into consideration official data from different sources. It also highlights issues of data discrepancy pertaining to the local official statistics. The causes and consequences of teenage suicidal behaviour have also been examined in a systematic manner.

### **3.1 Official Figures of Suicide in Mauritius**

This section outlines the different sources of suicide data consulted in the process of this research study. The data collection pathways of the two major suicide data sources have been investigated and are also presented as a sub-section. The next sub-section presents the local suicide data from all the available data sources and the discrepancies in the data have been highlighted. The last sub-section compares the suicide rate in Mauritius to the rest of the world.



### 3.1.1 Sources of Suicide Data in Mauritius

The information obtained and presented in this chapter was obtained using different means. Secondary data was obtained from Life Plus, the Ministry of Health and Quality of Life (MoH/MoHQL), and the Mauritius Police Force (MPF), either through established channels, or as already available in the public domain. Copies of research articles and working documents were requested following targeted interviews with experts, extensive internet searches and requests to relevant institutions such as the University of Mauritius. Numerical data, records, official and/or working documents, academic publications, research papers, student dissertations, as well as other relevant electronic resources, were obtained through these methods and examined in a systematic manner.

The main limitations of the information presented in this chapter are linked to the challenges of working with secondary data and information to tackle the research objectives:

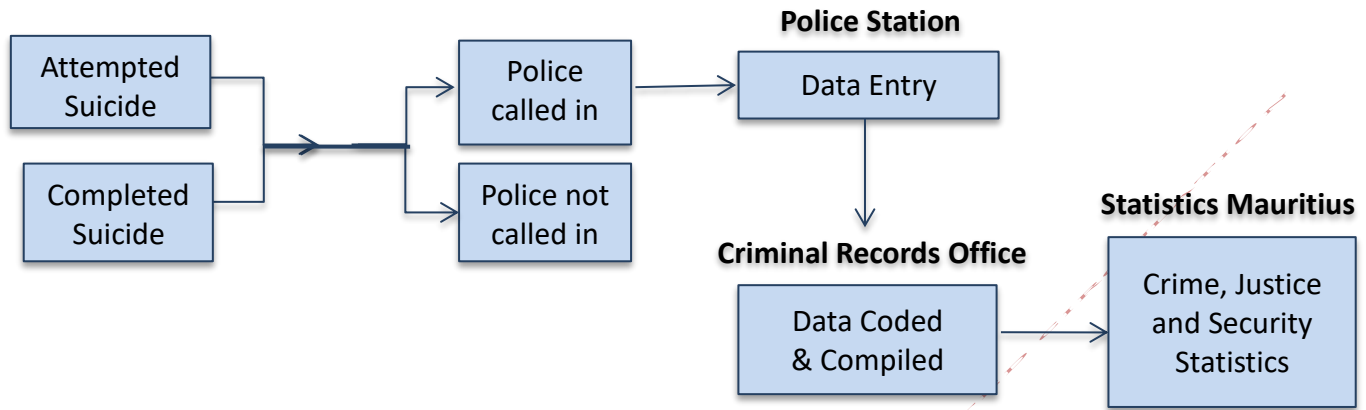
- **Accuracy:** The quantitative data presented in the next sub-sections relies on the differing data collection methods adopted by the MPF and the MoH (mainly). What is considered to be a suicide in Mauritius and how such information is collected and stored are, thus, bound to affect, how the problem of suicide is measured. Issues in this area will, by extension, affect the accuracy and representativeness of the data presented on teenage suicide. Thus, following such issues, completed suicides and attempted suicides in teenagers were not compared to other known causes of death and injury in this particular age-group.
- **Availability:** Although steps were taken to collect relevant data and studies in a systematic manner, detailed information on completed suicides and attempted suicides, inclusive of teenage suicide, could not be obtained from health services.

- **Appropriateness:** Although some research has been carried out on the phenomenon of suicide in Mauritius, these exercises differed in approach, objectives, scope and methods. They also did not focus exclusively on teenage suicide like the present study. As a result, other types of studies which did investigate the risky behaviours and challenges faced by teenagers, but did not factor in suicide, were examined. Moreover the data available from the MPF on attempted suicide did not appear to be representative of the number of suicide attempts noted at national level by the MoH. It would also possible that parasuicides, whereby the intended outcome is not death, but a cry for help, might also be lumped in the category of “attempted suicides”, following the difficulty in separating the 2 since both usually result in serious physical injuries.

### 3.1.2 Data Collection on Suicide in Mauritius

As mentioned above, the quantitative data presented in this chapter for the local context comes from two major, but different sources: the MoH and MPF. These institutions have differing approaches to data capture, collection and storage. These two approaches do not share the same pre-established definition for suicide and do leave room for human error at the level of data capture. This could partly explain the discrepancies in data between these two institutions, as will be observed in the next section, but would not account for instances where these institutions are not called upon.

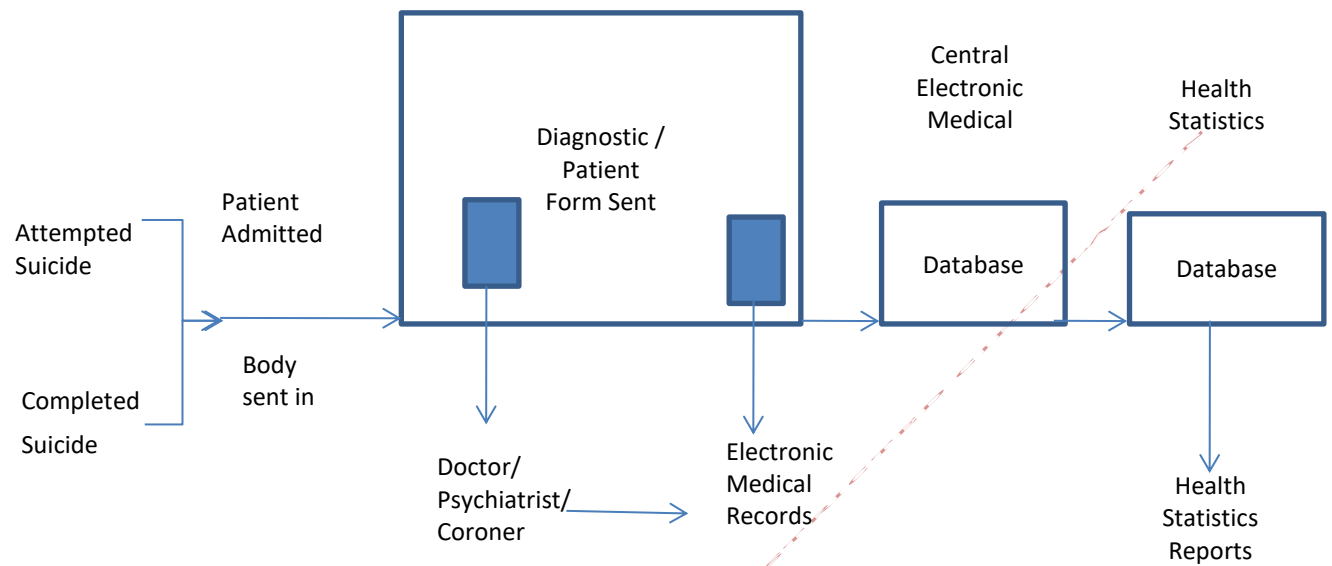
### Data Collection on Suicide within the Mauritius Police Force (MPF)



*Figure 5: MPF data collection system for suicide*

Figure 5 describes the different stages present within the data gathering process on suicide within the Mauritius Police Force. Data entry is performed in police stations depending on whether the police force has been notified of the case or not. The police not being notified is more likely to occur following attempted suicide, than in the event of a completed suicide, although sometimes “accidents” are difficult to classify. Data is coded, compiled and stored in the database of the Criminal Records Office, according to the following codes: D01A, D02A & D03A. Data on suicide is, then, made available upon an official request.

## Data Collection on Suicide within the Ministry of Health



*Figure 6: MoH data collection system for suicide*

Figure 6 describes the different stages present within the data gathering process on suicide within the Ministry of Health. The Medical Records Office within each hospital initiates the coding phase and compiles the patient records which they receive from Doctors and Psychiatrists for Attempted Suicide or Coroner, if it is a completed suicide. Data is coded and compiled according to the International Classification of Diseases 10<sup>th</sup> edition system (ICD10). A list of such codes is shown in Table 3.

*Table 3: ICD10 codes for attempted suicide and completed suicide*

<b>Type of Self-Inflicted Injury</b>	<b>ICD-10 Code</b>
accidental poisoning (usually not included as suicide attempt)	X40-X42, X46, X47
self-inflicted poisoning	X60-X69
self-inflicted injury by hanging, strangulation and suffocation	X70
self-inflicted injury by drowning	X71
self-inflicted injury by firearms and explosives	X72-X75
self-inflicted injury by smoke, fire, flames, steam, hot vapours, hot objects	X76, X77
self-inflicted injury by cutting and piecing instruments	X78, X79
self-inflicted injury by jumping from high places	X80
self-inflicted injury by jumping or lying before a moving object	X81
self-inflicted injury by crashing of motor vehicle	X82
self-inflicted injury by other and unspecified means	X83, X84, Y87
completed suicide	U03

This information is, then, sent to the Central Electronic Records Office where it is further edited and a preliminary disaggregation takes place. From there it is sent to the Health Statistics department where further examination and editing takes place, before the data is examined for its reliability, validity and finally analysed. The “IMPS” software is used for coding and compiling data throughout, whereas the “Epi 6” software is used for data analysis. The output of this process forms part of the “Health Statistics Report” which is usually released every year.

### 3.1.3 Local Suicide Data in Mauritius

The secondary data presented on suicide consists of observations recorded from 2001 to 2014 as seen in Table 4. MoH data refers to cases which were either treated as in-patients or bodies sent for processing at public hospitals. MPF data refers to cases reported to the police for completed suicide. There are some discrepancies between these two main sources since cases that are treated as in-patients at hospitals are not always reported to the MPF. Moreover, both institutions do differ in their approach in collecting data on suicide, as seen earlier. The number of cases recorded by the MoH, thus, constantly appears to be higher. The WHO appears to use the same data recorded by the Ministry of Health in its reports, whereas Life Plus, having no data recording system, relies on data provided by the Commissioner of Police, which is sieved. The sieving process explains the discrepancies with MPH data.

*Table 4: Completed suicide in Mauritius from 2001-2014, by source*

<b>Year</b> <b>Source</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Life Plus</b>	107	92	81	81	99	97	95	84	83	80	102	88	82	27 (up to 30 April 2014)
<b>MPF</b>	118	111	87	93	102	107	101	86	83	90	102	88	82	N/A
<b>MoH</b>	113	131	88	97	102	118	127	84	115	98	118	115	98	120
<b>WHO</b>	113	131	88	97	102	118	127	84	115	98	N/A	N/A	N/A	N/A

*(N/A – Not Available)*

Cases reported by the MoH only refer to cases treated as in-patients or bodies sent for processing in public hospitals but appear to exclude data from private institutions. On the other hand, missing information is often a feature of the data used by the police during the data collection stage in police stations. Other issues pointed to by the MPF which affect the

accuracy of the numbers of suicides recorded are: the difficulty in establishing motive (whether deliberate or not) in some cases of overdose, drowning, car accidents, falls and poisoning. Moreover, according to the Police, some suicides can also be disguised as accidents by friends and family because of the taboo and stigma associated with such an act. However, all cases of suicide are inquired upon by the Police to rule out foul play. Homicides may in some cases also be made to look like suicides. As pointed by Belle Rose (2004) who used similar data for retrospective analysis in her dissertation, research carried on this subject matter means relying on the skills of the collectors as well, who might not always be objective. These limitations would also extend to the number of teenage suicides recorded and reported as such.

As seen in Figure 7, using these different data sources has several implications on how suicide is viewed as a phenomenon in Mauritius. Unchecked use of such information and differing institutional criteria for recording completed suicide cases are likely to affect past, present and future perceptions of the magnitude of suicide in Mauritius, as well as related responses. For instance, according to the MPF, there were a total of 1250 cases of completed suicide from 2001 to 2013. Life Plus and the MoH, on the other hand, report 1171 and 1404 cases, respectively, indicating the omission of 70 to 154 cases. The data from the MoH also indicates a greater fluctuation between the number of cases recorded from year to year, as well as a greater number of cases on average per year. Such data also implies a decreasing trend in suicides for the 2001 to 2013 period, which is likely to continue in the next few years. The data recorded by both the MPF and Life Plus also suggests the same trend.

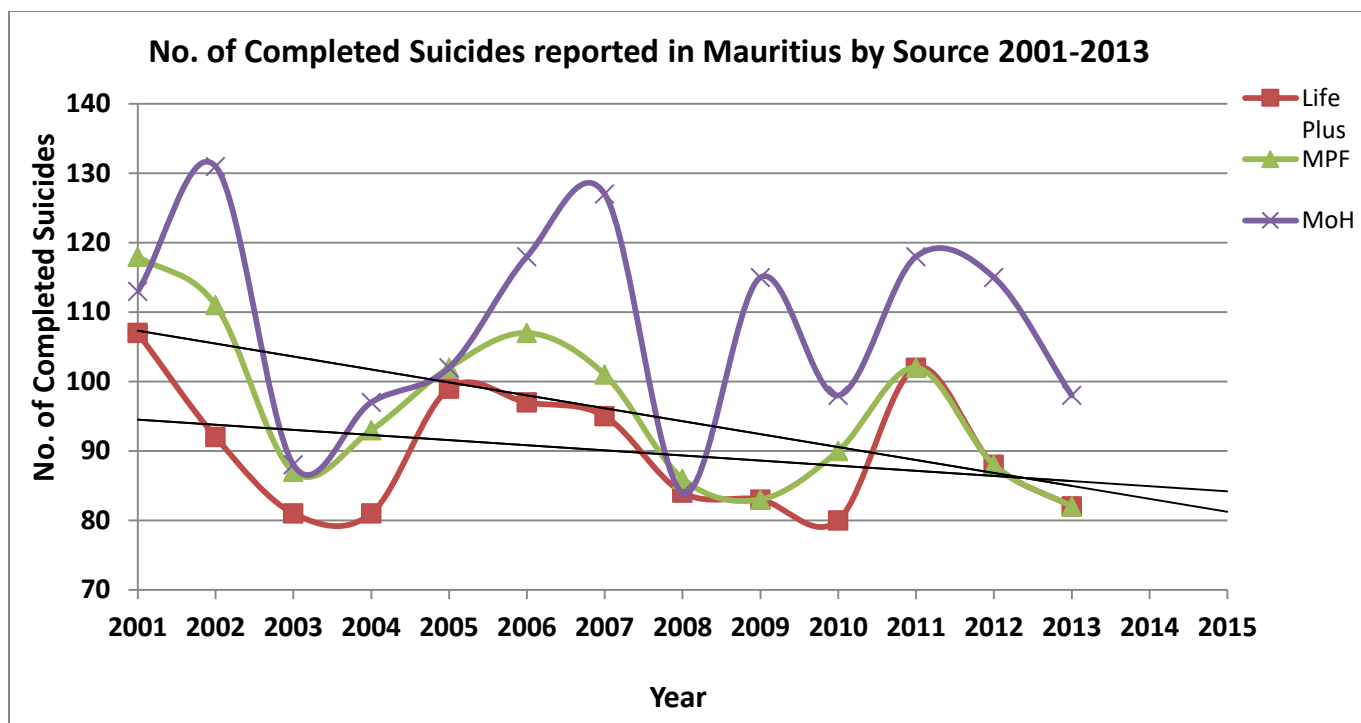


Figure 7: No. of completed suicides reported in Mauritius by source, 2001-2013 (Sources: MoH, Life Plus, MPF)

Figures on attempted suicide were obtained from the MoH (absolute numbers, disaggregated by sex) and MPF (records disaggregated by age and sex but incomplete) for 2011 to 2013, as seen in Table 5. The differences noted between these two sources (on a ratio of 2:5 at times) are even more striking mainly because significantly less attempted suicides are reported to the police.

Table 5: Attempted suicide in Mauritius from 2011-2013, by source

Year/Source	2011	2012	2013
MoH	1023	1034	1061
MPF	489	420	399



The numbers reported in the above table by the police have been adjusted for age and survival following attempt. For instance, 499 cases were actually recorded by the police for the year 2011 but nine cases have been omitted from the reported figure, as they referred to children aged less than five years old, and an additional one was also subtracted, since the victim died, making it a completed suicide. The same criteria were applied for cases reported for 2012 and 2013. Local experts do agree that both attempted suicides and completed suicides for those aged 5 years old, or less, should rather be seen as accidents as it is highly doubtful that such young children could be fully aware of the consequences of their acts. It is also possible that for some recorded cases for those aged less than five to actually be attempted homicides, acts of extreme cruelty and/or neglect towards children, in disguise, depending on who reported the case to the police.

It is also important to note that in general terms, figures for attempted suicide refer to the number of attempts themselves, not to the number of individuals who make those attempts. This subtle difference does imply that some individuals make several attempts as opposed to just one (especially in cases of parasuicide), which should be recorded each time but might not be at times. As pointed out by Belle Rose (2004), the actual number of people attempting suicide is usually less, but sometimes equal, to the number of attempted suicide cases for a given year. She also observed that despite the number of cases reported by the MoH being higher than those recorded by MPF, not all cases are treated as in-patients in public hospitals. This would again point to under-reporting if private health care institutions are to be taken into consideration. As seen previously for completed suicides, the purposeful misreporting of cases of attempted suicides again points to the stigma and taboo experienced by both the victim and their environment following such an act. Such shortcomings would, thus, suggest major under-reporting for both completed suicides and attempted suicides in Mauritius and by extension, hints at the potential existence of an epidemic of suicidal behaviour. The significant number of cases already recorded by the MoH suggest at the very least 1150 suicide cases per year (attempted + completed) which only account for those cases treated or recorded in public hospitals and do not include those not reported, or those treated in the private sector. Since an epidemic is defined as 1 % of a country being affected,

(approximately 1300 cases in Mauritius following the size of its population) and although the number of completed suicides appear to be decreasing, this is offset by the increase in attempted suicides observed in recent years.

Out of the different data sources, the MoH data appears to be the most reliable and most representative of the local context. On the other hand, data from the MPF contains more variables and detailed information such as age, sex, location, method, etc. Hence, both are useful in portraying a more realistic picture of the magnitude and related trends of suicidal behaviour in Mauritius. Though efforts have been made to improve quality of the data being used for this study, these should only be seen as proxy indicators of the actual situation in Mauritius. As mentioned before, there are distinct lapses in the accuracy and reliability of the data obtained.

### **3.1.4 A Comparative Perspective on Suicide in Mauritius**

In order to position Mauritius to the rest of the world in terms of suicide, the suicide rates for a number of countries have been compared. As seen in figure 8, according to a comparative exercise carried out by the World Health Organisation (WHO) among 134 countries in 2009, Mauritius had a rate of 8.3 suicides per 100,000 of its population.

Such crude “suicide rates” compiled by the WHO are based on Age-Specific Death Rates (ASDR) for what is classified as “International Self-Harm” per 100,000 of a population. It is a useful indicator which establishes the number of cases likely to occur for a given 100,000 individuals within a country. A suicide rate of 8.3 cases per 100,000 for Mauritius, thus, suggests roughly more than a 100 cases of completed suicide, in absolute numbers for a population of 1,237,283 in 2009. At country level, such data is coded and compiled according

to the International Classification of Diseases 10<sup>th</sup> edition system (ICD10) by the MoH and stored on the WHO's online Global Mortality Database.

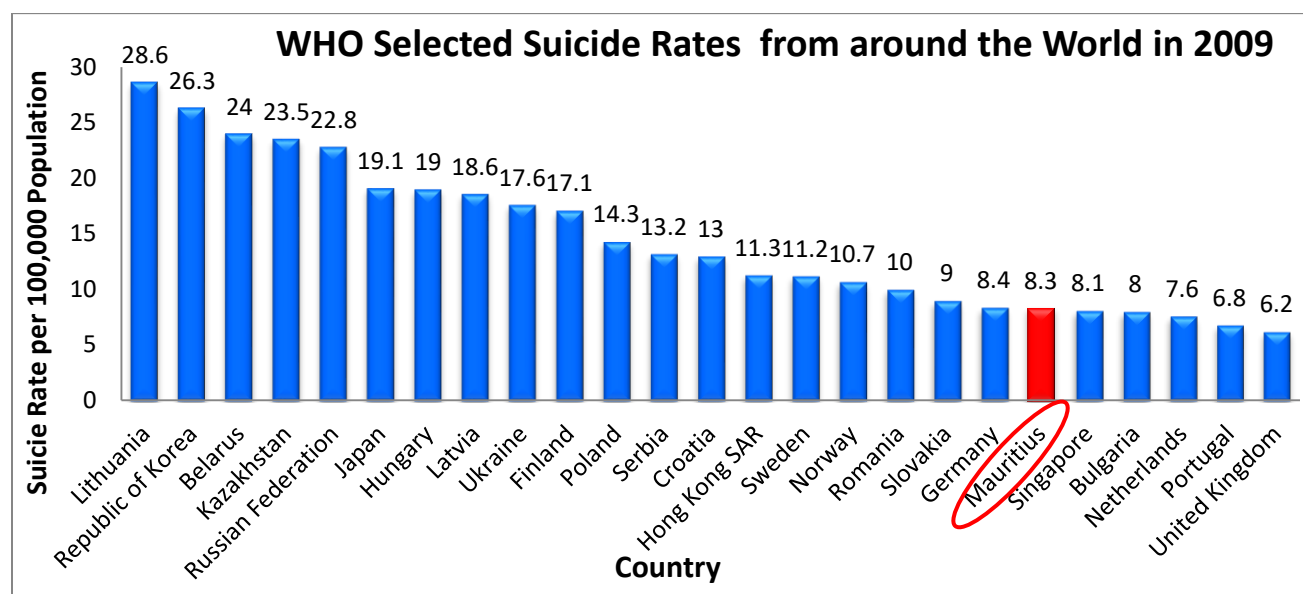
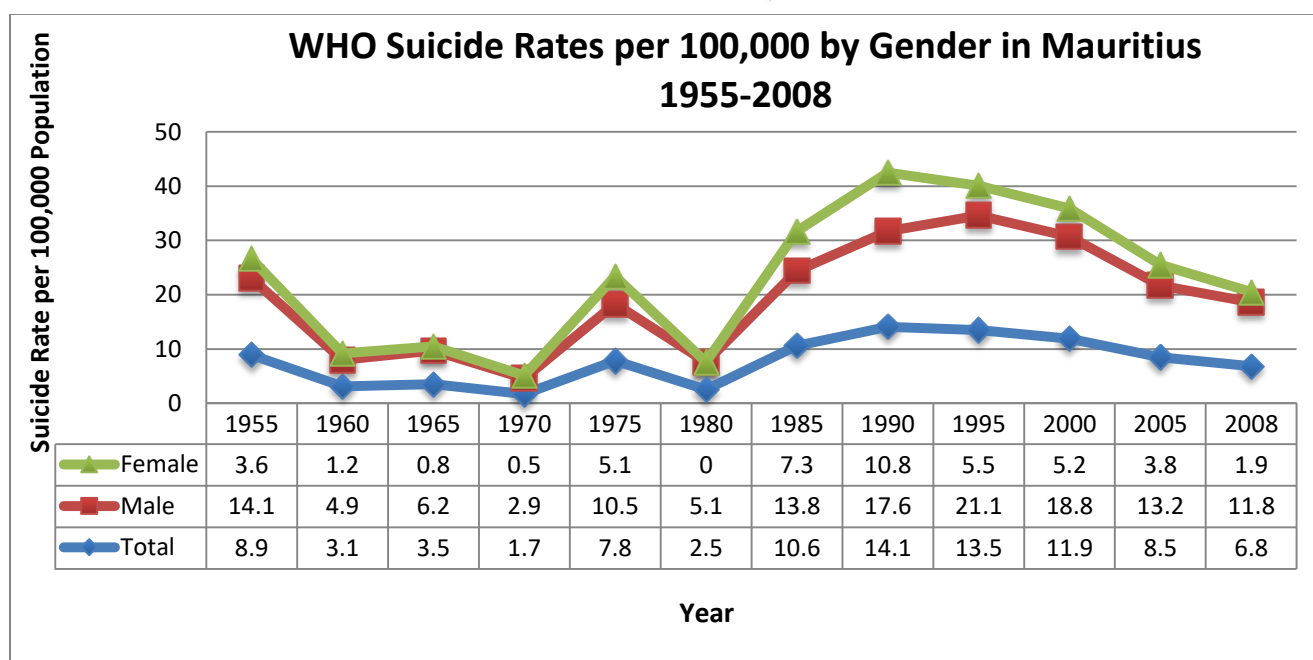


Figure 8: WHO selected suicide rates (ASDR) from around the world in 2009 (Source: WHO, 2009)

It can also be seen from figure 8 that the Mauritian suicide rate for 2009 was significantly lower than the ones prevailing in both Eastern European and Nordic countries such as Lithuania (28.6), the Russian Federation (22.8), Ukraine (17.6), Finland (17.1) and Norway (10.7). This also applies to Asian Countries such as the Republic of Korea (26.3) and Hong Kong (11.3). Standing at 8.3 per 100,000, the suicide rate for Mauritius was only slightly lower than Germany's (8.4) and slightly higher than the ones prevailing in higher income countries such as Singapore (8.1) and the United Kingdom (6.2). While comparing the suicide rate prevailing in Mauritius with other countries allows to put the Mauritian situation into perspective, this exercise does not allow for a comprehensive world or regional ranking to take place, since out of a 134 countries surveyed by the WHO, only 47 countries provided such information. The year 2009 was chosen as a comparative time period despite the same

information being collected again in 2010 since even less countries provided such information then.

According to the WHO, Mauritius has been grappling with the phenomenon of suicide for several decades as seen in Figure 9. It is important to note that the suicide rate which was recorded as 8.9 cases per 100,000 in 1955, at 3.5 in 1965, at 7.8 in 1975, at 10.6 in 1985, at 13.5 in 1995 and at 8.5 in 2005. This trend shows that while there have been some fluctuations over the past decades, the suicide rate does appear to be decreasing in more recent years. Consistent with observations made in the previous chapter, the ratio of male to female suicide rates in Mauritius has been significantly and constantly higher for men than for women over the past few decades. An all-time high of 6:1 was recorded in 2008.



*Figure 9: WHO suicide rates per 100,000 by gender in Mauritius from 1955 to 2008 (Source: WHO, 2010)*

The rates reported by the WHO for Mauritius are very important since these have sometimes been used by international researchers carrying out comparative studies on suicide and mental health over time. Thus, using WHO data, Shah (2012) found that in 1995 suicide rates increased with ageing in many countries with an exception being found for female suicide rates in Mauritius, Colombia, Albania and Finland. Bertolote & Fleischmann (2002), as well as Gvion & Apter (2012), also observed that when the data are separated according to WHO region, the highest rates in each region, with the exception of Europe, are found in island countries, such as Cuba, Japan, Mauritius and Sri Lanka. Finally, Chang *et al.* (2013) found that among 54 countries reviewed, Mauritius was one of the countries where the global economic crisis (using decrease in national GDPs and unemployment rates as indicators) may have caused the increase in the number of suicides among men in 2009 by ten cases while a decrease of four cases was noted among women.

While such observations do place the suicide rates for Mauritius presented into perspective, they do not allow for a more comprehensive understanding of suicide to be reached within the local context. Such issues are, hence, examined in the later in the report.

### **3.2 Trends in Teenage Suicidal Behaviour in Mauritius**

This section presents the trends in teenage suicidal behaviour in Mauritius by outlining a short summary of the recent trends from 2001 to 2013 followed by a comparison of teenage suicide in Mauritius with the rest of the world. The next section presents some disaggregated teenage suicide statistics as well as data to illustrate the profile of teenage victims of completed suicide.

### 3.2.1 Summary of Recent Trends in Teenage Suicide in Mauritius

Recent figures on teenage suicide attempts in Mauritius report 271 cases in 2012 and 263 cases in 2013 (Table 6 from Ministry of Health and Quality of Life, 2015). It is important to note that these cases also include subsequent death as a result of suicide attempts treated as in-patient in General Government Hospital. However, the number of subsequent deaths is believed to be amounted to only a few cases. These figures differ greatly from the 2011 figures where 90 cases of suicide attempts have been recorded among teenagers in 2011. As such, a sharp increase in the number of teenage suicide attempts is noted from the period 2011 to 2013. It is also noteworthy that in these attempts, there is a clear gender imbalance with girls systematically being over-representative of such cases.

*Table 6: Teenage suicide attempts (including deaths) for years 2012 and 2013 (Source: MoH, 2015)*

Year	2012			2013		
Age Group	Male	Female	Both Sexes	Male	Female	Both Sexes
13 - 19	93	178	271	100	163	263

In terms of completed suicide, according to Seerungen (1998), suicides among young people has been increasing since the 1960's, especially among the 15-24 age-group, which includes adolescents. This perception has consequently been validated by the Ministry of Social Security, National Solidarity and Reform Institutions (MoSS) study (1997) which provided a useful baseline to the present study by showing that the percentage of suicide in the age-group 12-20 years accounted for 14% of all the cases recorded. The suicide rate in that particular age-group was 8 per 100,000 population for males and 9 for females (during the 1992-1994 period). This implied:

- a rather high suicide rate compared to the overall rate found in the study at 10 per 100,000 of population.
- a greater risk in female teenagers as opposed to male teenagers.

The UoM (2011) study, on the other hand, reported a suicide rate of 2.1 per 100,000 for those in the <20 years age-group, which included teenagers or those aged 13 to 19 years during the 2000-2010 period.

Validating these findings by carrying out a systematic comparison of these past findings with a more recent dataset is problematic since the data available for this particular age-group is not consistent as seen in Table 7. Thus, in the interest of consistency, as well as following issues related to access, the data provided by the MPF will be used. As mentioned previously though, such data does have its limitations. Hence, as mentioned earlier, when referring to completed suicides, any observations made during the following sub-sections, using MPF data, should only be taken as proxy indications of the actual state of teenage suicide in Mauritius.

*Table 7: No. of completed teenage suicides from 2005-2014*

<b>Source/Year</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>Total</b>
MoH	5	8	13	4	13	9	7	11	14	11	95
MPF	4	7	13	4	8	12	13	10	N/A	N/A	N/A

Teenage suicide here refers to deaths classified as intentional which have occurred for those aged between 13 to 19 years old. Thus, 117 such cases have been recorded by the MPF during the 2001-2013 period. The average number of completed teenage suicides for the

2001-2013 period was nine deaths per year. The average for females was 4.3 cases and 4.7 cases for males, per year. 56 cases, or 48 % of all cases, were observed among females and 61 cases, or 52 %, were observed among males, during that same time period. It could, thus be implied that nowadays teenage males are slightly more at risk than teenage females, despite previous research findings from the MoSS study (1997).

Figure 10 illustrates the recent fluctuations in overall teenage suicide rates in Mauritius, as well as the rates specific to both sexes within the 2001-2013 period.

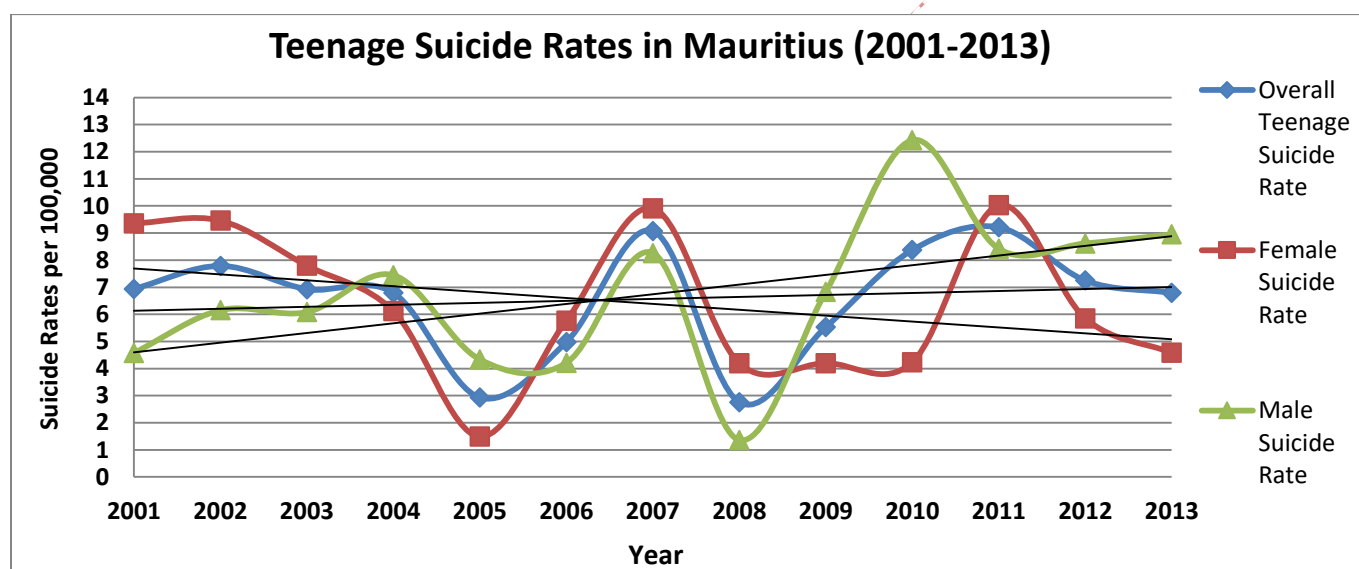


Figure 10: Teenage suicide rates (2001-2013) (Source: MPF, 2014)

In general terms, the resulting suicide rates, computed per 100,000 of the teenage population, appear to show a constant increase in both total rates and male rates. On the other hand, suicide rates for females appear to have steadily decreased over the years. Hence, as seen in figure 10, overall teenage suicide rates varied from 2.7 to 9.2 cases per 100,000 during the 13-year period. Male suicide rates varied from 1.36 to 12.4, whereas female suicide rates varied from 1.48 to 10.



### 3.2.2 A Comparative Perspective of Teenage Suicide

According to Wasserman, Cheng & Jiang (2005), the teenage suicide rate in Mauritius in 2000 (here defined as suicides occurring within the 15-19 years age-group per 100,000) was 12.42 per 100,000, making it one of the highest in the world when compared with higher income countries. Moreover, table 8 shows that the average suicide rate for selected countries, inclusive of Mauritius, over the past few decades, according to the WHO data available.

*Table 8: Suicide rates per 100,000 young persons aged 15-19 in 90 countries (areas), according to the WHO Mortality Database, February 2004 (Source: Wasserman, Cheng & Jiang, 2005)*

	<b>Males</b>			<b>Females</b>			<b>Total</b>		
<b>Selected Country\Year</b>	<b>1965- 1979</b>	<b>1980- 1989</b>	<b>1990- 1999</b>	<b>1965- 1979</b>	<b>1980- 1989</b>	<b>1990- 1999</b>	<b>1965- 1979</b>	<b>1980- 1989</b>	<b>1990- 1999</b>
Mauritius	5.08	6.16	11.69	9.02	11.06	13.17	7.04	8.58	12.42
Canada	13.75	20.74	19.85	3.38	3.65	4.95	8.66	12.4	12.59
USA	10.22	15.3	16.48	2.84	3.66	3.38	6.57	9.59	10.11
Hong Kong	3.01	3.38	5.87	4.65	3.63	4.95	3.81	3.5	5.43
Japan	10.61	7.46	6.6	6.91	3.99	3.24	8.79	5.77	4.96
Singapore	4.99	5.19	6.33	7.48	7.42	4.37	6.20	6.27	5.38
Australia	9.12	14.13	16.89	3.5	3.05	4.15	6.37	8.72	10.68
New Zealand	7.49	17.51	28.6	2.96	4.24	9.8	5.28	11.01	19.33
Non-European countries	10.34	13.17	13.83	4.08	3.78	3.59	7.25	8.58	8.84

It can be seen from table 8 that the 90's were the worst decade for teenage suicide in Mauritius with an overall average rate of 12.42 cases per 100,000 of the population. Average rates for teenage suicide during that decade were 11.06 cases for females and 11.69 cases for males. Such rates were significantly higher than the ones observed in Non-European countries during the same time period (8.84), as well as when compared to higher income countries such as Japan (4.96), the U.S. (10.11), Australia (10.68) and Singapore (5.38), etc.

On the other hand, figure 11 shows the most recent teenage suicide rates available in selected OECD countries. These suicide rates only pertain to those aged 15-19 years old. An average was devised for the Mauritian Teenage Suicide rate during the 2001-2013 period for comparative purposes, as well as to adjust for the smaller population size of Mauritius and, hence, the occurrence of suicide within the population of that particular age group.

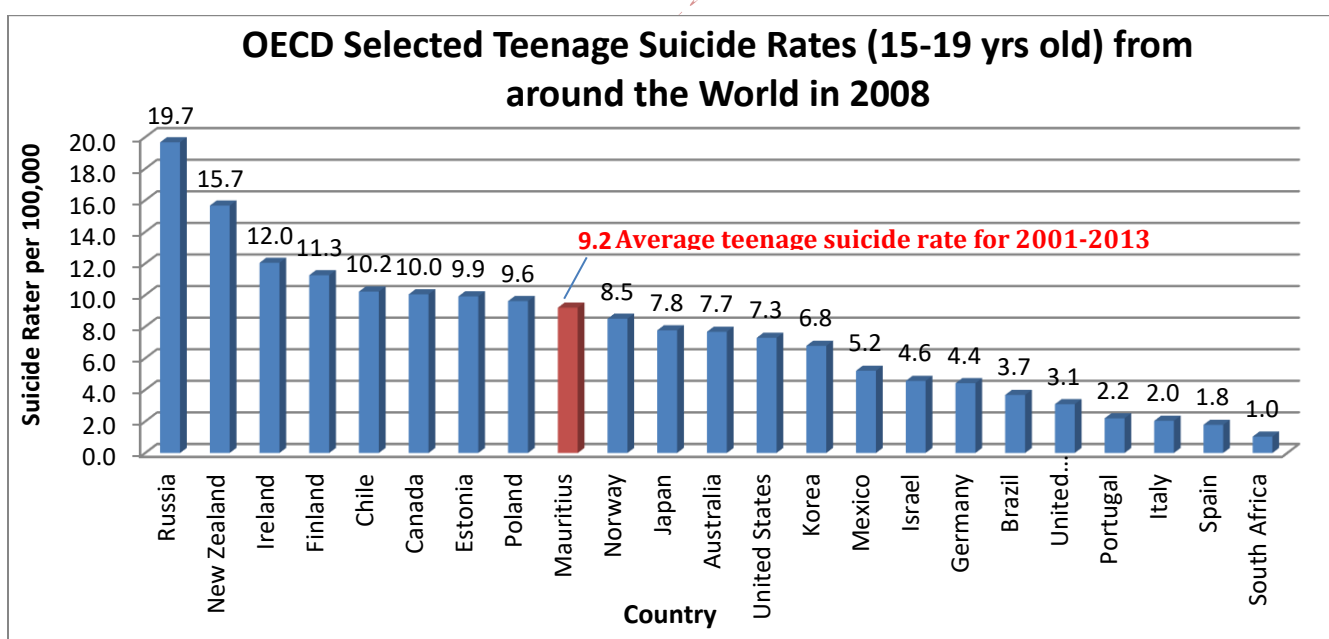


Figure 11: OECD selected teenage suicide rates (15-19 years old) from around the World in 2008

(Source: OECD, 2014)

At 9.2 cases per 100,000 of the teenage population, it can, thus, be seen that the average teenage suicide rate for Mauritius is significantly higher than circa rates shown for more developed countries such as Norway (8.5), Australia (7.7), the United States (7.3), Germany (4.4) and South Africa (1.0), to name just a few examples. It is, however, much lower than in countries such as the Russian Federation (19.7), New Zealand (15.7), Ireland (12.0) and Canada (10). Such an average for Mauritius is also lower than the average teenage suicide rate computed for the 90's but is still higher than the rates attributed to the 90's and 70's.

### **3.2.3 Disaggregated Teenage Suicide Data**

This sub-section presents local teenage suicide data disaggregated by age group, sex, method used, region and month reported.

#### **Age-Group & Sex**

Table 9 provides an overview of trends in teenage suicides according during the 2000-2013 period.

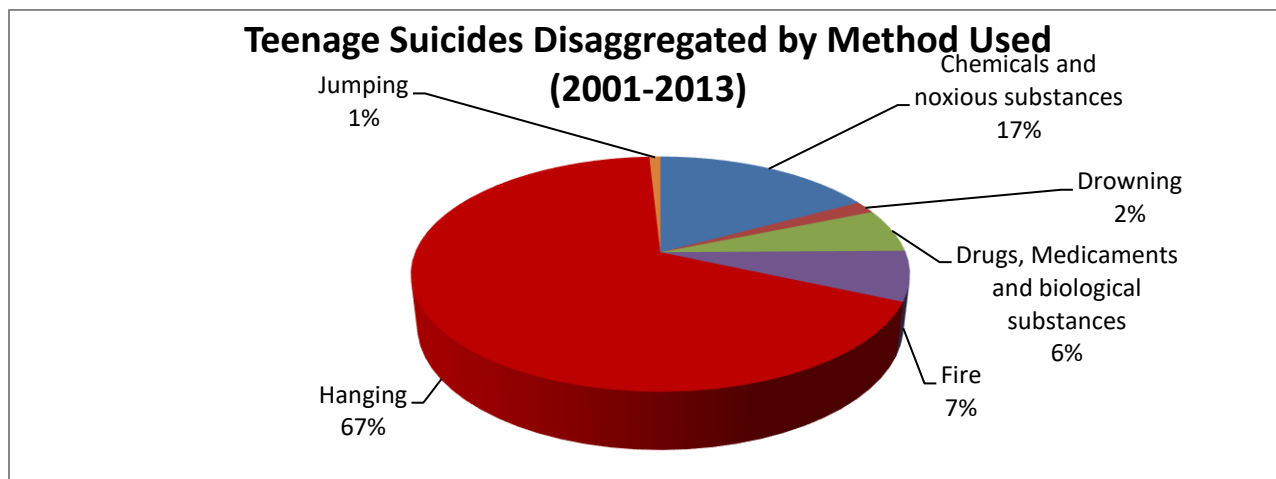
*Table 9: Teenage suicides disaggregated by age-group and sex (2001-2013) (Source: MPF, 2014)*

Age-Group	Male Cases	Female Cases	Total No. of Cases	Percentage (%)
13	1	0	1	0.85%
14	5	5	10	8.5%
15	13	10	23	19.7%
16	7	18	25	21.4%
17	12	8	20	17.1%
18	9	6	15	12.8%
19	14	9	23	19.7%
<b>Grand Total</b>	<b>61</b>	<b>56</b>	<b>117</b>	100 %

As it can be seen from table 9, the most at risk age groups appear to be those aged 16 with 21.4 % of all cases recorded, followed by those aged 15 (19.7%) and 19 (19.7%). 50 % of all female teenage suicides were found in the 15 (18%) to 16 (32%) age groups, implying that girls in that particular age-group are potentially more at risk. Among males those aged 15 (21%), 17 (20%) and 19 (23%) were found to be the most at risk.

### **Method Used**

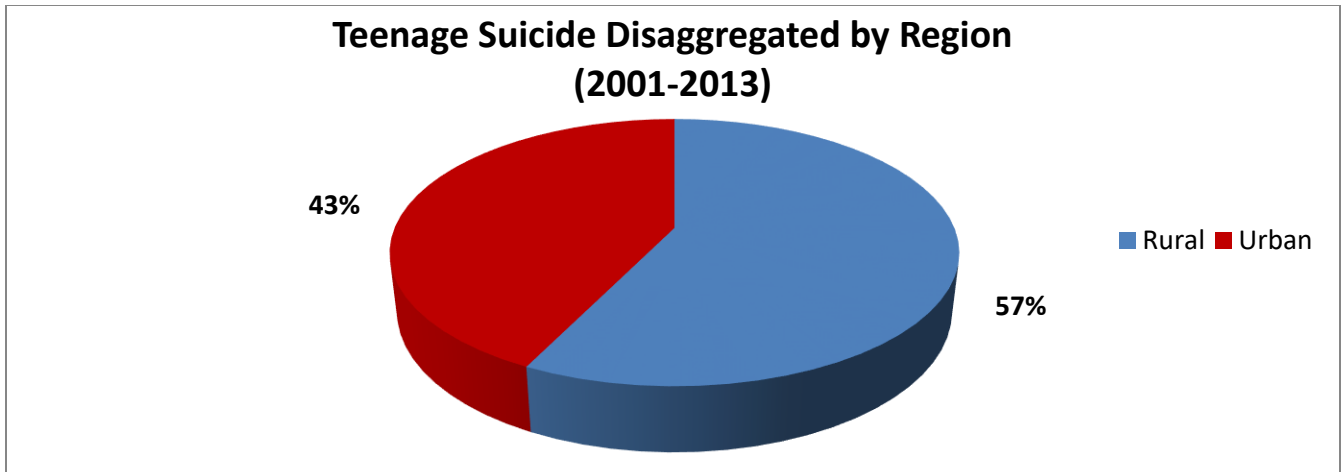
Figure 12 shows teenage suicides disaggregated by the methods used during the 2001-2013 period. Hence, out of the 117 cases of completed suicides recorded among adolescents, hanging appears to be the most popular method with 79 cases, representing 67% of all cases recorded by the MPF. Chemicals and noxious substances accounted for only 20 cases representing 17% of all cases 20 cases. Death by fire, or self-immolation (7%), was actually preferred to using pills, drugs, etc (6%). Out of the 61 cases recorded for teenage boys, hanging was used in 47 cases (77%), followed by absorbing noxious substances in 8 cases (13%). Girls were more likely to use hanging as well, with 57 % cases or a total of 32 cases, followed by absorption of chemicals with 21% or 12 cases. In general terms such findings appear to be consistent with observations made previously for adults.



*Figure 12: Teenage suicides disaggregated by lethal methods used (2001-2013) (Source: MPF, 2014)*

### **Region**

Figure 13 shows the distribution of teenage suicides according to region for the 2001-2013 period. Out of the 117 cases 67 cases, or 57 % of all cases, were recorded in rural regions whereas 43%, or 50 cases, were found in urban regions. Such observations are consistent with findings made concerning completed suicides among adults. The location of the teenager who committed suicide was unknown in 8 cases. Among the remaining 109 cases the most common location of victims included: Port-Louis with 14 cases (12%), followed by Curepipe with 10 cases (9%), Vacoas with eight cases (6%) and Beau-Bassin with six cases (5%).



*Figure 13: Teenage suicides disaggregated by region (2001-2013) (Source: MPF, 2014)*

### **Month Reported**

On average, there were three suicides every four months in a year during the 2001 to 2013 period. As it can be seen in Figure 14, there appears to be a recurrent increase during the first quarter of every year in the overall number of cases, female cases and male cases, followed by a decline until the month of July. The same increase in the number of completed suicides seen in adults can be noted in April as well as during the third quarter of the year (July to September) for all three groups.

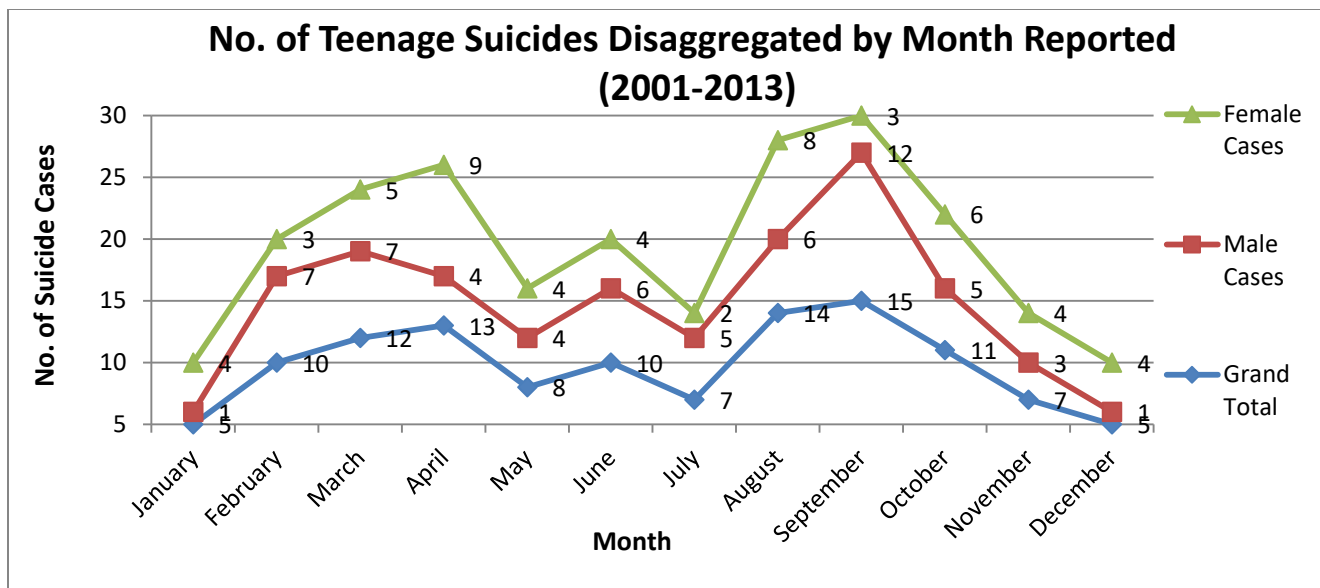


Figure 14: No. of teenage suicides disaggregated by month reported (2001-2013) (Source: MPF, 2014)

The fluctuations in the quarterly distribution of teenage suicides could be related to:

- The beginning and end of the first term as the number of cases appear to increase in February and decrease as from the Easter Holidays in April.
- The beginning of the third term, as the number of cases appear to increase as from August to September. This can be a very stressful period because of the high expectations being placed by the family, teachers, and friends, at the approach of end-of-year/final exams.

### 3.2.4 Profile of Teenage Victims of Completed Suicide in Mauritius (2001-2013)

Since there are only slightly more male cases than female cases of teenage suicide according to the data available for this study, two separate profiles can be observed as seen in table 10:

*Table 10: Profile of teenage suicide victims (2001-2013) (Source: MPF, 2014)*

	<b>Male (52%)</b>	<b>Female (48%)</b>
<b>Most Affected Age-Groups</b>	15 yr (21%) 19yr (23%)	15-16 yr (50%)
<b>Methods Used</b>	Hanging (77%) Noxious Substance (13%)	Hanging (57%), Noxious Substances (21%)
<b>Most Affected Regions</b>	Rural (57%) Urban (43%)	Rural (57%) Urban (43%)
<b>Time of the year</b>	March-April (18%) August-September (29.5%)	March-April (25%) August-September (19.6%)

While such profiles do not claim to be exact predictors for teenagers who may try to kill themselves, the information presented in table 10 could be used to target suicide prevention efforts, both within and outside secondary schools.

### 3.3 Causes of Suicidal Behaviour in Mauritius

Although there is scarce academic data on the causes of suicidal behaviour in Mauritius, the following section will provide an overview of related research, both published and unpublished, carried out on this subject matter. A study from the Ministry of Social Security, National Solidarity and Reform Institutions (MoSS, 1997) and the MIH study (2005) will be used to review the causes of completed suicides and attempted suicides. While it is likely to find an overlap between the causes of completed suicide and attempted suicides, differences are still to be expected because of the inclusion of parasuicides in the cases interviewed in the MIH Study and the information was obtained posthumously from parents, relatives and friends in the MoSS study. The rationale for including and reviewing unpublished work such as student projects from the University of Mauritius or articles in the press, is for the added



benefit of seeing suicidal behaviour through both the eyes of young people and from the perspective of the public at large. While such empirical findings can provide some insight into how suicidal behaviour is perceived in the local context, no generalisations can be made based on such work.

### **3.3.1 Causes of Completed Suicide in Mauritius**

As seen in the previous chapter, there are various “perceived” causes of completed suicide since victims cannot answer questions and the information gathered from close ones via what is referred to as a “psychological autopsy” cannot be expected to be a 100% objective and accurate. This is in part due to both the retrospective, highly subjective and emotionally charged information being requested. Thus, according to the MoSS (1997) who carried out such a study, two main types of causes were identified: psychosocial/social conditions and psychiatric.

#### **Psychosocial Causes/Social Conditions**

MoSS (1997) identified the following risk factors or psychosocial causes which could lead to suicidal behaviour and completion:

##### **1. Depressive features**

Feelings of guilt, loss of self-esteem, rejection and loneliness, hopelessness, worthlessness, helplessness and insecurity made worse/strengthened by lack of support by close relatives and others (whether real or perceived by the victim at the time).

## **2. Main stress factors**

Bereavement following recent loss of loved ones (children, husband, wife and other close relatives) through death or separation.

Social isolation and an unsympathetic attitude of relatives which was perceived as either real or exaggerated by the victim.

Financial difficulties through unemployment, loss of employment or absence of stable employment, which led to dependency on others.

## **3. Other stress factors**

Frequent and persistent marital conflicts leading to harassment and either verbal or physical violence, enhanced by alcohol consumption. It has been observed that in many such conflicts, in-laws played a negative role and so did extramarital affairs, dependency on a partner, lack of support and understanding, different lifestyles, different ethnicities, leading to maladaptation and frustration.

## **4. Presence of a disabling painful or serious physical illness**

This was noted as a problem for a previously active, robust and energetic person, for example, rheumatoid arthritis, organic brain syndrome leading to paralysis of limbs, etc. Other physical issues included incapacitating injuries, chronic bronchial asthma, chronic skin lesions, sexual difficulties, physical deformities and terminal illnesses like cancer.

## **5. Postpartum depression**

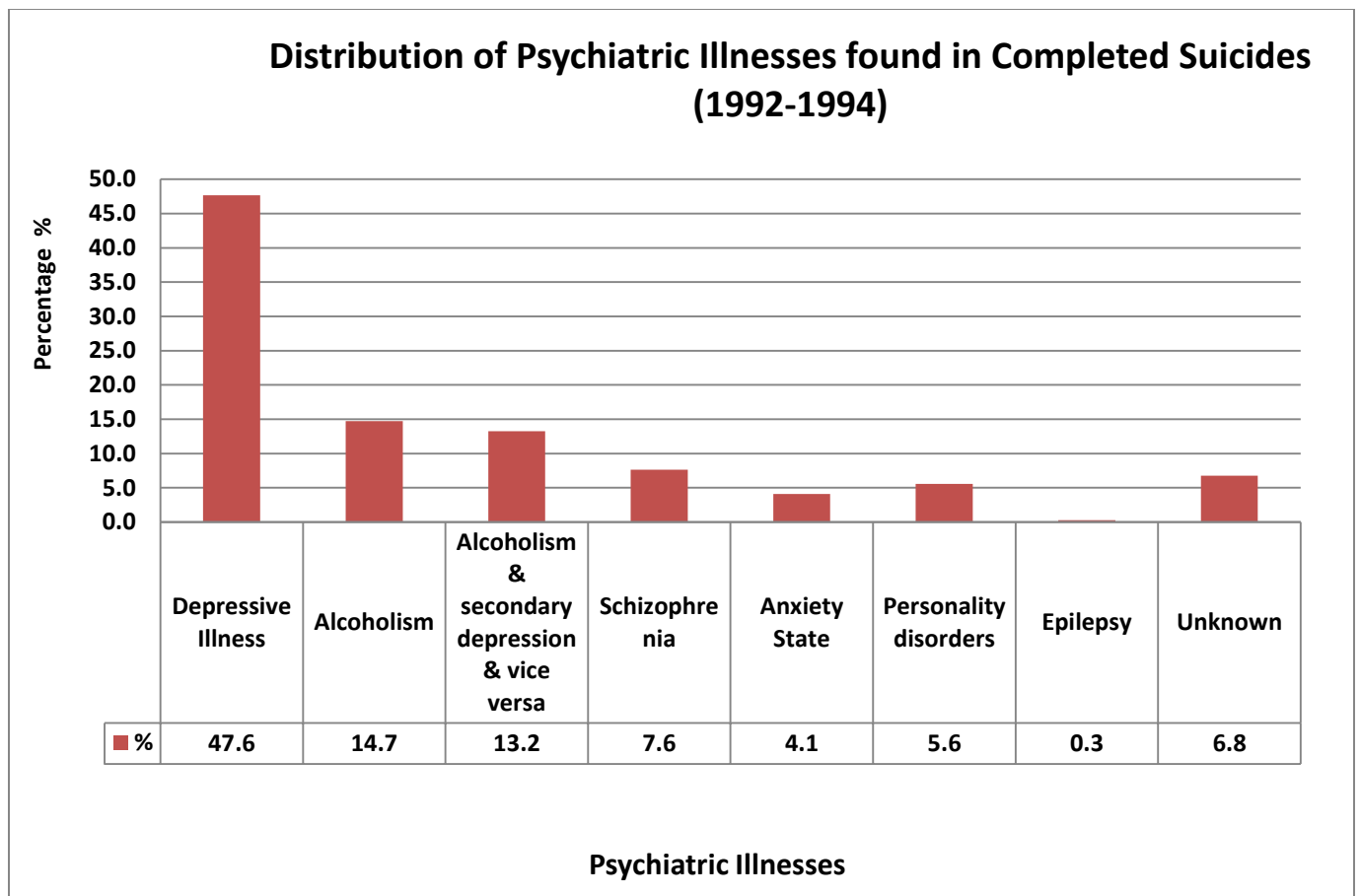
This was found in five cases where lack of awareness and support within the family and an already negative home environment were made worse by no access to psychiatric care.

## 6. Exposure to suicide

Exposure to such an event appeared to be an important cause as well, since 14% of the victims had experienced suicides among their family members or friends and may have been influenced by such acts. 17% of female victims had experienced such exposure compared to 13% of males. Out of the 48 victims who had been exposed, 34 used the same methods which had been previously used by a friend, relative or family member, implying what is referred to as “Cluster Suicide”. Women were observed as being more prone to using the same methods.

### **Psychiatric Illnesses**

Such illnesses appeared to be overwhelmingly present among the 340 cases investigated as shown in figure 15.



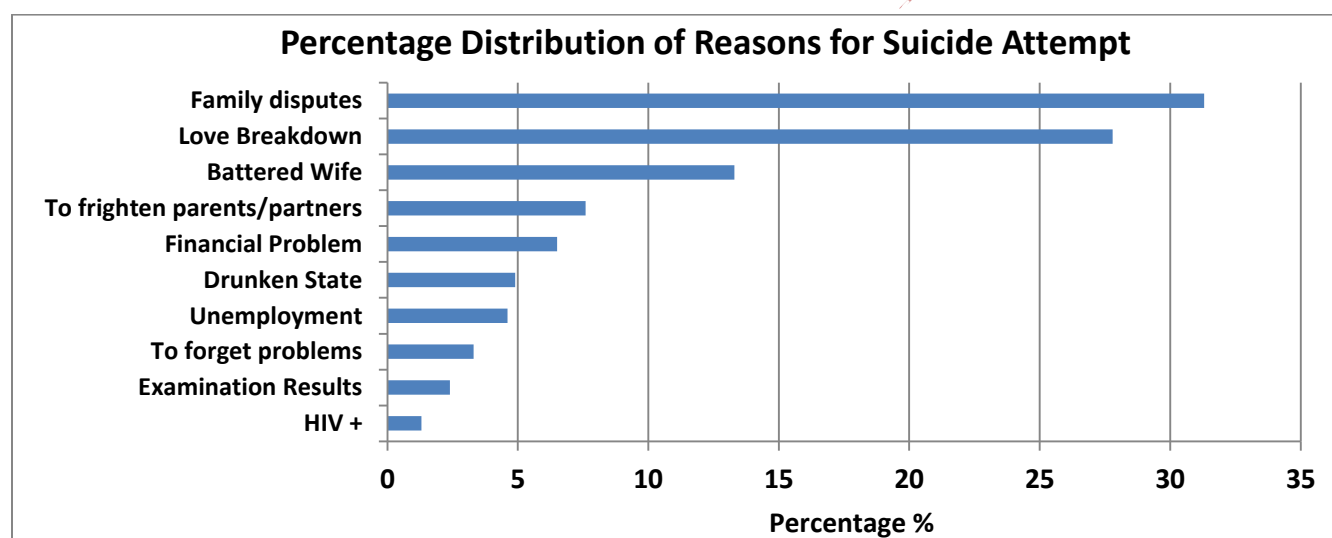
*Figure 15: Distribution of psychiatric illnesses found in completed suicides (1992-1994)*  
*(Source: MoSS, 1997)*

It was, thus, established that 93% of the people who completed suicide had some psychiatric illness. Depressive illnesses, alcoholism, alcoholism & secondary depression & vice-versa made up 76% of cases. The exact nature of the disorder could not be established in 7% of all cases. A more detailed analysis of depressive illness by age-group showed that prevalence in cases of those aged 21-30 was the highest with 50 cases (31 males and 19 females), followed by those aged 31-40 with 41 cases (23 males and 18 females) and those aged 12-20 with 30 cases (10 males and 20 females). It is, however, to be noted that such statistics should not be taken at face value. While mental illness plays a significant role in suicide, not all forms of mental illness can be classified as a psychiatric disorder, especially when

diagnoses were reached posthumously and were based on information received from relatives, parents and friends.

### 3.3.2 Causes of Attempted Suicide in Mauritius

Figure 16 shows the percentage distribution of reasons for suicide attempt according to the MIH (2005) survey:



*Figure 16: Percentage distribution of reasons for suicide attempt (Source MIH, 2005)*

As it can be seen from figure 16, the main reasons given were of an interpersonal nature with family disputes and love break down as the two most important reasons. This was followed by violence within the family i.e. domestic violence and an extreme form of emotional blackmail or warning i.e. to frighten parents/partners” which would suggest the presence of parasuicides among cases since such reasons do not appear to demonstrate a genuine desire

to die. The MIH (2005) study also identified three distinct categories of causes, or risk factors, linked to suicide: individual, family and societal. The following sub-section, therefore, provides an overview of the main factors identified in these three categories, when compared to control cases.

### **Causes: Individual Risk Factors**

Individual risk factors identified were further sub-classified into the following categories: childhood trauma, socio-economic disadvantage, losses, stress, substance abuse, anti-social behaviour, previous suicide attempts, mental illness and suicidal ideation, depression and depression co-variates.

#### **1. Childhood Trauma**

Physical and sexual abuses were found to have played an important role among those who attempted suicide. Physical abuse by adults was noted in 22.3% cases, compared to 12.1% in the control population. Sexual abuse by adults was three times more likely to have been experienced in cases with 9.9 %, when compared to only 3% in the control population. Sexual abuse by peers was even more prominent among cases, with 7.1%, compared to 2% in the control group.

#### **2. Socio-economic Disadvantage**

Higher education and higher unemployment were found among cases when compared to the control population. 36.3 % of cases had received primary education compared to 28 % in the control population. 40.5% of cases had received secondary education compared to 33.4% in the control population. However, cases were less likely to have an SC or HSC certificate with only 19.3%, compared to 32.6% in the control population. As a result, cases were more likely

to be a homemaker (19.8% vs 14.1%) and less likely to be a wage earner (46% vs 56%), or to be employed (22.3% vs 11.3%).

### **3. Loss**

Loss here mainly refers to the loss of loved ones, esteem of close ones, prestige and finances. Thus, the death of parents within the past three years (29.5% vs 20.8%), loss of loved persons (20% vs 14.1%) and loss of prestige, position and self-esteem (29% vs 5.8%) were more common among cases when compared with the control population. Cases were also twice as likely to have experienced financial problems with 38% vs 19%. Cases were much more likely to experience the breakdown of their environment characterised by being despised by friends (21.8% vs 4.5%), despised by blood relations (26.3% vs 4.3%) and what appears to be the most significant one: family disputes (60.3% vs 18.9%). Some of these elements were seen as causing major stress.

### **4. Stress**

Elements noted during the survey as acting as stress factors for cases when compared to the control population included: family disputes (31.5% vs 10.4%), financial difficulties (10.5% vs 5.4%), loneliness (5.7% vs 0.3%), unemployment (9.6% vs 7.2%), health problems (5.2% vs 1.6%), and gender based violence i.e. "battered wife" (2.3% vs 0.9%).

### **5. Substance Abuse**

Substance abuse was found to have both a direct and indirect negative impact on cases. While cases were more likely to have ingested alcohol (41.6% vs 30%) and drugs (2.6% vs 1.8%) consumption of such substances in their environment does appear to have created a negative environment where care and support may have been lacking. Hence, parents consuming alcohol (66.2% vs 63.9%), partners consuming illegal substances (40.9% vs

35.9%) as well as peers consuming alcohol (66.2% vs 60.4%) or illicit drugs (16.9% vs 8.8%) were found to be higher in cases than in the control population.

## 6. Anti-Social Behaviour

Figure 17 shows the type of anti-social behaviour reported by cases when compared to the control population.

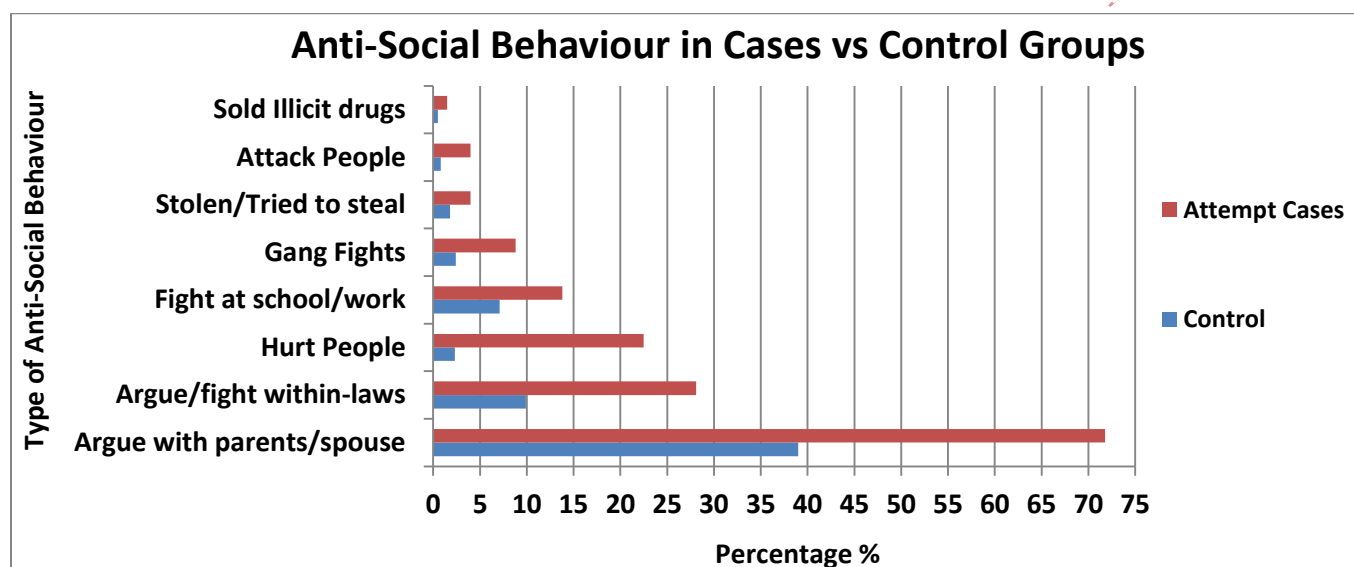


Figure 17: Anti-social behaviour in cases vs control group (Source: MIH, 2005)

As it can be seen from figure 17, arguing with parents and spouse (71.8% vs 39%), arguments with in-laws (28.1% vs 9.9%), desire to hurt people (22.5% vs 2.3%), fights at school or work (13.8% vs 7.1%), as well as gang fights (8.8% vs 2.4%) were much higher in cases than in the control population.



## **7. Previous Suicide Attempt/ Deliberate Self-Harm**

34.3% of suicide attempts had a previous history of one to two attempts which were also found to have occurred in childhood (9.8% vs 0.9%) or among parents (6.3% vs 3.1%) and blood relatives (10.8% vs 9.6%). This would, hence, imply the presence of mental illness since childhood among some cases and/or the negative impact of exposure to suicide, as will be seen when looking at the causes for completed suicides among teenagers in the next subsections.

## **8. Suicidal Ideation and Mental Illness**

24.6% of cases signified their intent and had premonitions/dreams to commit suicide. Such cases were more likely to come from rural areas (41.4%), to be females (19.4%) and belong to older age-groups (39.6%) than those from the control population. According to the MIH (2005), such dreams could imply the presence of mental illnesses such as schizophrenia.

Depression (66.3%) followed by anxiety (14.3%), alcoholism (8%) and schizophrenia (7.1%) were common among cases who suffered from mental illness. Cases in the following categories: Older (52.2%) Urban (59.4%) females (66.7%) showed a tendency towards depression. On the other hand, young (91.2%) urban (66.8%) males (86.6%), showed a tendency towards anxiety. Some of the mental symptoms noted among those cases with mental illness were as follows: belief in control of an external power (24.9%), hearing of voices (20.9%) and perception of chronic dislike by others (25%).

## **9. Depression & its co-variates**

Cases who suffered from mental illness during childhood (5.5%) and at the time of attempt (14.3%) were found to be three times more likely to be both stressed (85.3%) and depressed (32%). Depression was found to be strongly correlated with financial problems (34.2%),

death of parents (46%), family disputes (47.2%), critical parents (66.2%), partners using drugs (43.6%) and frequent arguments with parents/spouse (66.2%).

### **Causes: Family Risk Factors**

Family risk factors here refer to the state of relationships within the extended family and between partners. At the family level, critical parents/family played an important role (71.5% vs 52.6% in control group) as well as family disputes (21.6% vs 4% in control groups). Disputes with in-laws were more frequent in cases with 34% vs 6%. Disputes with partners were also more frequent with 27.1% vs 2.1%. Cases who attempted suicide were more likely to come from a love marriage (62.4% vs 49.4% in control groups).

### **Causes: Societal Risk Factors**

At the societal level, an adverse environment with the following attributes was believed to have affected the cases interviewed:

- Many abandoned buildings (16.5% in cases vs 10.3% in controls)
- Many people committing suicide (19.5% in cases vs 17.3% in controls)
- Lots of street fights (37.3% in cases vs 33.2% in controls)
- Same ethnic neighbours (60.4% in cases vs 51.6% in controls)
- Rampant family violence (38.5% in cases vs 27.4% in controls)
- Many drug users (24.8% in cases vs 20.5% in controls)
- Drug selling (20.8% in cases vs 18% in controls)

### **3.3.3 Causes of Completed Teenage Suicide in Mauritius**

The MoSS study (1997) did look at some of the risk factors or psychosocial causes which could lead to suicidal behaviour and completion in teenagers in particular. General related factors noted included vulnerability to love stories, songs and movies. Peer pressure to experience romance, often associated with dejection and negative reactions from parents, other close relatives and their environment were also deemed to play an important role. As seen previously, these causes could be classified into two main categories: psychosocial/social conditions and psychiatric causes.

#### **Psychosocial Causes**

##### **1. Poor familial support**

Frequent quarrels in the family often associated with verbal and physical violence, alcoholism, separation of parents, divorce leading to dissolution of the family, were seen as playing an important role. Illness leading to incapacity of one or both parents resulting in a lack of close and intimate relationship with parents, were also found to be high risk factors.

##### **2. Intimate relationships with partners against parental wishes**

This resulted in almost continuous harassment and punishment by parents and other close relatives.

##### **3. Following these two items, victims experienced feelings of rejection by parents, family members and their immediate environment, as well as feelings of loneliness, unloved and unwanted. This sometimes led to a vicious circle consisting of attempts to gain attention from others, then, at later stage, to hostility, aggression and feelings of guilt, all leading to severe depression and self-destructive behaviour. Such a**

vicious cycle could also potentially explain the escalation leading from parasuicide to completed suicide in Mauritian teenagers.

#### **4. Exposure to suicide**

Such an event was also deemed to be a relatively prominent factor in suicide for teenagers as opposed to other groups. There was evidence of such exposure in 20% of teenage suicide victims i.e. the victims experienced suicide in family members or friends, but more often in their blood relatives. It was thought that such incidents could cause suicide to appear more permissible and lead to a phenomenon known as “cluster suicide”, usually observed in youth where suicidal acts are replicated.

Other factors suggested by psychologists as well as other social observers, and reported by Seerungen (1998) were:

- The rising divorce rate and the effect of parental divorce on adolescents.
- Serious dysfunction within the family, such as child abuse or parental alcoholism.

#### **Psychiatric Causes**

Mental illnesses also appeared to rate very high in terms of importance in the MoSS study (1997). In 76% of adolescent suicides, the main diagnosis, reached posthumously, were depressive disorders and anxiety state with panic reaction, often associated with impulsivity, hostility, not only towards the self, but towards others and aggression with self-destructive behaviour. In 12% of adolescent suicides, the retrospective diagnosis was personality disorder with conduct disorders often associated with aggression and anti-social behaviours.

### **3.3.4 Causes of Attempted Teenage Suicide in Mauritius**

#### **Recent Challenges faced by Mauritian Teenagers**

While the MoSS (1997) study does provide some insight into both the external and internal causes of teenage suicide, there are no similar study on the causes of parasuicide and attempted suicide among Mauritian teenagers. Recent research conducted on the challenges faced by Mauritian teenagers is thus briefly discussed to address this gap. As seen in previous studies conducted in the local context, such challenges which may act as risk factors for suicidal behaviour include drugs, alcohol and violence, among others. Such issues will, thus, be briefly discussed since effective long-term programmes supporting teenagers in dealing with depression and self-esteem issues may not always be available in many Mauritian secondary schools (Rivet-Duval *et al.*, 2006). The sub-sections which follow, therefore, attempt to establish the magnitude of recent challenges currently faced by Mauritian teenagers.

#### **Alcohol & Mauritian Teenagers**

The previous section has shown that alcohol consumption can play an important role in mental illnesses related to suicide. Table 11, thus, shows the findings related to alcohol consumption among teenagers in secondary school students during the most recent exercise of the Global School based Student Health Survey carried in 2011 by the MoH/WHO. Questionnaires were administered to a sample of 2168 students from forms II, III and IV. Such results, obtained from a sample of such young students, imply that not only is alcohol consumption rather common among teenagers (one out of four having had a drink recently), but that (unregulated) access is also very easy as from a very young age.

*Table 11: Alcohol consumption among teenagers in secondary schools (Source: MoH/WHO, 2011)*

		Sex											
		Boy						Girl					
		Age Group				Group Total		Age Group				Group Total	
		13-15 yrs old (incl)		16-18 yrs old (incl)		No.	%	13-15 yrs old (incl)		16-18 yrs old (incl)		No.	%
		No.	%	No.	%			No.	%	No.	%		
Classmate s or Close Friends Use Illicit Drugs	<b>Yes</b>	35	18%	98	42%	132	31%	11	6%	27	14%	38	10%
	<b>No</b>	78	41%	60	25%	138	32%	125	64%	119	60%	244	62%
	<b>Don't Know</b>	79	41%	77	33%	156	37%	59	30%	52	26%	111	28%
<b>Group Total</b>		192	100%	234	100%	426	100%	195	100%	198	100%	393	100%

### **Illicit Drugs & Mauritian Teenagers**

As pointed out in the previous section, substance abuse remains an important individual risk factor, both directly and indirectly, when examining suicidal behaviour. Hence, in a national survey on substance abuse in secondary schools carried out in 2003, CASR/MRC (2003-4) noted that young substance abusers are usually characterised “by a lower desire for control, drive, eagerness, energy and competitiveness leading to low continuity of studies and higher rates of dropping out.” Moreover, it was also noted that sexual activity, as well as physical and sexual violence are higher among such teenagers who consume alcohol and illicit drugs.

Table 12 shows the results of a questionnaire-based survey carried out on 819 pupils from secondary schools in 2003, on whether classmates or friends ever use drugs.

*Table 12: Classmates or close friends ever use drugs by sex & age-group (Source MRC/CASR/UoM, 2003)*

<b>Results for students aged 13-15 years</b>				
<b>Alcohol Use</b>		<b>Total</b>	<b>Boys</b>	<b>Girls</b>
Percentage of students who drank at least one drink containing alcohol one or more of the past 30 days		25.2 %	28.1%	22.2%
Among students who ever had a drink of alcohol (other than a few sips), the percentage who had their first drink before age 14 yrs		72.5%	75.3%	69.2%
Percentage of students who drank so much alcohol that they were really drunk one or more times during their life		17.1%	20.8%	13.5%

As it can be seen from Table 12, boys were more likely to be acquainted with individuals who consumed illicit drugs as they got older, than girls. Hence, 18% of boys aged 13-15 yrs reported having such acquaintances whereas 42% of boys aged 16-18+ responded positively to the same question. Girls, on the other hand, were less likely to have such acquaintances, should the findings of this self-reporting survey prove to be accurate. More recent studies give a more alarming picture of the actual self-reported consumption of youth aged 12-18 + and those aged 15-24.

Hence, in a survey of 800 young people aged 15-24 on youth health risk behaviour, the MIH (2006) found that 23.8% of youths were lifetime users of marijuana starting around 15-16 years, while 22% were current users. 10.7% of youths were lifetime users of heroin while another 10.7% were current users. Some started as from 13-14 years old. The injecting mode of use (9.2%) was common accompanied by considerable sharing of syringes (9.1%). 6.9% and 5.8% of youths were also lifetime users of White Lady and psychotropic drugs, respectively. Moreover, one in five consuming illicit substances such as Heroin or Marijuana reported doing so on school premises.

Another survey, the Global School based Student Health Survey carried out by the MoH/WHO (2011), using a sample of 2278 youths from Mauritius from forms II, III & IV, showed the prevalence of lifetime drug use (i.e. using drugs, such as Brown Sugar, Marijuana, White Lady, or Subutex, one or more times during their life) was 6.4%. male students (9.3%) were found to be significantly more likely than female students (3.7%) to report lifetime drug use. Of those students who reported lifetime drug use, 44.8% did so for the first time, before the age of 14.

Such alarming findings would suggest that access and consumption of illicit substances by secondary school students has been persistent over the past decade and have likely given rise to serious mental health issues in teenagers and current young adults.

### **Violence & Mauritian Teenagers**

As seen earlier, anti-social behaviour, is an important individual risk factor in relation to attempted suicide. In a recent report, on violence and indiscipline in secondary schools, the National Economic and Social Council (NESC) noted that “forms of indiscipline which in previous years included unruly behaviours, bullying, truancy, using foul language, among others, have nowadays evolved into “cyber-bullying”, consuming alcohol and drugs, deliberately damaging property within and outside schools, fighting between school gangs and assaults on teachers” (NESC, 2012).

Table 13 shows the cases of violence, truancy and indiscipline reported to the police from 2007-2011.



*Table 13: Cases of violence, truancy and indiscipline reported to the police from 2007-2011  
(Source: NESC, 2012)*

<b>Details</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
No. of truancy cases reported	n.a.	769	609	591	416
No. of cases of indiscipline & violence (reported by schools & colleges)	13	78	77	88	114
No. of parents solicited by the police	44	201	367	266	545
No. of school children/charged with an offence	3	3	5	5	16

As seen in Table 13, 370 cases of indiscipline and violence in schools were reported by secondary institutions by the police for the 2007 to 2011 period, implying an average number of 74 cases per year. 1423 parents of teenagers involved had to be called in by the police during that same period. Such a rise in both violence and indiscipline in secondary schools would suggest the presence of adverse environments in many secondary schools throughout the country.

### **Other Risky Behaviours Mauritian Teenagers**

Following the importance attributed to love affairs by teenagers in relation to suicide, as mentioned by the MoSS Study (1997) it is, hence, important to provide an overview of early sexual activity in that age group. Such behaviour is usually associated with increased risks of teenage pregnancy, infectious diseases etc. Thus, according to the MIH (2006) on youth health risk behaviour for those aged 15-25, 44.7% had sexual intercourse and 16.3% had sexual contact. Most reported starting at 17 or older. Having multiple sex partners was common and was linked to the consumption of alcohol or illicit drugs. Overall only 22% used contraception. 1.7% gave birth and 2.4% had abortions (illegal). 13.4% of those sexually active contracted sexually transmitted infections.

### 3.4 Consequences of Suicidal Behaviour in Mauritius

The consequences of suicidal behaviour may differ depending on whether the attempt made has resulted in death or not. In broad terms, the consequences of attempted suicide, inclusive of parasuicide, appears to be more concentrated on the surviving victim. The consequences of successful attempts, or completed suicides, on the other hand, affect survivors, that is, those that are left behind. Subsequently, the consequences of suicidal behaviour can be classified according to the following categories:

- Physical health impairment of victims (in cases of attempted suicide);
- Mental health impairment of victims (in cases of attempted suicide);
- Mental health impairment of survivors (in cases of completed suicide);
- Financial implications (in cases of both attempted and completed suicide); and
- Stigmatisation of victims and family members (in cases of both attempted and completed suicide).

When combined, these different implications also have societal implications (in cases of both attempted and completed suicide). However, following the scarce existence of academic data on the consequences of suicide in Mauritius, only a few of these items can be tackled using existing sources, which include the media.

#### **Physical Health Impairment of Victims**

Physical impairment of victims, here, refers to the physical damage of those who have attempted suicide but failed. The extent of the physical damage incurred depends on several factors which include:

- how serious the intent was

- the method used
- how long after the attempt the victim was saved
- communication of intent and how seriously it was taken

A primary consequence of suicide attempts would, thus, be the harm caused to the body or physical health impairment.

There has been some anecdotal coverage of such cases in “Le Mauricien” newspaper for instance. Thus, Athal (2012) gave several examples of the consequences of suicide attempts. The first example given was that of a failed attempt by electrocution resulting in a 25 year old man having both his arms amputated. Another example given was that of another young man who was now brain damaged and in constant need of care after jumping from a building. That particular person who was portrayed as being intelligent and having an engaging sense of humour prior to his attempt, now lives in a fog and constantly has seizures. A third example given was that of a 12 year old girl who tried to swallow pills and suffered extensive liver damage resulting in her skin colour turning yellow, following the overdose. The final example given was that of a 24 year old man who shot himself in the head. The damage to his brain resulted in him suffering from partial paralysis and in him having to drag one leg, having a useless arm, as well as no vision or hearing on one side.

### **Mental Health Impairment of Victims**

As seen in earlier, in a majority of cases, mental health disorders and psychiatric disorders appear to be common conditions in Mauritians with suicidal tendencies. Following a suicide attempt, it is believed that mental health impairment is further amplified and that a relapse is possible. A previous suicide attempt has been found to be one of the leading risk factors or causes of suicide as seen earlier. Evidently, the need for both emotional and psychological support is crucial after such an event. While there is scarce academic data on this particular

subject, the in-depth interviews carried out by the two psychologists for this study, as will be seen later in this report, should help to shed more light on the mental health of teenagers who have attempted suicide.

### **Mental Health Impairment of Survivors**

The following subsection is based on the transcripts of interviews carried out during the first national study conducted on completed suicide in 1997. While the observations made are on a very small scale, the insight does provide a useful prelude to the chapter detailing the interviews conducted by the two psychologists, with surviving family members of those who completed their suicide.

Following a suicide, a feeling of guilt and blame is often experienced by the close family circle. When the motive of the attempt was poorly understood or when the act was not expected, this issue of blame is heightened and is coupled by a strong sense of perplexity. It is common that family members and close friends feel that they could have prevented the act. This mix of emotions can give rise to serious psychological problems, including depression and post-traumatic stress disorder. Such issues could be observed in at least three cases whereby the interviews conducted caused family members to seek psychological assistance as a direct result of the exercise. The first example was the mother of a suicide victim who was still grieving her son, three years after he passed away and was still wrestling with intense feelings of guilt and sadness, as she believed that she was wholly responsible for his act. In another case, a victim's brother tried everything to save his sister who had set fire to herself. One can only imagine the intensity of the despair experienced by this sibling considering that his sister had been living together with him and his wife when this happened. Another tragic example was the suicide of a 92 year old man who killed himself upon hearing false news that his son and daughter-in-law who were abroad on holiday, would not be coming back. He succeeded on his second attempt, a week before his son and his wife came back. In such cases it would appear that relatives of suicide victims are the

most affected following their proximity with the victim and the quality of their relationship with them.

In other cases, friends, especially close one, are also. Such was the case of a 22 years old victim who ingested poison. What was also interesting to note in that particular case is that there was a history of suicide and substance abuse in the family. The cause of death of the victim's mother and uncle when the victim was younger, were suicides. His father was most likely an alcoholic. Another similar case was observed in the suicide of a 29 years old victim whose brother and sister also committed suicide some years before. Her father was alcoholic. Such cases would, hence, suggest that suicides can potentially act as a trigger and cause a ripple effect within one's environment and psyche which can take several years before surfacing. Suicide can, thus, potentially become a viable option following such events. This outlook is made even worse if there is also a history of mental illness in the family/close environment. No information was found on the impact of attempted suicide on family members and friends.

### **Financial Implications for Victims and Family Members**

There is no information on such aspects in the Mauritian context, although some elements found may shed some light on this difficult aspect for survivors. In the cases of completed suicides direct costs incurred by survivors are usually limited to the price of a funeral. On the other hand, post suicidal attempt treatments are associated with low to high costs depending on the severity of the uncompleted act and would usually be incurred by family and relatives as opposed to the victims of the attempt. As pointed by the MRC (2011), a carer's allowance for someone looking after an invalid was only Rs 1,606. This would not be enough to cover direct medical and pharmaceutical costs, as well as indirect costs, such as loss in quality of life of relatives, parents etc..., as a result of having to look after someone in need of constant care.

### **Stigmatisation on Victims and Family Members**

While information on the extent of the stigmatisation and shame experienced by those associated with suicide cannot be found for the Mauritian context, its presence can be felt in the statistics on completed suicides and attempted suicides. As seen in the discrepancies between MoH and MPF data in table 5, it would appear that victims of suicide attempts and their families sometimes prefer to pass the attempt off as an accident. Rejection and avoidance by friends and by the society is feared, since victims of suicide attempt are often regarded as weak and selfish individuals instead of an individual in need of medical care. Stigmatisation, thus, instigates a feeling of shame which is experienced by both suicide victims, family of victims and further prevents the measurement of the problem by those in charge of treatment and prevention. This, in turn, is likely to reduce the effectiveness of policies and programmes on suicide.

### **Wider Societal Impact**

There is no information on the societal impact of suicide in the Mauritian context. However, the thousands of attempted suicides reported per year by the MoH would suggest that attempted suicides and parasuicides do have serious effects on society. As seen in the previous chapter, the direct costs incurred by society are health and social care costs, especially in instances where these costs are incurred by the government. Indirect costs to society are productivity losses as a result of disability or premature death of those who have attempted suicide.

As seen previously, another societal consequence of suicide is the sensationalistic media coverage, as opposed to acting in an informative or preventive manner. This may potentially lead to contagion and imitation since such reporting may trigger other suicides. Such a phenomenon is referred to as 'copycat suicides' or as the "werther effect".

### 3.4.1 Consequences of Teenage Suicidal Behaviour

While it can be inferred that the consequences of teenage suicide (both attempted and completed) are similar to the consequences observed in other age groups, this cannot be either proved or disproved following the lack of material available on the subject for the local context. The only three aspects which could be investigated were the societal impact, the stigmatisation of those close to the victim and sensationalistic media coverage. The study on suicidal tendencies in secondary schools in Mauritius by Auckel (2013) was the only one found which dealt directly with the perceived consequences of teenage suicide and tackled the “werther effect” as well as the stigma associated with the act in the local context.

Auckel (2013) carried out a series of interviews and questionnaires in five secondary schools totaling a sample of a 100 students. Most of the respondents chose to look at the problem from a community/societal approach when asked about the consequences of (completed) suicide. They wrote about the formation of a culture of suicide when asked about the consequences of such an act among their peers. Respondents thought that teenage suicide could become a “trend” or “an easy way” for other suicidal students to end their pain. They would be encouraged to terminate their life by imitating their fellow friends who committed suicide instead of showing courage and trying to deal with their pain and issues. This would further prove that the growing concern with “cluster suicides” would be justified.

Some respondents from the same survey also commented on the negative publicity that could befall the college and the “disgrace” it would bring to the victim's family, pointing to the reality of the stigmatisation of victims and their close ones.

### 3.5 Institutional Support Services to Combat Suicide in Mauritius

This section now turns to a review of the institutional framework which exists locally in order to address the issue of suicide in the local context.

According to the Suicide Prevention Unit Action Plans in 2006 and 2009 the “We Care for you Unit” (later named the Suicide Prevention Unit) was set up in 1990, following an outcry in the press and concern expressed in Parliament in 1989 on the increasing number of suicides and suicide attempts in Mauritius. It was set up under the aegis of the Probation and Aftercare Service under the Ministry of Social Security, National Solidarity, S.C.W. & RI, to cater to the prevention and counseling needs for those displaying suicidal behaviour. A campaign of 9000 posters and one radio was launched in order to touch hospitals, dispensaries, welfare centres, district council offices, district courts, post offices, police stations and other public places. While there was a surge in the number of cases treated by this unit, a national seminar was organised for a deeper discussion on the problem and specificity of suicide in Mauritius in May 1990.

A Steering Committee for the Suicide Prevention Unit was later set up under the Ministry of Social Security, National Solidarity, S.C.W. & RI (former Ministry of Social Security, National Solidarity and Reform Institutions) in 1991. The two of the most important decisions taken by this committee were the two research studies on suicide in 1997 and 2005 which have been discussed in previous sections.

As pointed by the Life Plus Strategy and Programme, the Suicide Prevention Unit was detached from the Probation and After Care Division in February 2011 and started operating as a separate Unit within the Ministry of Social Security, following a government decision. Since then it has been staffed by a Principal Probation Officer, a senior Probation Officer and



a Probation Officer on a full-time basis. Two part-time clinical psychologists were also attached to the Unit.

### **The Life-Plus Unit**

The name of the Suicide Prevention Unit was changed to Life Plus in September 2011. Life Plus can be seen as the arms of the Government of Mauritius in all matters relating to Suicide Prevention. Located in Beau-Bassin, its main aim is to keep suicide and its associated suffering to a minimum level. Life Plus is currently implementing the 2009 Action Plan while keeping in line with recommendations of the World Health Organization. Besides providing counselling sessions and a 24 hour hotline, it is also involved in prevention at three different levels, namely:

- 1) Primary (promoting positive and healthy living),
- 2) Secondary (carrying out awareness campaigns on stress and stress management) and
- 3) Tertiary (explaining the mechanisms of suicide and the identification of suicidal people).

Such interventions involve giving talks in schools, in social welfare centres and being active in the media. Life Plus is also present on the internet through its own website with contact information, a stress questionnaire etc.

A SWOT analysis was conducted to identify the internal and external factors affecting the proper functioning of Life Plus (Table 14). This analysis reveals Life Plus has been operating with limited resources for a number of years. While Life Plus has a large mandate, some of the challenges encountered to extend the scope and maintain the quality of its services include the recruitment of human resources and adding a research division.

Table 14: Life Plus SWOT Matrix

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Working hand of the Government of Mauritius in all matters of Suicide Prevention.</li> <li>• Expertise and experience in both Suicide Prevention and Intervention.</li> <li>• Work in close collaboration with other government departments.</li> <li>• Active and present in the community and the media.</li> <li>• Dealing with all aspects of suicide in Mauritius except medical care which is being taken care of by the Ministry of Health, which does not carry out any prevention work.</li> <li>• Various strategies and methods adopted by the Life Plus Unit both in prevention and intervention.</li> <li>• Published informative pamphlets.</li> <li>• Free Hotline operational 24/7.</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of a strong and permanent organisational structure with sufficiently trained personnel to effectively deal with the problem of suicide in Mauritius.</li> <li>• Lack of resources should be disbursed by the government as recommended by the WHO - for training, publications and costs to carry out awareness sessions.</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>• A Suicide Act to define the role of the Life plus Unit, its staff. It would also provide legal framework for officers to visit cases of attempt at suicide and provide bereavement support to individual and families.</li> <li>• A centralised system of data, both, on cases of completed suicide and attempt at suicide. This could be incorporated in the law on Suicide which would allow Life Plus Unit to monitor cases and adopt a more reflexive approach in matters of suicide in Mauritius.</li> <li>• Research should be ongoing: Life Plus could perform this function to sharpen intervention and prevention strategies.</li> <li>• Intervention in Rodrigues.</li> </ul>	<ul style="list-style-type: none"> <li>• Backwash of industrialisation on the Mauritian Society.</li> </ul>

## **NGOs**

NGO presence in the field of suicide prevention is seriously limited in the local context.

### ***Befrienders Mauritius***

Also located in Beau-Bassin, Befrienders is an organization founded by Samaritans international, which started in Mauritius in 1995. It is a Non-Governmental organization which has been active in suicide prevention through public awareness campaigns in schools, talks on the radio, TV and the press. It also has a free, anonymous and confidential listening service and regularly trains volunteers who provide a listening service on the phone between 09 00 and 21 00 hours, seven days a week. The organisation also maintains a regular presence on the World Wide Web with a Facebook page and a blog with a wealth of information on depression, suicide prevention and contacts for both adults and young people. Resources, personnel and volunteers are some of the main challenges which Befrienders face in their operations.

### ***Friends in Hope***

Although not operating specifically in the area of suicide, but rather indirectly so, is another NGO i.e. 'Friends in Hope'. With its Headquarters located at Bonne Terre, Vacoas, Friends in Hope is a Non-Governmental Organisation which started off in 1997 as a very small group of relatives of people suffering from a psychiatric disorder. Together they found hope through mutual support and the sharing of experience on how to cope with such a traumatic event in one's family and later started providing support to those suffering from mental illnesses and their families. Services offered include the provision of information and counselling to patients and their families and running of an Activity Centre. There up to 30 persons meet each weekday for therapeutic activities ranging from self-care, role-playing, arts and crafts, and various programmes aimed at improving mental concentration as well as socialization and preparation for entering or re-entering the world of work.

## **National Mental Health Response**

### ***Brown Sequard Hospital***

This Hospital dates back to 1879 and is the only psychiatric hospital in Mauritius. Some of the types of psychiatric illnesses treated at this institution include: depression, nevrosis, anxiety and psychomatic disorders, organic illnesses (including epilepsy); schizophrenia and other personality disorders, as well as substance abuse. Treatment provided by this institution includes rest, nourishment and careful supervision.

Of the 4,344 in-patients treated at Brown Sequard Hospital in 2012, mental and behavioural disorders due to the use of alcohol accounted for 1,848 cases (1,624 males, 224 females), that is 42.5%, followed by Schizophrenia with 1,346 cases (31.0%). The hospital also houses a Medical Social Service division whose objectives are as follows:

- Deal with the problem of the mentally sick and disabled persons
- Help patients and their relatives cope with the stigma attached to mental illness
- Assist them in achieving a happier life
- Work with other agencies such as the social security service so as to better meet the needs of clients
- Carry out social enquiries at the request of a psychiatrist and the Board of Lunacy

## CHAPTER FOUR – METHODOLOGICAL APPROACH AND DESIGN

### 4.0 Introduction

This chapter explains and justifies the methodological approach and design of this study. As mentioned earlier, this study has been conducted over two related stages. The first stage has used an essentially qualitative approach focusing on semi-directive interviews of selected teenage participants who have attempted suicide as well as close relatives of teenagers who have committed suicide. The second stage consisted of administering a survey questionnaire to a sample of secondary school students in order to gauge the extent of risk behaviours, including suicidal behaviours at this level. In accordance with the terms of reference of this study, this survey was designed to be a pilot survey conducted on a small-scale prior to engaging in a nationwide survey. This chapter, therefore, elaborates on the methodological, practical and ethical issues raised in terms of selection of sites and participants, data collection and interpretation of findings.

It is worth noting that although the above represent the main research techniques upon which the bulk of the findings of this study rests, other research methods including on-to-one interviews and FGDs with relevant players and stakeholders in the area of teenage suicidal behaviour have also been conducted at strategic phases of the study process in order for the research team to take-stock and design the main research instruments more effectively as well as to cross-check and validate the emerging findings as the study progressed. In addition to the above-mentioned primary sources of data, the study has also drawn from the secondary sources of data compiled from a desk research of relevant official statistics and reports as well as the limited academic research available on the issues of suicide in general and more particularly teenage suicide in Mauritius.

## 4.1 The Qualitative Phase of the Study

Whilst quantitative research excels at summarising large amounts of data and reaching generalisations based on statistical projections, on the other hand, qualitative research excels at "telling the story" from the participant's viewpoint, providing the rich descriptive detail that sets quantitative results into their human context. Table 15 below, summarises in tabular format the main research techniques used in the qualitative phase of the study along with the rationale for the adoption of these techniques and the main criteria for the selection of participants for this aspect of the study.

*Table 15: The qualitative phase of the study*

Research Method	Main criteria for selection of participants	Rationale for adoption
Case Studies of 30 teenagers who have attempted suicide using the semi-directive Interview Method (administered by trained psychologists)	<ul style="list-style-type: none"><li>❖ 20 girls and 10 boys</li><li>❖ Registered with Life Plus</li><li>❖ Attempts made over Reference period ear-marked for this study i.e.: 2012-2013</li><li>❖ Formal consent for participation obtained after thorough explanation of what the study was about and entailed from their behalf.</li></ul>	<ul style="list-style-type: none"><li>❖ First-hand capture of social reality and motivations behind suicidal behaviour.</li><li>❖ Data was emergent from the narration rather than pre-figured and imposed on participant.</li><li>❖ Psychologists were able to administer the interview with due empathy and horizontality as opposed to more restrictive and obtrusive data collection methods.</li><li>❖ Overall good method to challenge theoretical assumptions associated with more positivistic methods of data collection.</li></ul>

Retrospective Case studies of 10 cases of completed suicide using the semi-directive Interview Method administered to close relatives of victims by trained psychologists.	<ul style="list-style-type: none"> <li>❖ List of victims over same reference period as above provided by Life Plus.</li> <li>❖ Close adult relatives of victims (predominantly mothers and fathers who agreed to collaborate)</li> <li>❖ Formal consent for participation obtained after thorough explanation of what the study was about and entailed from their behalf.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Attempt at arriving to as comprehensive as possible of the causes and consequences of the suicide of the teenage family member from the point of view of close relatives.</li> <li>❖ As above, data was emergent from the narration rather than pre-figured and imposed on the interviewee.</li> <li>❖ Psychologists were able to administer the interview with due empathy and horizontality as opposed to more restrictive and obtrusive data collection methods.</li> <li>❖ Overall good method to challenge theoretical assumptions associated with more positivistic methods of data collection.</li> </ul>
One-to-one interviews with key informants	<p>Key stakeholders in this area:</p> <ul style="list-style-type: none"> <li>❖ Life Plus Officials</li> <li>❖ NGO Befrienders</li> <li>❖ Police</li> <li>❖ Ministry of Health</li> <li>❖ Psychologists in private practice</li> </ul>	<ul style="list-style-type: none"> <li>❖ Multiple vantage points on the phenomenon of teenage suicide from key actors in this area with focus on magnitude of the problem in the field, support services available, victims trajectory and data compilation mechanisms.</li> </ul>
Focus Group Discussion	<p>Individuals and agencies which are directly concerned with the research problem.</p> <ul style="list-style-type: none"> <li>❖ Psychologists</li> <li>❖ NGO</li> <li>❖ Psychiatrist</li> <li>❖ Ministry of Education officials</li> </ul>	<ul style="list-style-type: none"> <li>❖ General stock-taking.</li> <li>❖ Uncovering the empirical and perceived amplour of the phenomenon of suicidal behaviour particularly among secondary school students and associated impacts.</li> <li>❖ Awareness of complex subjects such as taboos in the family, neighbours and authorities.</li> </ul>
Media Content Analysis	<ul style="list-style-type: none"> <li>❖ Survey of press articles on coverage of teenage suicides.</li> </ul>	<ul style="list-style-type: none"> <li>❖ Critical analysis of media portrayals of teenage suicide and whether they are in line with WHO guidelines.</li> </ul>

### **Ethical and Administrative Clearances for the study**

It is important to note, as from the outset, that in spite of the sociological focus of this research project - as opposed to a biomedical focus – there was a need to apply and obtain ethical and administrative clearances from the Ethics Sub-Committee of the Ministry of Health and Quality of Life in order to proceed with the implementation of a study on such a sensitive topic.

Ethical clearance was obtained, albeit after lengthy delays, based on a study design which laid emphasis on ethical practices and clarity at each and every level of the data collection process, ranging from the concepts, the research instruments, the selection of participants through to the data collection process and analysis of data.

In effect, the study team came up with and adhered by a protocol for both the qualitative and quantitative phases of the project, whereby strong emphasis was put on consent, confidentiality, anonymity, trust, a non-judgemental stance and empathy in the handling of such sensitive material. For example, when selecting and involving participants, care was ensured that full information about the purpose and uses of participants' contributions were given. Being honest and keeping participants informed about the expectations of the research exercise, and not pressurising participants to speak are good ethical practices which have been closely adhered to.

It is equally worthy of note that for such a sensitive topic, it would not have been proper for interviewers other than trained psychologists to engage and obtain participants' full cooperation and participation. Given the extra care required in talking about such life events which can be charged with much hurt, angst and grief and the need to avoid other bouts of depression from reminiscing these events, it was, since the outset, deemed crucial to recruit two trained psychologists to conduct the interviews. Their contribution was, therefore, a prerequisite for obtaining valid data from the participants in a non-contrived and fully consensual manner.

A particular ethical issue to consider is the handling of sensitive material and confidentiality. The study team subscribed to the need to keep confidential details of participants and what they hear during the interviews. In fact, care has been taken to anonymise both the participants by using pseudonyms wherever their interview data is used.



Also, although there have been a few cases where participants refused to cooperate in the qualitative phase of the study and eventually had to be substituted with other teenage suicide attempts from the Life Plus database, the study team managed to carry out the required number of case studies.

By and large, it can be argued that this study has been done within high standards of ethics while maintaining the rigour and systematicity required of social science research.

#### **4.1.1 Case Studies of Teenagers who have Attempted Suicide using the Semi-Directive Interviewing Technique.**

A case study design has been considered an appropriate research strategy to explore the causes and consequences of suicidal behaviour among teenagers. At its simplest, a case study attempts to arrive at a comprehensive understanding of a phenomenon under study. In this study, the subjects are mainly those teenagers who have attempted suicide although as explained earlier, retrospective case studies have also been undertaken by interviewing parents and close relatives of teenagers who have completed suicide.

Hakim (1994, p.61) argues that 'The case study is the social research equivalent of the spotlight or the microscope (...)' and goes on to state that 'at the minimum, a case study can provide a richly detailed 'portrait' of a particular social phenomenon (...)'.

A review of classic studies which are based on case study designs shows the diversity of ways (and disciplines) in which case studies are used given its flexible character (Yin 1984). For instance, some case studies are designed to explore, describe and understand a topic particularly when prior data is lacking on that issue (e.g. Pryce's (1979) study of a single West Indian community in Bristol in the UK). Case studies can also be used for illustrative

purposes or to produce 'typologies' (e.g. In his study of suicide, Douglas (1967) uses case studies to discover different types of suicides by uncovering the different social meanings attached to this act).

They are also used to complement or further refine knowledge on topics where data already exists. Conversely, they can be used to test prevailing explanations and ideas. Hakim (1994, p.62) refers to the latter design as the "(...)'critical case' or 'strategic' case study which assesses the evidence for a conclusion or explanation by looking at the *most favourable* illustration of it. Alternatively, a general explanation may be tested by looking at a 'deviant' case which suggests that the *exception* disproves the rule, or at least proves that the general rule needs to be re-defined as applying only in certain circumstances."

Many of the above uses and benefits associated with case study designs are applicable to this study. As such the case study design enables a 'zooming in' on the experiences of those who have attempted suicide; it allows a total exploration, description and understanding of the causes and implications of suicidal behaviour, thus, providing a detailed and comprehensive 'portrait' of this phenomenon.

Furthermore, case study designs vary according to the methods of data collection used as well as whether they adopt a single case or multiple cases (See Yin 2007). In this study, we adopt a multiple case design. This enables investigating whether there are commonalities or differences in psychosocial problems faced by those teenagers, the ways in which they attempt to cope and eventually what tilt them to engage in suicidal behaviour, looking specifically at 'strategic cases'.

A further precision which is required here is the use of one specific type of case study i.e. 'individual case histories'. This type of case study provides a detailed and substantiated

account of an individual's 'history' with reference to some specific personal characteristics or series of events that they have experienced (Hakim 1994). As Hakim (1994, p.65) argues that 'individual case histories focus post hoc on the antecedents, contextual factors, perceptions and attitudes preceding a known outcome'. The individual case histories carried out in this study aim at gauging the interplay of social forces which influence suicidal behaviour and the consequences thereof on themselves and their significant others.

An important advantage of the case history approach is that it enables the engagement with and the capture of how respondents react to evolving processes as a result of changing conditions and situational contexts. Strauss and Corbin (1998; p.165) describe process as a 'series of evolving sequences of action/interaction that occur over time and space, changing or sometimes remaining the same in response to the situation or context'.

Given that suicidal ideation and the act of attempting suicide are best conceptualised as an evolving process, the case history approach enables one to investigate from the participants' standpoint (for survivors of attempted suicide), the changes which occur both in the perceptions and actual behaviour of the participants over the period in which they contemplated suicide through to the time in which they engaged themselves in the act. Let us now turn to the actual research techniques used to obtain the data from the case histories.

### **The Semi-directive Interview Technique**

The data collection technique for the case studies took the form of semi-directive interviews. This type of interview places a significant amount of importance on the subject's freedom of expression. Rather than using a rigid questionnaire as in the case of the structured questionnaire interview, an interview guide or check-list has been used by the psychologists which consists mainly of a series of topics or themes requiring investigation in order to address the broader research questions which frame this study.

The interviews were, therefore, open-ended and assumed a conversational manner but were 'focused' in the sense that both psychologists were following a standard set of questions from the interview guide which were adhered to as closely as possible. The study team had beforehand carefully worded the questions so that they appeared genuinely naïve about the topic in order to obtain rich and descriptive information.

The flexibility and open-ended nature of the questions asked give participants the freedom to choose how they reply and in addition, as opposed to the directive interview, the participants has the ability to provide further explanations for the information he/she gives. In such interviews, the interviewer relies particularly on the 'trigger' (which is the initial question in order to get the participants providing information on a specific issue or set of issues) and the 'track' (whereby the interviewer has the responsibility to request further explanations or to guide the respondent back to the subject when the latter strays) (See Mwanje, 2001).

Participants often responded in ways which were not relevant to some of the questions and the role of the interviewers was to steer them back to the main issues which were important. Considerable probing was also required in order to obtain further information about new insights which occasionally emerged.

### **Selection of Participants**

The selection of participants for the case studies was guided by the aim to focus on participants who can exemplify and provide 'information-rich' cases about the experiences of teenagers who have attempted suicide more particularly with a view to reach an understanding of the causal factors, the methods and consequences of these attempts.

The selection of participants was effected from records of teenagers who have attempted suicide available at the Life Plus Unit. The reference period for selection of participants was over period 2011-2013.

As mentioned before, 20 girls and 10 boys were effectively chosen from the list. The choice to select more girls than boys was because official statistics indicate a disproportionate representation of girls among suicide attempts.

It is worthwhile to note that not all the parents of, or the participants themselves, who were contacted necessarily participated in the study due to unwillingness and/or unavailability. While it was initially intended to organise the interviews at the Life Plus Unit office, practical constraints such as opening times clashing with school hours, distance particularly from those who come from remote parts of the Island as well as unwillingness to relive emotionally harsh moments meant that seeking and obtaining participants for the study was a complex undertaking.

One compromise which was subsequently adopted was to conduct the interview at the place of residence of the participants in order to minimise disruption and other inconveniences. Even so, there were some participants who initially agreed to meet with the psychologists but who eventually desisted. Nonetheless, in spite of these practical difficulties the study team managed to conduct interviews with the required number of teenagers who have attempted suicide.

While this selection strategy, which is akin to purposive or qualitative sampling procedures, relies less on randomness and probability and more on purpose and convenience, it is widely known in the social science literature that these strategies are particularly useful for obtaining useful insights into phenomena which are otherwise difficult to study.

### **Pre-interview Arrangements**

It is worthwhile to note that prior to the start of the interview exercise and also as part of quality assurance and follow-up, technical meetings were held in order to inform the psychologists about the requirements of the study; develop the semi-directive interview schedule and impart to them the techniques of interviewing the participants in order to obtain data which guide this study.

Prior to starting the study, the semi-directive interview was piloted with the main aim to assess the workability and structure of the set of questions in the checklist. The attitudes and response of interviewees to strategic questions, the overall time taken for the interview were also observed and noted in view of fine-tuning and refinement for the main exercise.

### **The Interview Process**

The bulk of the interviews took place at the participants' places of residence for aforementioned reasons. They were conducted in French and/or Creole as per participants' preference. They lasted on average between 1 and 1 ½ hours.

It is worthwhile to note that in some interviews the psychologists made use of a digital tape recorder in order to concentrate solely on the interview process. However, where it was noticed that the use of a digital voice recorder was intimidating the participants and was affecting the interview process, the use of the recorder was abandoned and resort to note-taking was adopted.

### **4.1.2 Case Studies of Close Kins of Teenagers who have Committed Suicide**

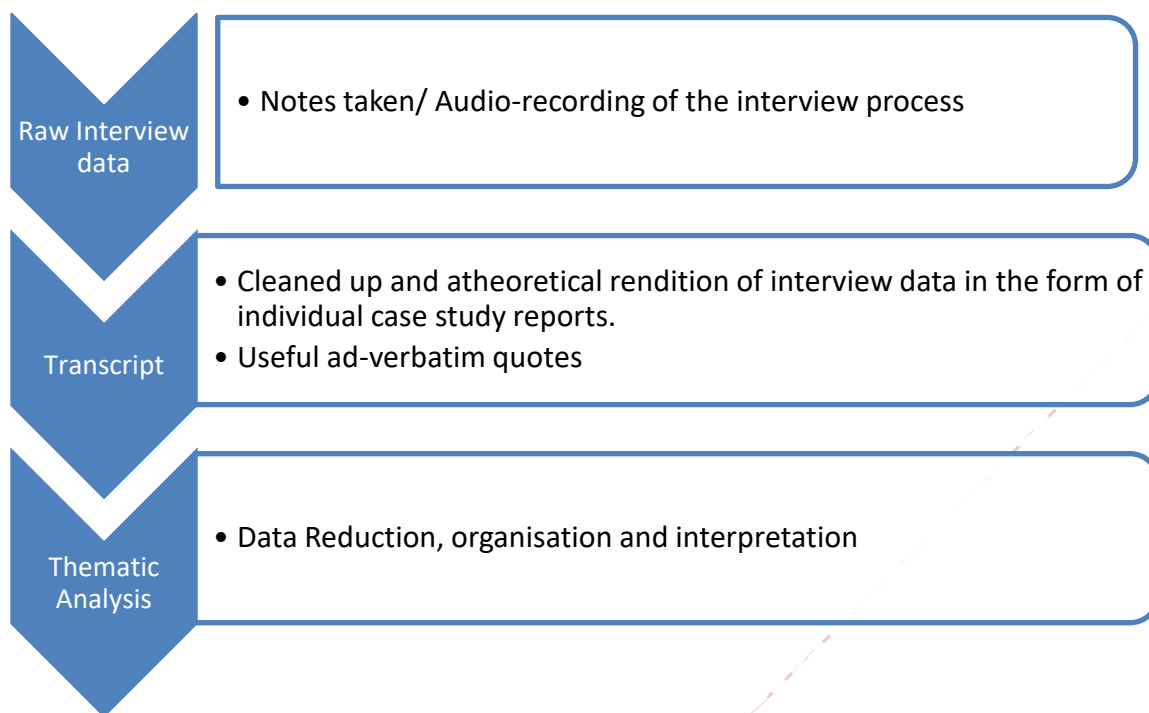
The case studies of close kins of teenagers who have completed suicide followed largely similar modalities as described above.

The same psychologists were used for the interview with a checklist of questions which was only modified to ask about the victim in the third-person and to cater for a description of the victim in retrospect; known social networks and activities of victim; possible causes and methods employed and life after the suicide.

In all ten case studies selected from official records from Life Plus over the same reference period as above (i.e. 2011-2013) was conducted. Biological mothers or fathers or in one case where the parents were not in Mauritius, the paternal uncle of the victim was interviewed.

### **4.1.3 Data Analysis and Interpretation**

It is right to say that qualitative procedures of data collection generate large amounts of data which become challenging for analysis and interpretation. The diagram below gives a schematic representation of the process of data analysis and interpretation of findings which are further elaborated in Chapter Five.



*Figure 18: Schematic representation of the process of data analysis and interpretation of findings*

### **Thematic Analysis of the Transcripts**

It is widely acknowledged that three general stages in qualitative data analysis can be identified and it is emphasised that these stages occur cyclically – which follow one after another in a continuous cycle: *data reduction, data organisation and interpretation* (See e.g. Denzin and Lincoln 2006; Sarantakos 1998).

In data reduction stage, data are coded, summarised and categorised in order to identify important aspects of the issue being researched. In the second stage of qualitative data analysis – data organisation: it is the process of assembling the information around certain themes and points. This leads to the last phase – data interpretation which involves identifying patterns, trends and explanations which lead to conclusions.



The findings elicited in Chapter Five have been generated as a result of the above procedures.

### **Validity of Findings and Interpretations**

Validity refers to the extent to which the findings and interpretations generated in the study match what occurs in reality. Several strategies have been employed in order to maximize validity in this study. At the outset, in all the interviews, the interviewers have built rapport, trust and openness and encouraged participants to express themselves in their own words and in the way that they see things.

The questions asked were in order to get a deeper understanding of participants' meanings rather than imposing ideas and concepts. As far as possible the interviewers have also prompted respondents to illustrate, expand and clarify their initial responses talking in detail as well as about specifics. Moreover, the interpretation of the interview data was frequently checked with the informant at the interview itself in order to clarify meaning and ensure that the interpretation reflected the information in the way that the participants expressed it.

The data collection and analyses phases were subjected to continuous questioning and revaluation by the study team. The use of multiple methods and multiple sources of information (the FGDs and unstructured interviews) has also helped in improving the validity of the data.

## 4.2 Complementary Methods

### **One-to-one Interviews with Key Informants**

For a more holistic understanding of the phenomenon of suicide from multiple perspectives, it was important to interview the stakeholders in this area. Useful data were, therefore, obtained from different officials interviewed, including established practitioners (psychologists and psychiatrists), service providers (Life Plus, the Police, Ministry of Health), NGOs (Befrienders, Friends in Hope) as well as suicide and suicidal behaviour data compilation pathways (Police, Statistics Mauritius, Ministry of Health).

This exercise was important in a context where very little data exists on these issues. As the questions varied according to the stakeholders, the interviews assumed a conversational manner requiring improvisation and continuous probing. Emphasis was on the specific perspective of the interviewee in his/her official capacity.

Some steering committee members for this project, more particularly the officials from the Ministry of Education and Life Plus, have also been particularly helpful in sharing the empirical reality of the phenomenon in educational settings and common causes among teenagers who come for counselling respectively.

### **Focus Group Discussions (FGDs)**

Focus group research involves organised discussion with a selected group of individuals to gain information about their views and experiences of a topic (Gibbs, 1997). Focus group interviewing is particularly suited for obtaining several perspectives about the same topic. The benefits of focus group research include gaining insights into people's shared

understandings of everyday life and the ways in which individuals are influenced by others in a group situation.

They can be used at the preliminary or exploratory stages of a study (Kruger, 1988); during a study, perhaps to evaluate or develop a particular programme of activities (Race *et al.*, 1994); or after a programme has been completed, to assess its impact or to generate further avenues of research. They can be used either as a method in their own right or as a complement to other methods, especially for triangulation (Morgan, 1988) and validity checking. Focus groups can help to explore or generate hypotheses (Powell & Single, 1996) and develop questions or concepts for questionnaires and interview guides (Hoppe *et al.*, 1995; Lankshear, 1993). They are, however limited in terms of their ability to generalise findings to a whole population, mainly because of the small numbers of people participating and the likelihood that the participants will not be a representative sample.

FGDs can be complementary to quantitative research tools depending on how it is being used. Being an exploratory research tool it can, therefore, be useful for idea generation by the researcher. It also provides insight into the source of complex behaviours and motivations “the group effect” which is not provided by other qualitative and quantitative methods.

In the context of this study, one FGD has been integrated in the research design particularly in the preliminary stages of the study for the following reasons. In addition to generating data which is useful in its own right, the FGD has also been used in a complementary manner to take stock and extend our understanding of the phenomenon of teenage suicidal behaviour and also the institutional support services available to address this problem. This has partly helped in terms of constructing the check-list of questions used in the semi-directive interviews.

The FGD involved academics, service providers and psychologists who have working knowledge in the field. Useful insights into the complexity of the phenomenon, its multiple causal factors and dire consequences as well as shortcomings of the current system were discussed. Some important dimensions which were brought up included the stigma associated with suicide and even attempted suicide; failures to interpret early warning signs in terms of behavioural change and the difficulties of disentangling attempted suicide with attention seeking and parasuicidal behaviour.

### **4.3 The Pilot School-Based Risk Behaviour Survey among Secondary School Students**

As mentioned earlier, another important aspect of this study has been to administer a survey questionnaire to a sample of secondary school students in order to gauge the extent to which they engage in risky behaviour practices at school including suicidal ideation and behaviour. Table 16 below provides a summary of the approach adopted for the pilot survey. This section provides more detail about the instrument used and the procedures for data collection and analysis. T

*Table 16: Risk-behaviour survey among secondary school students*

Method	Criteria for Selection of Respondents/ Sampling Methodology	Rationale for adoption
School-based Survey Questionnaire	<p>Intended Sample: 50 students from each of 3 schools selected (n=150)</p> <ul style="list-style-type: none"> <li>❖ Stage 1: 3 secondary schools randomly identified by the Ministry of Education (1 Boys only; 1 Girls only and 1 Mixed)</li> <li>❖ Stage 2: Use of School Registers from identified schools as the sampling frame. Class distribution of students was ensured by Probability Proportional to Size.</li> <li>❖ Stage 3: Selection of 50 students from each school.</li> </ul> <p>Actual Sample: (n=131 students)</p>	<ul style="list-style-type: none"> <li>❖ Widely used as a source of data for surveillance of youth risk behaviour and practices.</li> <li>❖ Less obtrusive way to obtain data on suicidal behaviour as part of a wider study on other risk behaviours than a direct questionnaire specifically on suicidal behaviour.</li> <li>❖ Very practical and cost effective when compared to face-to-face interviews.</li> <li>❖ Relatively easy to administer, analyse and quantify.</li> <li>❖ Reduce bias. There is uniform question presentation and the researcher's own opinions will not influence the respondent to answer questions in a certain manner.</li> </ul>

### 4.3.1 The Youth Risk Behaviour Pilot Survey

Youth Risk behaviour surveys are widely used in many countries including the US and European countries as part of wider surveillance systems on youth health risk behaviour and practices (CDC, 2015). To date no such study has been implemented in Mauritius in a comprehensive manner although some KABP studies with a focus on specific risk behaviours (e.g. substance abuse) have been conducted.

Given the merits of such a survey as a tool for monitoring youth risk behaviour the study team, the client i.e. the Ministry of Social Security and the Steering Committee for this study have supported this endeavour. However, as a full-fledged survey of this nature at national level would require far more resources in terms of time, funding, staffing and logistics while response rates, consent and cooperation of parents, schools and school authorities were unknown factors, it was envisaged that as a first step, a pilot survey would be undertaken.

The main objectives of the survey, based on a relatively small sample of 150 students, were not to make grand generalisations about the state of youth risk behaviour and more particularly suicidal behaviour, but to have a sound indication of how far our students engage in risky practices and more specifically to explore how far suicidal behaviour is prevalent among this population.

Of equal importance and at a more practical level, this pilot survey also served to validate the instrument and the process of engaging students in such an initiative. Together with the data, the lessons learnt in the process of its collection can be adopted in view of a subsequent survey, this time on a nationwide magnitude, given the availability of resources.

### **The Survey Questionnaire**

The survey questionnaire (See Annex 1) was designed by the study team and presented to the steering committee comprised of relevant stakeholders including the Ministry of Social Security, Education, Life Plus.

In designing the questions, care was given to keep the language and length of the questionnaire simple and short as the questionnaire targeted students with mixed abilities.

Besides, questions pertaining to suicidal behaviour, the questionnaire was designed to also assess practices and prevalence of such issues as:

- Alcohol, cigarette and drug consumption
- Lifestyles: dietary habits and physical activity
- Mobile and internet use
- Experiences and perceptions of school environment and academic level (including bullying at school)
- Physical, mental and emotional health status

- Personal life (self-esteem, relationships, finance, etc...)
- Self-harm and risky behaviours
- Future outlook

#### **4.3.2 The Fieldwork Process for the Pilot Survey**

The survey was conducted at all three schools in the early stages of the first school term 2015 in order to minimize as much as possible class disruption.

##### **Selection of Schools**

It is important to highlight that the selection of the schools was effected by the Ministry of Education and Human Resources. The request made by the study team was for the identification and selection of one 'boys only'; one 'girls only' and one mixed secondary school at random from existing state secondary schools. For the purpose of this study on such a sensitive phenomenon, it was convened that details of the school be kept confidential and the results anonymised.

It is equally noteworthy that the study team also required that these schools should not display any known extreme variations which could skew the survey findings.

##### **Pre-Survey Stage**

Prior to administering the survey, there was a need to establish contact and provide relevant explanations and obtain the collaboration of the selected school Rectors and administrative personnel.

At these first contacts, administrative and logistical arrangements for sample selection from the school registers were effected. As explained earlier, the sampling strategy was straightforward involving selecting students in proportion to the size of their Forms. A sample of 50 students was initially targeted per school although in practice the study team oversampled some 55 students per school in anticipation of refusal to participate in the study, absences etc...

Once the sample pulled out, the next step was to seek and obtain the cooperation of the school administration in the distribution of explanatory letters as to the purpose of the study and the involvement of the students in this exercise and more importantly, ensure the distribution and collection of consent forms to the students' parents. Mutually convenient dates for conduct of the survey were agreed.

### **Survey Implementation**

It is widely acknowledged in the social research literature that administering questionnaire surveys to teenagers can be fraught with difficulties. Apart from concerns about the level of response, the reliability and validity of the returns can also be jeopardised lest adequate assistance and monitoring of the filling of the interview questionnaire. Also given the numbers involved, it would have been impractical for the questionnaire to be administered on an individual basis by individual interviewers.

For these reasons, at each of the three schools, care has been taken for the study team to reunite at each school all the respondents (who had returned consent forms from their parents) in a large multi-purpose room within the school premises. The purpose of the study and expectations of the study team from the students were clearly explained and queries addressed. The guarantee of anonymity, objectivity and confidentiality was provided. Moreover, the questionnaire has been thoroughly explained with the use of a laptop and



projector and students have been guided through the questionnaire section by section. It is also noteworthy that the exercise was held within school hours at times which were deemed convenient by the school authorities so that the students do not miss out on their regular classes.

With the assistance of gender-paired research assistants from the study team and teachers delegated by individual schools to facilitate the process, this exercise has by and large run relatively smoothly at each school. The students had resort to immediate help when faced with difficulties interpreting the questions.

It can, therefore, be argued that in general, all possible non-obtrusive measures have been taken to allow the responses received to come close to genuine and authentic insights in the behaviours and practices of the students surveyed.

### **Data Analysis**

After completion of the fieldwork, the raw data was entered into a database and cleaned using the Statistical Package SPSS 18.0 followed by the analysis of the data and writing of the report.

## **4.4 Summary**

This chapter has elaborated on the study methodology, sampling procedures, data collection and interpretation. In a nutshell, it has highlighted the two distinct stages in data collection and, therefore, two distinct but complementary data sets:

- (a) the multiple case studies based on the semi-directive interviews of those teenagers who have attempted suicide and close relatives of those who have died as a result of suicide and
- (b) the small-scale school-based pilot survey of youth risk behaviours.

The next two chapters will elicit the findings of these two data sets respectively highlighting the main causes and consequences as well as the methods utilised.

## **CHAPTER FIVE: CAUSES AND CONSEQUENCES OF TEENAGE SUICIDAL BEHAVIOUR: A THEMATIC ANALYSIS OF THE CASE STUDY FINDINGS**

### **5.0 Introduction**

This chapter organises and presents the main findings of the study in a thematic manner guided by the main objectives of the study which are to elicit the main causes and consequences of teenage suicidal behaviour. The findings therefore represent an interpretation of the case study material collected from threads of interviews (a) with those who have attempted suicide and (b) with close relatives of those who have died as a result of suicide.

While limitations of space will not allow for an exhaustive rendition of each and every case study effected, it is nonetheless important to bear in mind that across the interviews, there are many recurrent elements which have surfaced and which indicate common sets of not only causes but also methods, manifestations and consequences of suicidal behaviour among the interviewees. This chapter will therefore reduce the narrative data from the interviews to the core categories and themes which emerge from the interviews.

For clarity of presentation and argument, the findings are organised according to the three datasets obtained. The first part summarises and presents the data obtained from interviews with the 20 teenage girls who have attempted suicide followed in the next part by data from the dataset of boys who have attempted suicide. The third part focuses on the 10 retrospective case studies of teenage suicides constructed from interviews with parents of the victims.

The final section provides a synthesis of these findings and discusses them in the light of existing empirical and theoretical data on teenage suicidal behaviour, as seen in chapters 2 and 3 both locally and elsewhere.

## **5.1 Main Findings from Case Studies of Teenage Girls who have Attempted Suicide**

A tabular summary of the main findings which emerged from the teenage girls dataset is provided below where, for ease of reference, the main details of the attempted suicide are provided, including the methods utilised, the sets of causal factors which – based on the interview data - have reportedly brought the teenager to this point and also the triggering factor which may have tilted the latter to take the step.

It is worth noting that this dataset which comprises of selected cases who have attempted suicide in the reference period selected for this study i.e. 2011-2013 even include girls in their early teens i.e. 12-15 years of age. In fact no less than 13 out of the 20 girls interviewed were 15 or less.

Also while the majority were still college students at the time of the interview, there were also two girls who had dropped out of school, one of whom was even married after falling pregnant at the age of 17.

In terms of socio-economic backgrounds of participants, it is useful to note that the latter were from diverse ethnic/religious and generally in the lower middle and working class backgrounds. However here it is important to acknowledge that the selection of participants

in this study was not a random selection and therefore does not provide an accurate reflection of the actual breakdown of suicide attempt by class category. Instead, it was drawn from the list of recorded attempters available at Life-Plus and who, more importantly perhaps, consented to take part. It is widely held that the official records do not include those attempters who may come from higher class backgrounds and who – given the highly sensitive and stigma-prone nature of the phenomenon – tend to be dealt with or treated more discretely at the level of private practice.

In terms of educational background, it is equally important to note that with the exception of two drop-outs, the participants went to a variety of colleges, state-aided and private. In general, from the interviews, it was found that the participants ranged on a wide spectrum of abilities including some who have always tended to struggle through to some who were in good establishments and who described themselves as above average students but who, for reasons we will see later, saw their performances take a nose dive as a result of unfavourable circumstances.

*Table 17: Summary of psychologists' interviews of teenage girls who have attempted suicide*

Attempted Suicide Victim and Age at time of attempt	Suicide Method(s) Employed	Details	Set of Causal Factors of Suicide Attempt(s)	Triggering Factor
<b>Cathy, 15</b>	Cut her wrists	Cut wrists with knife  Had previous suicidal thoughts	Diagnosed with depression Broken family - lives with mother and step-father Conflicts with mother Aggressiveness Low self-esteem Feelings of loneliness, mood swings Alcohol, cigarette and drugs consumption Poor relationship with sibling Poor academic performance	Conflicts with parents
<b>Keena, 14</b>	Ingestion of pills	Drank 8 epileptic pills from sister	Parents separated Troubled by arguing parents Feeling neglected by parents Feelings of loneliness Diagnosed with chronic depression – mood swings - difficulties to sleep - eating disorders Peer influence - alcohol and cigarette consumption Poor relationship with mother and sibling	Conflicts with mother

			.	
<b>Jenny, 12</b>	Cut her wrists	-	Father blames daughter for his disease Poor family dynamics – frequent conflicts Feelings of loneliness Poor relationship with sibling Depression – mood swings	Conflicts with parents (beating)
<b>Paula, 16</b>	Ingestion of lizard poison	-	Intimate relationship – mother disapproves Depression – mood swings Feeling neglected and lonely Poor family dynamics – aggressive towards mother Low self-esteem Alcohol, cigarette and drugs consumption Poor relationship with siblings Poor academic performance	Conflicts with mother about intimate relationship with boyfriend which mother disapproves
<b>Ansuya, 15</b>	Cut her wrists	-	Intimate relationship – mother disapproves Conflict with mother – aggressiveness Poor relationship with mother and sibling Depression – mood swings Feelings of loneliness	Parents did not allow her to see boyfriend – depressed and aggressive
<b>Shirley, 14</b>	Ingestion of bleach	Made a suicide plan 1 suicide attempt Drank Javel	Depression – mood swings Poor family dynamics Low self-esteem Feelings of loneliness	Conflicts with parents
<b>Annie, 13</b>	Ingestion of pills	1 suicide attempt Swallowed Panadol	Depressive – mood swings Poor family dynamics – absent parents Feelings of loneliness Poor relationship with parents Poor academic performance	Conflicts with parents
<b>Anita, 17</b>	Cut her wrists	2 suicide attempts Had previous suicide thoughts and attempts (bridge) Cut wrists with knife	Conflictual parents Alcoholic father Depression, mood swings Poor relationship with parents Alcohol, cigarette and drugs consumption Intimate relationship Pregnancy resulting in marriage with boyfriend Poor relationship with mother-in-law	Pregnancy (1 <sup>st</sup> attempt) Argument with husband (2 <sup>nd</sup> attempt) – husband unemployed and had problems with the police
<b>Shane, 13</b>	Cut her wrists	Had several suicide thoughts and planning	Poor relationship with mother – frequent arguing (physical) Feeling neglected - Mother works a lot Feelings of loneliness Aggressiveness Intimate relationship – mother disapproves Depression – mood swings Hallucinations and heard voices	Conflicts with mother
<b>Sheena, 15</b>	Ingestion of pills with red bull	Self-harm Swallowed Panadol with red bull	Poor relationship with parents Aggressiveness Peer influence Alcohol, cigarette and drugs consumption Depression – mood swings parents were about to send her to RYC, aggressiveness, fan of M. Manson, regularly cut her wrists (self-harm)	Wanted to experience what would happen
<b>Bella, 15</b>	Ingestion of pills	No history of suicide ideation	Issues with female friends and peers (jealousy among girls) Seek attention of boyfriend Relationship problems with boyfriend	Argument with girlfriends over boyfriend Shutting down from family

		2 plaquettes of Panadol		
<b>Manon, 13</b>	Ingestion of pills	Acted on impulse  60 Panadols	Poor relationship with stepmother (jealousy) Issues with peers and friends Mood Disturbances / Feeling unloved and lonely	Feelings of rejection by peers Difficult family relationships Issues with perceived rejection from parents
<b>Manti, 15</b>	Ingestion of pills	2 suicide attempts during same year (2013)  BSH prescribed pills	Feeling ashamed following a 'rape' Feelings of entrapment due to family situation (Depressive mother, disabled father, low revenue) Lack of support and comprehension Lack of communication at home especially with mother	Alleged rape Dysfunctional parental behavior Inability to cope with consequences of acts Difficult living conditions - poverty
<b>Bhavna, 15</b>	Ingestion of pills	No history of suicide ideation	Peer pressure (Fitting in) As a means to scare parents so as not to be sent to reformatory Escape from own thoughts	Parents threatening to send her to correctional center following issues with peers and a boyfriend
<b>Uma, 16</b>	Ingestion of bleach	Suicidal ideation Received psychological help after the act	Father left at age of 4, lives with mother and stepfather Misunderstood and had difficulties coping with back stabbing and gossiping habits of 'friends' Depression (to numb feeling of pain and emptiness) Feelings of loneliness Expectations (academic performance)	Depression Feeling unwell
<b>Seema, 16</b>	Ingestion of bleach	Suicidal ideation Received psychological help after the act	Parents disagree with relationship with boyfriend (expectations) Lack of trust in family (communication problems) Harassment from parents Loss of romantic interest and relationship	Severe argument with parents over issue Parental pressure Difficulties coping with too many emotions over too many ongoing issues
<b>Santoshi, 14</b>	Hanging	Deserted parents' home and living with boyfriend Received prior psychological help	Lack of communication and understanding within family To put an end at miserable feelings and arguments	Perceptions of being controlled and deprived of freedom by parents Threats to be sent to a juvenile correctional center
<b>Jenifer, 15</b>	Cut her wrist	Suicidal ideation Self-mutilates to this date	Developmental Issues Low self esteem difficulties fitting in with peers Bullying	Low mood and confusion Difficulties adjusting to home environment Difficulties coping with parents' behavior at home Self-destructive behaviours when in relationships
<b>Fanny, 17</b>	Ingestion of bleach	Suicidal ideation	Bad family dynamics (alcoholic and violent father) Afraid of being stigmatized because of her family situation	Low mood Feelings of entrapment Feelings of shame and fear
<b>Sharfa, 19</b>	Ingestion of pills	Suicidal ideation Suicide plan Did not receive any psychological help after the act	Bad family dynamics due to financial problems Loss of close family member	Parents' argument Family difficulties Lack of hope in a better future/change in current situation

### **5.1.1 Main Methods Employed**

Before analysing the causes, it is worth noting a pattern in terms of the preferred methods employed by girls in attempting to commit suicide. The majority of the interviewees have stated that the most common method which they have used include ingestion of toxic substances (bleach, pills, insecticides). Some participants have also cut their wrists while one case attempted suicide by hanging.

### **5.1.2 Suicidal Ideation and Prior attempts**

In many cases, as seen from the table above, the attempt followed known instances of suicidal ideation, suicide plans and even other prior attempts. For instance, Jennifer who attempted suicide at 15 was reported to have suicidal ideation and was still engaging in self-mutilation till this date. Likewise Manti, had already effected two attempts within the same year i.e. 2013 before she was interviewed.

It is also to be noted that some were even receiving psychological support prior to the act. Furthermore, a minority had engaged in the attempts without indication of suicidal ideation.

It is equally worthy of note that it was not always clear, across all the different cases, whether these attempts were necessarily intended to be fatal or whether as explained earlier (e.g. refer to chapter 1). In fact the interviewers pointed out that there was a possibility that at least in a couple of cases the attempts were more akin to parasuicide than to suicide per se.



### **5.1.3 Main Causes which Explain the Suicide Attempts**

As seen from the table above, there is no single, clear-cut but rather multiple (and sometimes even interacting and compounding) causes or stressors which explain the suicide attempts among girls. As we saw in Chapters Two and Three this finding is not uncommon in the suicide literature where it is acknowledged that explanations of suicide are generally multifactorial rather than unifactorial. Nonetheless, a closer look at the data also indicates some common themes, trends and patterns which emerge and which are indicative of certain commonalities of profiles, as well as recurrent experiences and causes or clusters of causes.

#### **Common Emotional States: Depression and Mood Disorders**

With regard to specific diagnostic profiles, there are clear indications from the interview data that in the build up to the attempts, the teenagers generally display common emotional states associated with suicidal behaviour in the literature. Thus, there were clear evidence of states of depression, anxiety and anger while in some cases there was also evidence of mood disorders, conduct disorder, borderline and antisocial personality disorders as well as substance use disorders.

From the transcripts, there are also recurrent examples of difficulties or inability to cope; problem-solving deficits; a sense of hopelessness, poor self-image and low belongingness which are widely acknowledged in the literature to have strong associations with suicidal behaviour. It is worth noting that in a few cases where there are as yet unresolved issues, even at the time of the interview, i.e. months after the suicide attempt, the participants reportedly still displayed evidence of the above.

In terms of the main causes which explain the suicide attempts, the interview data appear to converge towards five main clusters of explanations which in some instances are intricately

linked. It is useful to note that the first three factors account for the majority of the cases interviewed.

### **Adverse family dynamics**

One of the leading causes which recurrently emerge across a majority of interviews with the teenage girls who have attempted suicide involves adverse family dynamics (Refer to Table 17 above). These include in the main the following dimensions:

- Parental pressure and control;
- Communication difficulties and conflicts with parents;
- Family violence against the participant (emotional and physical); and
- Dysfunctional families (lack of provision of emotional and financial stability).

Altogether, one of the most pertinent findings of this study perhaps lies in the inadequacies in parenting which, according to the interview data range among the most common factors provided by the participants in accounting for why they have attempted suicide.

Conflicts with parents on multiple issues such as excessive control, frequent arguing, incompatible expectations which in some cases have developed into episodes of emotional and even physical abuse have often been cited as the main trigger factors which culminated into the attempts. In fact as seen in the Table above, some of the participants were even deemed to be 'beyond control' and rebellious, as it was even envisaged that their parents would send them to rehabilitation/ correctional centres.

In some cases, participants have also evoked lack of normal motherly or fatherly love, care and affection as well as feelings of neglect and burdensomeness which have culminated into the desire to self-harm, at times to seek attention or at times to end what is construed to be

a hopeless situation. This is particularly evident among those who hail from broken families. Apart from indifference or abandonment, some cases come from backgrounds where the fathers themselves engage in deviant behaviour including having an extra-marital affairs or being an alcoholic. These are hardly conducive to a normal and stable family life. In particular, when these adverse family dynamics are compounded with financial difficulties and make it even more difficult to cope both emotionally and financially, the pressure to put (attempt) an end to their lives is high as the evidence from some of the case studies indicate.

The following excerpts from the interview transcripts provide some vivid illustrations of some of the difficulties which the participants had with their family and which led on to incite their suicide attempts.

**Annie, 14 years old**, reports that her parents used to quarrel and she could not bear to see that her parents argue in front of her. She got quite tense...Mother worked very late in the night and Father started to have an affair with a woman. He used to leave Annie alone to meet his concubine and would come home soon before wife would get back from work.

**Jena, 13 years old**, reports that she used to fight with mother and beat her because she thinks mother does not love her, but only her brother...father...harasses her verbally so that her self-esteem is crushed. Now father has started beating her and she gave back and became aggressive. The situation has worsened when father learns that he is suffering from an incurable disease-Lupus. His work will be suspended and he has to follow treatment. Jena is in a fix and feels guilty now. Father continues to blame her now for his disease.

**Keena, 15 years old**, and reports that she lives with her mother who is separated from father since the past 8 years... When she used to stay with father,...her mother was wild and harsh whenever I return home. She also reports that her mother would say that she has become very independent and that her behaviour was very odd to the point of stopping me from going to her father's place. She added that they fought and argued...her mother put too much pressure on her....she cried a lot....But she reports that her mother did not give up. She couldn't stand it anymore. She became depressed. She didn't want to stay there....She wanted to die.

**Shirley, 15 years old**, reports having conflicts with step-father and mother didn't side with her. Both were very strict with her. Shirley was feeling very lonely and depressed. Her step-father did not try to understand her. In fact he imposed lots of rules in the house. He was very strict with her. Shirley could not adjust and was feeling lonely.

**Manon S., 13 years old**, reports that she attempted suicide because she had problems at home and at school. She reports that during that time she felt that her stepmother was jealous of her and that her father sent her to live with her grandma.

**Fanny L., 17 years old**, reports that her father who is an alcoholic has made life very difficult for herself and her family making them lose face in the community many times. Fanny also reports that she grew up as a witness of domestic violence due to her father's alcohol abuse. She reports that once he got taken away they have coped with difficulty and are barely making it. But the harm was already done, it was too hard to cope with this kind of life.

**Source: Excerpts from interview transcripts**

### **Problematic intimate relationships**

Another important set of causes which can be extracted from the interview data pertain to problematic dating behaviour or intimate relationships. Teen dating violence which at times involves rejection and difficult break-ups where the girls who are victims of unreciprocated love do not see any other issue than to attempt suicide. While at times this can be in a bid for attention seeking, at many others this is an attempt to put an end to their hopelessness.

In addition to rejection and break-ups, there are also a significant number of girls who have reported that their attempts were due to their parents' firm disapproval of their relationships. Again rejoining the above issue about parental control, a significant number of girls have attempted suicide as a result of the depression caused by the disapprobation of their parents. The following extracts from the interview transcripts substantiate the above points.

**Bella B., 17 years old**, reports that when she decided to attempt suicide she thought she was going to get her boyfriend to shift his attention to her and be more committed. « Sur le coup mo pa fine vrement penser ki pou arriver sauf ki mo ti penser mo copain pou comprend ki limportans li ena dan mo la vie ek li pou rapporcher ar mwa. »

**Seema I., 16 years old**, reports that all was good until her parents were informed by third parties that their daughter was having a boyfriend...She reports that they asked her to immediately stop the relationship or organize to get married...She reports that besides having to deal with feelings of a first breakup, she also had to deal with the aftermath of facing the whole family and community as someone who had wronged them by falling in love.

**Jenifer P., 15 years old**, reports that she has had a series of relationships where she has liked some of the boys, and others where the boys have liked her. However, she reports having a self-destructive behavior where she finds herself behaving in ways which push them away causing more stress and isolation for her.

**Santoshini D., 14 years old**, reports that she started by having a boyfriend like her other friends... she reports that she got angry when her parents confronted her about those issues and she fled the next day...the parents report having set stricter rules for their daughter with clear boundaries as to movements in and out of the house...She reports that their parenting is outdated and that she feels suffocated by their constant nagging. She reports feeling misunderstood and having enough.

**Ansuya, 17 years old**, reports that she happened to be very intimate with a boy about 22 years old...Moreover he is from other religion. So the family did not approve of the relationship. Ansuya became very stubborn and aggressive. She fought with her mother everyday...Ansuya eloped with the boy....the police was informed...and Ansuya was brought back home....Her parents made her stop school. Ansuya was feeling lonely and depressed. She cried a lot... She could not live without her boyfriend...She became aggressive and committed the irreparable act.

**Shane, 15 years old**, reports that she had a boyfriend. They were very intimate and that did not please her mother. So they fought every day and argued. Shane could not adjust with the fact that her mother wanted to accompany her everywhere. Sometimes she would lock herself in her room and she went on Facebook to chat. She was not allowed to go out and that did not please her. She became aggressive and sometimes even went as far as beat her own mother. She could not cope with this situation anymore.

**Source: Excerpts from interview transcripts**

### **Peer pressure and influence**

Another cause which is reported by some of the participants as having brought about their attempt at suicide involves negative peer pressure and influence. At a stage of life where adolescents are particularly prone to peer influence, it appears that they are particularly susceptible to what their peers think or say about them. From the interview data, we find that some girls who have attempted suicide have done so as a reaction to (emotional) bullying, gossip and rejection by peers. In one case in particular, the peer influence involved fitting in (e.g. forming part of a group which is fanatical about Marilyn Manson).

Peer pressure which have directly or indirectly brought about suicidal behaviour can also be argued to involve dimensions such as tacit competition as well as the pressures to fit in groups of significance to the teenage girls. In some respects, it is precisely such issues as difficulties to adjust or to integrate to their groups particularly within the school setting which adversely impact on these girls and predispose them to suicidal behaviour. Given that peer pressure can have as tragic an impact as to contribute to suicidal behaviour, there is clearly a need to deter bullying and sensitise students in general about the harmful effects of excessive pressure on one another at school as well as to empower students in general to distinguish and overcome adverse peer pressure.

**Bhavna K., 15 years old**, reports that since she joined school she has had issues with being teased about her dress length and her ways. Last year, she reports that she was constantly being put aside from the group for reasons including her unavailability of funds to pitch in for group lunches or her not having a boyfriend.

**Jenifer P., 15 years old**, reports having had difficulties in her social interactions during her schooling years. She reports that...she experienced a lot of antagonistic and bully behaviors from other girls her age because she could not match them in terms of swag. She reports that her parent's financial condition did not allow her brand name items and that she felt ok not having these branded things. She reports that other girls in her school teased her about her shoes, her bag, and everything else they could. She also reports that she started skipping school and not going to classes. She reports repeated conflict with the school management as well, whom she perceives as having supported the bullying by punishing her all the time. She reports that management never took their time to listen to her version of the story.

**Manon S., 13 years**, reports that she was also having issues of confusion over her peers' behaviour towards her. She reports perceiving them as friendly one day and switching to a total opposite behavior the next day. She reports that she does not feel she has any friends at school. Manon also reports that she has seen the school's counselor but feels like it did not help.

**Uma C., 15 years old**, reports that she has tried to turn to her friends but she met with hostility and difficult behaviors. She reports that she often felt misunderstood and had difficulties coping with their back stabbing and gossiping habits. She reports having felt even lonelier and sunk deeper into her feelings of loneliness.

**Source: Excerpts from interview transcripts**

### **Engaging in multiple high-risk behaviours: Downward spiral to suicide**

The data also indicates that some of the participants engage in multiple high-risk behaviours including substance abuse, indiscipline, juvenile delinquency and debauchery which are accompanied by unfavourable educational performances and conflicts with authority (at home and in wider society). It can also be argued that in many cases the combination of these factors have meant that the attempters have been caught in a downward spiral to which suicide was therefore seen by them as the only ultimate route available to them. The following vignette based on the interview with Sheena (17) is an illustration of the 'cul-de-sac' in which some of the attempters find themselves as a result of living life wrecklessly. Here, however, it should also be borne in mind that together with the responsibility of the teenager, there is a need to locate this behaviour within a precise context – particularly the home environment.

*Sheena, 17 years old, reports that her parents were always quarrelling and were causing tension at home. She couldn't concentrate on her studies...She fought with mother every day. Her mother would give her lots to chores to do at home...So she preferred to stay outside... She made lots of friends at the bus stand and also on facebook. Sometimes the boys made her drink alcohol and smoke. She had tried some drugs too. She was gaining weight and hated herself. She used to engage in auto-mutilation. She had trouble with the school authorities. She was even arrested in a shoplifting gone wrong. She got fed up with her life. She felt her future was hopeless and decided to put an end to it....*

In fact, as shown in Table 17, many of the participants who have reported consuming cigarettes, alcohol and even drugs and who seem have deviated from the mainstream priority of focusing on their education and career in favour of deviant forms of behaviour.

### **Psychiatric disorders**

As trained psychologists, the interviewers have also remarked that in one case, the interviewee (Shane 13) did display some psychiatric disorders which share symptoms with schizophrenia including hearing voices and hallucinations.

On the other hand, as mentioned earlier, depression which is acknowledged to be a precursor for suicide was identified in the grand majority of the participants although the reasons for the depression and associated symptoms are more in terms of the causes that have been described above. In fact some participants were even diagnosed with chronic depression and which were even compounded with abuse of alcohol and drugs.

## **5.2 Main Findings from Case Studies of Teenage Boys who have Attempted Suicide**

Table 18 provides a tabular summary of the main details of the suicide attempt which emerged from the interview. It can be noted that of the 10 boys who participated in this study, on the basis of having attempted suicide in the reference period for the study i.e. 2011-2013, it can be found that, the majority are aged in the age group 16-18. This stands in contrast to girls, who as we saw in the previous section were younger i.e. 15 or less. In fact among the boys only 2 were in early teens – 13 and 14 respectively.

All the participants in the study were in a secondary school.

It is worthy of note that in two cases, there was a sense of denial that the attempts were not suicidal but accidental. Thus Roshan reports *'not understanding why everyone is talking*



*about suicide as all he wanted was to relieve the fear he felt on the moment'. Likewise, Krishna denies he sought to commit suicide 'but that he accidentally swallowed bleach'.*

*Table 18: Summary of psychologists' interviews of teenage boys who have attempted suicide*

Victim and age at Attempt	Method(s) Employed	Details	Set of Possible Causal Factors of Suicide Attempt(s)	Triggering Factor
<b>Anil, 13</b>	Jumped from the balcony	1 <sup>st</sup> suicide attempt	Depressive, impulsiveness and aggressiveness Hear voices and have hallucinations Mood swings Psychiatric disorder Poor academic performance Poor relationship with schoolmates and teachers	Fighting and punishment at school
<b>Krishna, 18</b>	Ingested Insecticide/Herbicide	1 <sup>st</sup> suicide attempt  Herbicide = Tipol	Poor relationship with parents Depressive Poor academic performance Intimate relationship – parents disapprove Alcohol and cigarette consumption Peer influence	Conflicts with parents
<b>Bhima, 16</b>	Ingestion of pills with alcohol	1 <sup>st</sup> suicide attempt  Swallowed his own asthma pills	Poor relationship with father Parents separated Depressive - Mood swings Poor relationship with sibling Peer influence Alcohol, cigarette and drugs consumption Poor academic performance	Under influence of alcohol - conflicts with father
<b>Yash, 16</b>	Ingestion of pills with Coca Cola	Several past attempts  Swallowed 16 Panadols with alcohol	Poor relationship with parents Poor relationship with sibling Poor academic performance Alcohol and drug consumption - Aggressiveness Peer influence Intimate relationship – parents disapprove	Conflicts with parents - aggressive
<b>Pravin, 18</b>	Ingestion of pills with alcohol	1 <sup>st</sup> suicide attempt  Pills ( Artane)	Intimate relationship problems – girlfriend left him Peer influence - Alcohol and drug consumption with friends Poor academic performance - Arguments at home Financial difficulties at home – Father stopped working Depressive – Mood swings	Intimate relationship problems – girlfriend left him
<b>Jesse N, 18</b>	Ingestion of bleach	1 <sup>st</sup> attempt  No suicide planning  Intentional attempt	Feelings of confusion Tired Feelings of being misunderstood Poor self-esteem Poor relationship with parents Poor school attendance Poor academic performance Evidence of reckless behaviour	Behavioural difficulties Issues with teachers at school

		Mother denies all and claims accident	History of impulsive behaviour Behavioural issues at school – numerous restigations	
<b>Krish, 17</b>	Ingestion of unknown substance	1 <sup>st</sup> attempt	Parental pressure and control Controlling mother and uncle Absent father Poor communication with parents Eroding sense of self worth Decreasing self-efficacy and esteem History of self-harm – punching walls	Feelings of overwhelm in the face of parental pressure Anger
<b>Dan, 17</b>	Punching through glass	1 <sup>st</sup> attempt  Severe suicide ideation  No suicide planning  Intentional attempt	Troubled relations with parents Parental pressure for better grades School attendance declining Poor communication with teachers Changes in behaviours Severe depression Low self-esteem - Low self-confidence Inability to handle strong emotions Prefers isolation Declining academic performance Engaged in wreckless behaviours	Feelings of overwhelm and disempowerment Feelings of never being good enough
<b>Roshan, 14</b>	Ingestion of pills	Made several past attempts	Delayed developmental issues Intimate relationship – girl's parents disapproves Ended intimate relationship Changes in attitude and behaviour since breakup - aggressiveness Feelings of loneliness Feelings of unworthiness and unloved Depression and stress History of self-harm	Rejection
<b>Beshav, 17</b>	Overdose of headache medication	1 <sup>st</sup> attempt  Accidental attempt  Headache medication	None	Severe headaches Inability to find relief for pain using the usual dose

### 5.2.1 Main Methods Employed by Boys

Again before analysing the causes, it is worth noting that for boys also there is a tendency to ingest toxic substances (bleach, pills, insecticide) at times mixed with drinks. In the other cases the attempts involved jumping off the balcony, cutting their wrists and punching through glass.

### **5.2.2 Suicidal Ideation and Prior attempts**

In the majority of cases, this was their first attempt. In part this corroborates the point that boys tend to act in fits of anger and impulsion rather than premeditation. Also, there was no evidence of suicidal ideation except in a minority of cases. In fact in two cases, there was a known history of past attempts and suicidal ideation. In some cases, it was even found by the psychologists/interviewers that the intention to die was not clear and were instead attempts at self-harm as a response to stressors which they could not cope with.

### **5.2.3 Main Causes among Boys**

From the interviews with boys, it can be found that the causes for suicidal behaviour between boys and girls are no different. In other words largely similar causes are attributable to boys attempting suicide. Table 18 shows in a summarised form some of the main causes which have brought about the suicide attempts among the boys interviewed.

Again, the commonalities include similar diagnostic profiles in the build up to the attempts. Across the board, the male teenagers generally displayed clear evidence of states of depression, low self-esteem, feeling disempowered and misunderstood at times even accompanied with disorders including conduct, antisocial personality and substance abuse disorders both at home and at school. What is, however, worth highlighting is that in the boys' data, there were comparatively more poignant bouts of anger which were so overwhelming that they committed self-destructive acts.

Also as with the girls, there are also recurrent examples of inadequate coping abilities or problem-solving deficits; a sense of hopelessness and low belongingness which have also

contributed to the suicidal behaviour. Likewise, in largely similar manner to the girls' data, there were also indications of some common elements which are evidence of patterns in the pre-suicidal stages including unfavourable educational performances, frequent conflicts with parents, siblings and peers; feelings of loneliness and low belongingness and even consumption of alcohol, cigarette and drugs in some cases.

The following present the main causes identified as being the main explanations which brought about the suicidal behaviour. It is noteworthy that these factors do not operate on a singular basis but rather have possibilities of intersection with one another.

### **Family Stress and Conflicts**

One of the leading causes which recurrently emerge across a majority of interviews with the teenage boys who have attempted suicide again involves conflictual family dynamics and more particularly parental pressure and control. Table 18 above provides a summary of the interview findings which shows the predominance of conflicts with parents as a major causal factor and we can also see that in many instances these also consist of one of the main trigger factors which push the teenagers to commit the act (Refer to Table 18 above).

**Frequent arguments and conflicts at home particularly with parents as well as parental pressure and control, stand out as the main cause of suicidal behaviour among boys. In no less than 6 out of the 10 case studies of boys who have attempted suicide, we note that conflicts with parents (and more particularly with the father) have been given as the main causes which led to their suicide attempt.**

What are these conflicts or stresses about? From the dataset, we find that in many of these cases, there are reports of personality clashes with parents and more particularly issues of personal space as well as conflicts over poor academic performance, substance abuse

(alcohol in particular but also evidence of drug use), negative peer influence which are arguably the main reasons behind these conflicts.

**Krishna (18)** reports that he wants some independence and ability to make simple decisions from time to time.

*He reports that his mother demands that he does things the way she wants and does not give him the space to experience things from his perspective.*

**Dan (17)** reports that he feels like he is not being given the room to grow and experience life as a teenager.

Also, unmet expectations and reproaches of parents about under-par academic performance seem to be more pronounced - as a source of conflict which leads to suicidal behaviour - among boys than among girls. Some recurrent statements such as 'feeling as a failure', 'feeling of never being good enough...have often come across in the interviews which have motivated the act.

Another important point which emerged from the interviews was that, perhaps less apparent in the case of girls than with some of the boys interviewed, was descriptions of overwhelming anger in the face of parental pressure and which culminated in suicidal behaviour.

However, here, it should also be pointed out that the sources of these conflicts with parents themselves are not a one-way process but instead feed into problematic behaviours of the boys, although it is not always clear whether those problematic behaviours are the causes or merely reactions or strategies to cope with these parental pressure.

### **Problematic Intimate Relationships**

Like for the girls' data set, another important set of causes which can be extracted from the interview data as accounting for suicidal behaviour pertains to problematic dating behaviour or intimate relationships which are faced with rejection or disapproval by parents (own or girls' parents). Three of the 10 boys studied revealed that a problematic intimate relationship for the above reasons have prompted or contributed to their attempt at suicide.(Refer to Table 5.2 further below)

### **Peer Pressure and Influence**

Another cause which is reported by some of the participants as having brought about their attempt at suicide involves negative peer pressure and influence. Perhaps as distinct from the girls' dataset peer pressure here involves mainly engaging in risky behaviours such as deviant behaviour and indiscipline at school, as well as alcoholism and drugs which are often accompanied by deteriorating educational performances.

### **Psychiatric Disorders**

Again as with the girls, the interviewers have also remarked that in one case (Anil 13), there was a strong possibility of a psychiatric illness as the participant reported hearing voices and hallucinations and had some important behavioural difficulties together with being prone to depression, aggressiveness and impulsiveness. His relationships at school with both the classmates and the school authorities were prone to conflicts and allegedly the inability to resolve these conflicts had brought about his attempt.

On the other hand, as mentioned earlier, the majority of interviewees also indicated depression, moodiness and a number of associated symptoms such as feeling unloved, useless, misunderstood, disempowered and having no hope for the future, which are all known to be symptomatic of suicidal behaviour.

#### **5.2.4 Common consequences of suicidal behaviour among boys and girls.**

In this section we turn to the common consequences which suicidal behaviour have upon both those teenagers who have attempted suicide and their significant others, obtained from the interview data. The consequences are manifold, some which indicate hope and a more positive outlook after the event and some which indicate bleaker futures. The following provides a thematic overview of the main consequences. As there are important similarities between the data sets from both boys and girls who have attempted suicide, they are presented in a single section.

##### **Hospitalisation**

In the grand majority of cases, given the methods used there was a spell at the hospital. In some cases, given the seriousness of damage to health, the stay at hospital was rather lengthy. Some even spent time in coma and at the Intensive Care Unit between life and death. For instance, in the case of Krishna 18 who ingested a cocktail of herbicide and insecticide, he was a few days in coma and 1 week in Intensive Care Unit. Rather Similarly Pravin 18 who attempted suicide by ingesting pills with alcohol, hospitalisation involved 1 day in coma and 3 days in ICU.

Again depending on the method of attempt, in some cases more longstanding health effects of the attempts have been reported. Complications in digestive tracts and stomach problems have repeatedly been mentioned by those who have ingested toxic substances.

##### **Psychological Follow-up and Therapy**

Although it would be expected that those who have attempted suicide undergo psychological and even psychiatric treatment, an important finding of this study is that in more than ½ of

the cases studied, there was no psychological follow-up at all. In a couple of cases, only one session with a psychologist has been reported in the aftermath of the event but without further continuation.

The stigma and negative connotations attached to undergoing psychological treatment were oft-cited reasons why those who have survived attempts do not have such treatment.

### **Positive Lifestyle Transformations**

In many cases following the suicide attempt, participants have indicated some positive transformations in the form of more attention and care by close family who have tried to improve parent-child relationship. Examples of reinforced and less conflictual relationships abound in the interviews with an attempt particularly from the parents to avoid that such an episode recurs. These take the forms of changing attitudes of parents for the better, with more efforts to communicate and show care and affection. Rebuilding rapport within the family and with peers and teachers at school are also key elements of these positive lifestyle transformations.

### **Positive Self-Transformations**

At the same time, in many cases there have been important self-transformations which have occurred. It was not unusual in the datasets to have the participants mention that they have understood the value of life and that they have had a 'wake-up call'.

In fact, beyond improved relationships with parents and with teachers and peers, many participants have indicated that they are now more concentrated on their studies and seek to lead a normal life where their energy is channelled in more positive things of life. Some even indicated that they managed to get over their depression.



### **Negative Impacts**

On the other hand, there are quite a few of the participants who on the other hand had not witnessed an improvement in their lives after their attempt. In fact, in some cases where there were some specific reason for the attempt at suicide which had remained unresolved, the post-attempt stage did not lead to any improvement but instead the psychologists/interviewers observed and noted the persistence of symptoms associated with depression and mood swings. These in turn partly explain the reoccurrence of suicide attempts anew.

For instance, in the case of Bella who attempted suicide at 15 as a result of a teenage pregnancy, the latter left school and indicated that she had lost all trust and esteem in her boyfriend and had no interest in pursuing getting a partner.

## **5.3 Main Findings from Retrospective Case Studies of Teenagers who have Committed Suicide.**

In this section we focus specifically on the data set pertaining to the retrospective case studies of those teenagers – 5 boys and 5 girls – who have completed suicide based on interviews with their close relatives. Table 19 below provides a concise summary of the interview data as to the main details of the completed suicide pertinent to this study from the perspective of close relatives. As can be seen from the table, in the majority of cases the interviewees were biological parents (predominantly mothers) with the exception of 2 cases where paternal uncles have agreed to be interviewed given non-availability of parents.

### **5.3.1 Gendered Patterns in Methods Used**

The literature on suicidal methods indicates clear gender differences in the techniques used to commit the act. Similar patterns are revealed from the data obtained from the retrospective study of victims.

An immediate finding pertains to gender differences in methods used. In the cases studied, hanging has been systematically adopted by boys. On the other hand, girls have generally ingested pills (overdose of blood pressure medication and psychiatric medication) or toxic substances (herbicide) with the exception of 1 girl who committed suicide by hanging and another who jumped from the 4<sup>th</sup> floor of her apartment. Even though caution should be exercised in generalising from such small numbers, yet it is useful to note that these gender differences in preferred methods of committing suicide corroborate findings from interviews with key informants who have working knowledge of this phenomenon locally.

### **5.3.2 Suicidal Ideation and Past Attempts**

Across the interview data it has been found that in at least half of the cases, parents report that there had been no past attempt at suicide nor any indication which they picked up and this tragic event therefore came as a huge shock.

However in the remaining cases, there was acknowledgement of suicidal ideation and even history of attempts. In fact in three of the cases (Refer to Table 19), there were some clear indications of the risk of committing suicide which may not have been adequately attended to. For instance, in the case of Ankita, who committed suicide at 14 by jumping from the 4<sup>th</sup> floor of her apartment, there was admission from the mother that the former had mentioned '*being fed up with life*' and gave many indications of depression.

In the case of Banesh who committed suicide at 17, it was reported by the father that the latter had expressed curiosity about death by hanging, about a year before committing the

act, indicating that there was a possibility that suicidal ideation had already started. Likewise, it was reported in the interview that Christie who committed suicide at 17, had a known history of suicidal ideation. Together with suicidal ideation, 2 of the 10 cases studied had a known history of past attempts. In particular, Letty, who committed suicide at 16, had already attempted suicide 2 times before. These points corroborate existing evidence that the past attempts at suicide arguably place people at risk of further attempts unless psychosocial and/or medical support are available.

*Table 19: Summary of psychologist interviews of parents of teenagers who have committed suicide*

Suicide Victim	Suicide Method Employed	Details	Set of Possible Causal Factors of Suicide Act	Triggering Factor
<b>Yousouf, Male 17 years</b>	Hanging	Hanging in front of house No past attempt No self-harm	Intimate relationship problems Depression	Girlfriend called him to harass and threaten him
<b>Avinash, Male 15 years</b>	Hanging	Hanging in bedroom	Alcoholic and violent father Depression and stressed Bullied at school – asked to change school Peer influence Was seeing psychologist at school Poor academic performance	Depression Could not cope with attitude of father and wanted to live at Grandmother's place
<b>Leena, Female 15 years</b>	Hanged from staircase	No past attempt	Depression – mood swings Poor relationship with mother and sibling Possible pregnancy	Dispute with mother about boyfriend issues
<b>Diya, Female 18</b>	Drank herbicide	No past attempt	Intimate relationship – boyfriend possessive and harassed her Depression – mood swings	Dispute with boyfriend
<b>Ankita, Female 14 years</b>	Jumped from 4 <sup>th</sup> floor of apartment - roof	Tell mother she was fed up of life	Peer influence Wore all black and follow Gothic cult Beyond control Poor academic performance Problems at school, bad conduct Moody and nervous Depression	Possibly bad reports from first term tests
<b>Banesh, Male 17 years</b>	Hanging	No past attempts Used curtains in a building of future family restaurant	Hanging may have been experimental and accidental	Unknown

		Questioning about death by hanging a year ago		
<b>Ron, Male 19 years</b>	Hanging	No past attempts No suicide planning reported No suicide ideation reported Appears intentional Used bath robe belt tied to window bars	Father drug addict and deceased No mother-son relationship Lives with uncle Poor academic and intellectual performance	Issues related to abandonment by his mother and a lack of relationship therein
<b>Christie, Female 17 years</b>	Overdose of blood pressure medication	Intentional  History of references to suicide ideation  No history of self-harm	Father had affair – brings mistress home when mother is working Frequents arguments between parents Disempowerment Distraught about home situation Depressed mood Domestic violence	Distraught about home situation
<b>Letty, Female 16 years</b>	Ingestion of an overdose of psychiatric medication	2 past attempts  Intentional  Suicide ideation  No suicide planning	Father sick and then died Poor eating patterns – anorexia in appearance Poor physical health - gastrointestinal disturbances - frequent headaches Poor sleeping patterns Not many friends Poor communication with mother and siblings Poor school attendance Good but declining academic performance Self-harm – cutting and risky behaviours Not engaging much with family members Mother suspects smoking Marijuana and cigarettes	Severe depression (Mental health)
<b>Nilesh, Male 17 years</b>	Hanging	1 past attempt  Evidence of suicide ideation  Intentional	Appear to have had existential issues Appeared depressive with pessimistic views of the world	Appeared to have had existential issues

### 5.3.3 Causes Identified

The causes of suicide among the completers based on interviews with close parents in many ways reflect the causes identified earlier among the attempters. We again see the impact which adverse family dynamics can have on teenagers as well as relationship

problems/rejection and negative peer influence which together account for the majority of the cases above. We also note that in a couple of cases (e.g. Nilesh 17 and Ankita 14) these seem attributable to psychiatric disorders combined in the latter case with academic difficulties.

However what can also be added to these sets of causes, are tragic events (See e.g. Letty and Ron in Table 5.3 above which involve loss of parents to death or abandonment) which have culminated in the suicide cases.

### **Mysterious or Unknown Causes**

In fact it is also useful to highlight that in some cases, particularly without any suicide note, parents, near and dear ones are still unclear as to what were the exact cause of suicide. The following case study is useful to present here as it encapsulates the sense of unresolved mystery which often veils some suicide cases.

#### **Case Study #1: Banesh**

The client is described as a vivid young man of eighteen years old with a lively and warm personality. His father reports that he always played around with him and had a great attachment to his family. From the report, it is deduced that the client was 17 years of age at the time of his death in October 2012. He attended a state school in lower six and is reported to have had good grades. His favorite hobbies were playing soccer and spending time at the gym working out.

The father reports that the young man preferred to stay home but also had an active social life with an extended circle of good friends of both genders. The father reports that he met a number of them he did not know at the funeral or the religious ceremonies thereafter. He reports that all of them praised the deceased and reported their shock as to the suicide.

The father reports that on the day, his son went to school and came back home and was napping when he got back. He reports that when he left home to go to his customary meeting with his friends on Friday evening his son was on the couch watching cartoons and laughing out loud. He reports having made a joke and chatted to him before leaving.

The father reports that while he was with his friends, his wife called him to ask him if he had seen their son as she could not seem to find him. He reports thinking that this was not in his habits and left to go help the family look for him. He reports that all the uncles and cousins joined into the search.

The father reports that after they exhausted all the places he could have been at, he decided to go and visit a commercial building he has where he is stocking items in view of opening up a family restaurant. He reports that all the shutters were closed and he is the only one who had the key. He reports that one of the cousins shown the light from his mobile as he opened the shutters and the whole family saw his body dangling from the end of a rope which was a curtain.

The father reports that his wife was in hysterics, and his nephews helped him pull the body down. He reports it was still warm which may have indicated that he had just lost his life. The father reports having alerted the police for the procedures and reports feeling weak and disappointed in their lack of sensibility to details or outcomes of the report.

The father reports that soon after and within the space of a year they lost his parents which has caused a continued grieving in his family who is still coping with their grief. He reports this is why he requested the meeting to take place away from his residence.

The father reports that he has difficulties understanding his son's action as there was no prior indicator which may have alerted the family. He reports that he finds it even more puzzling that a few days before they were watching television and there was a program on suicide and he asked his son to pay attention. The latter is reported to have responded "*Sa ki pou fer guetter li ene zafer bête*". The father also reports another incident from a distant family where another boy committed suicide and the family was talking about this and he responded "*Sa piti la ti ale Royal ek line suicide, sa mari couillon sa*". However, the father reports remembering, a while back, that he had inquired about certain facts on the process of hanging and asked how did people die when they hung themselves. However, the father does not seem to relate these comments to suicidal ideation.

The father reports that his son had a good support system with the family and had many people he could confide in the advent that he would have difficulties with anything he felt uncomfortable to talk to his family about. The father reports that he heard whispers that there was a girlfriend involved but he never got any clarification over the veracity of the story. He reports that his son's behavior on that day did not seem to indicate any emotional debilities or difficulties.

The father speculates that the son may have tried the hanging as experimentation and did not really intend on taking his own life, but he reports that the family is tired of trying to find answers to their questions. He reports feeling like the police has failed them by keeping their son's cell phone for over a year and not providing them with a conclusive plausible reason to the cause of death. He reports having felt hurt and discouraged after he was presented with a preliminary report which did not present with accurate facts.

At this point, the father reports that the family is still grieving and the mother is still emotionally very affected and tries to cope the best that she can. He reports that their household of six has declined to two as his parents died soon after and his daughter left for her studies. He reports that his son was prospecting Engineering as a career path and studies in Malaysia. The father reports that the recent HSC results were very painful for them as it reminded them that their son was due to graduate.

The case of Ron is another case which again evokes how elusive it is to identify and comprehend the exact cause of a suicide. The following self-explanatory case study of Ron provides yet another indication of how people who may at first sight appear to be normal and fully functional members of society may harbour unresolved issues which can eventually surface out in a dramatic manner.

### **Case Study # 2: Ron**

The client is related to the spokesperson as his nephew. It is reported that his father died when the client was 10 years old and that his mother abandoned him when he was three months old. It is reported that the client has been raised by the family on his father's side since his abandonment. It is reported that the father was a drug addict and that the mother had three other children, whom she abandoned to family members as well. It is reported that although the client knew who his mother was he did not have any mother-son relationship with him.

The client is described as a young man who was raised in comfort and abundance by his grandmother and a Scottish step-grandfather. It is reported that, as a child, he was diagnosed with a heart condition and that family members have always been protective of him. It is reported that the client has completed an educational level of up to a level of Certificate of primary education and has followed three years of prevoc thereafter. It is reported that he held a job in advertising and appeared to love it.

It is reported that the client had a large circle of friends and girlfriends and liked to party. It is also reported that the client had a good rapport with all his family members and was considered as a son to his aunts and uncles on his father's side.

The uncle reports that the client lived with him singlehandedly as he is divorced. He reports that they had their house routines and that there were no major issues other than age related or of concern. He describes the client as loving and readily apologizing if he was caught on anything which was not within the boundaries of the house rules.

The uncle reports that nothing in his nephew's behavior indicated that he was going to commit suicide. He reports that the night before, when he got home, his nephew was in his room, as usual, listening to his favorite music. He reports that he seemed a little blue, but nothing of concern as they went about their routines the same way. He reports that in the morning he helped the deceased pick his clothes for his scheduled interview and gave him the usual props. The uncle reports that he left for work at 0800 in the morning and that at 0815 his nephew committed suicide. He reports that in between he had sent a text message to his cousins informing them of his intention. The uncle reports that the family was confused and by the time they organized to get to the house, it was too late.

The uncle reports that the aunts are the first ones who arrived and found him hanged at the window with the uncle's bathrobe belt. It is reported that the whole family is still in shock of what happened as it the reason behind the act is still a mystery to them. The uncle reports that for a long time they have explored reasons and cannot seem to understand. Among the possible causes they have explored a breakup with a

girlfriend; a debt that he had accumulated at work worth about no more than thirty thousand rupees; and his inability to cope with thoughts about the reasons behind his abandonment.

The uncle reports that shortly prior to his suicide, a girlfriend of his reported that they had a conversation about mothers' day and that he cried a lot when she asked him whether he had any present planned for his mother. The uncle reports that this has been an ongoing area of pain and unanswered questions for the client who has expressed a lot of sadness over time over this issue.

The uncle reports that the whole family still has a hard time dealing with the lost. He reports that among the most poignant thoughts are the questions to why he chose suicide as an alternative? The family is also experiencing feelings of anger towards the deceased, denial, and grief in varying degrees.

### **5.3.4 Consequences of Completed Suicide**

The retrospective study of completed suicides provides useful insights into the impacts and experiences of suicide of teenage children onto their close relatives. It is widely acknowledged that when someone commits suicide, his/her family members are very likely to experience a range of emotional reactions, ranging from grief and prolonged mourning, self-blame, confusion and even anger. Given that generally suicide is an unexpected and sudden form of death, its effects can be strong and long lasting particularly on next of kin. The interview data in many ways corroborate the above points. The following summarises the main consequences of suicide on close family.

#### **Difficulties in Overcoming Grief**

Generally, a family who loses someone to suicide, like any other sudden death, goes through a grieving process that will usually involve denial, shock, bargaining, anger and then ultimately, acceptance. However, a recurrent feature of the interviews has been that over the course of the 1-2 years since the suicide, there was still a profound sense of disbelief, grief and a vivid sense of emotional trauma. Across the interviews, it was clear that they had yet to come to terms with the loss of their child to suicide.



In most cases, it was clear that although the family still loved and mourned the suicide victim, at the same time, they feel frustrated, disappointed or angry at the loved one's choice of suicide. Those who feel anger tend to resent the fact that their loved one acted selfishly in choosing death. This was particularly the case among those who had not given any indications that they were contemplating suicide.

### **Health Implications**

Research indicates that when parents lose a child to suicide, they may experience significant rates of depression, anxiety and even physical illness. Likewise across some of the interviews, parents have in many respects provided clear evidence that associated with the above harsh grieving process, their mental and even physical health have been negatively affected. For instance, in the interview with the mother of Letty who committed suicide at 16, it was reported that the former is herself in a state of depression arguing that 'life has no meaning' and that there is 'no hope for the future'. In fact, the mother has even admitted having suicidal thoughts. Such testimonies point towards gaps in the provision of counselling and psychological support for close kins who have lost children as a result of suicide.

### **Excessive Guilt**

It was also common among the interviewees that they felt terribly guilty about the act and they consider themselves responsible. These effects were particularly pronounced among those who had either given warning signs (signs of depression and important behavioural changes, suicidal ideation and even past attempts). They argue not being able to forgive themselves for having been somehow inadequate in their parental responsibility. Although only the late family member is responsible for his/her choice to end his life, the sense that they could have prevented the suicide leads parents to question their own abilities as caregivers and lead to excessive guilt.

### **Blame and Marital Dissolution**

In some cases where the causes of suicide were related to parental conflict or teen dating violence, there is evidence of anger and blame against those who are seen to be responsible for the suicide. For instance, in the case of Avinash who committed suicide at 15, the latter's parents have separated since the suicide. The cause of the suicide was related to the behaviour of the father who was allegedly alcoholic and violent and Avinash allegedly could not cope with him and wanted to live at his Grandmother's place. Similarly, in the case of Christie who reportedly committed suicide because she could not accept the extramarital affair of her father and a conflict-prone family situation, her parents subsequently broke up.

### **Stigma**

Another important consequence of suicide is the stigma that it brings to the deceased and his/her family. In fact here it is worth pointing out that the difficulty of getting the cooperation of parents to talk about their children's suicide is partly to do with a desire to hide that their loved one's death was a suicide. In attempting to contact parents from the list provided by LifePlus, the interviewers/psychologists even reported that in some cases the parents were particularly aggressive that the former had knowledge that their children had committed suicide. One of the interviewees, notably Ankita's mother, reported that she had to change jobs to avoid the stigma.

## **5.4 Summary**

The datasets examined above provide some useful insights into the causes and consequences of suicidal behaviour (among attempters and completers) over the reference period selected for this study i.e. 2011-2013. It is useful to note here that on account of the participants who gave their consent to take part in this study (including parents of completers of suicide), there are some forms of suicide including contagion or copy-cat suicides (explained in

Chapter Two) and 'pact suicides' – suicide of two lovers on account of impossible love - which have not surfaced and for which the causes may be distinctive.

Based on the case studies carried out, it has been found that, in line with existing academic and empirical literature on the subject both internationally and locally, there are no single unifying causes of (teenage) suicidal behaviour which have been identified. Instead there are multiple causes which often operate in an interrelated manner to provoke a downward spiral which culminate in teenage suicidal behaviour. In the main, five often inter-related themes emerged prominently across the interviews. These are as follows:

- (a) **Adverse family dynamics:** including parental pressure and control, communication difficulties and conflicts with parents, family violence against the participant (emotional and physical) and broken and/or dysfunctional families (lack of provision of emotional and financial stability).
- (b) **Relationship Issues** (rejection, break-up, teen dating violence)
- (c) **Peer Pressure**
- (d) **Entanglement in risky behaviours** (substance abuse, deviance, etc) often leading to entrapment in a downward spiral.
- (e) **Psychiatric disorders** (depression, mood swings...)

In addition to these difficulties, it is also clear that those who engage in suicidal behaviour have difficulties or inability to cope and lack skills and support. They also indicate a sense of hopelessness and low belongingness which are widely acknowledged in the literature to have strong associations with suicidal behaviour. These compounding problems thus bring about what has been described as an "intra-psychic upheaval" in early adolescence leading to motivational and behavioural problems with the simultaneous timing of major developmental changes and expectations from home and school environments.

The stressors and behaviours that those adolescents wove together to form a composite picture of a youth at high risk for depression and self-destructive behaviour with symptoms

such as personal drug and alcohol use, running away from home, playing truant, prolonged sadness and crying, unusual impulsivity or wrecklessness or dramatic changes in personal habits are intertwined with the family and personal history, the individual personality and the emotional/social events taking place in a person's life.

There are by and large no major differences by gender in terms of the causes with possibly the exception that the girls (involved in this study) tend to engage in suicidal behaviour at a relatively earlier age than boys. There also seems to be a gender difference in terms of methods of suicide whereby male teenagers have tended to resort to hanging while the preferred method for girls has generally been in terms of ingestion of toxic substances.

From the above picture, it is clear that there is a need for teenagers to develop problem-solving and other coping strategies in order to overcome difficulties at this complex stage of their lives. Coping is the ability to effectively regulate emotions, behaviours, and motivations in response to stressful situations. Individuals are thought to have preferred styles of coping, which they tend to use across situations. Coping strategies must emphasize self-responsibility to find positive, non-destructive ways to find relief. Second, communication skills are important. This involves being able to talk to a good listener. It is important to express feelings, vent emotions, and talk about problems and issues. Peers are good sympathizers, but they often would not take an adult perspective to begin to plan how to make changes for the better.

Interventions have a place of great importance in developing skills at the individual, family, and community level to educate about healthy behaviours and support activities for young people. While parents, or other guardians, may know the risks of early drinking or smoking, they may need help in specific skills to help children and youth avoid those risks. Of course, learning by example is powerful, and so programs that help parents modify their risk behaviours likely benefit the children as well. Sorting out the issues, setting goals and making

plans to move forward are skills that can be taught and practised. Ultimately, most young people will develop and assume the responsibility for their own protection and peace of mind. But during the years of learning and practice, parents, teachers and helping adults need to be aware of the signs and patterns that signal danger. Awareness of adolescent stress and depression opens the door for adults to begin constructive interventions and stimulate emotional development.



## **CHAPTER SIX – FINDINGS FROM PILOT SURVEY OF 3 SECONDARY SCHOOLS**

### **6.0 Introduction**

This chapter presents the main findings which emerged from the pilot survey conducted at the level of the three secondary schools randomly selected for this study. More details of the sampling methodology for the selection of students are provided in Chapter Four.

A central objective of this pilot survey was to identify the extent to which secondary school students are exposed to or indeed are engaged in risky behaviours at the level of the school, to complement the case study data. Although the survey questionnaire includes a module on suicidal ideation, self-harm and suicide attempts as well as suicide-related KABP (Knowledge, attitudes, behaviours and practices) questions, it also touches upon many other issues which are pertinent to risk behaviours and practices of teenagers within the school setting.

This chapter is organised as follows. The first part presents the basic biographical profile of the respondents of the survey. This is followed by the main findings pertaining to the module on suicidal behaviour including intentional harm and suicide ideation. The knowledge and perceptions of on suicide is also included in this section. The next part organises the main findings pertaining to other risky behaviours including consumption of alcohol, cigarette and drugs. The mobile and internet usage is presented in the next section. Section 6.5 looks at the knowledge and practices pertaining to dietary lifestyle and physical activity of respondents while section 6.6 presents data on the school environment and academic level of the respondents. The three last sections deal with the overall health status of students

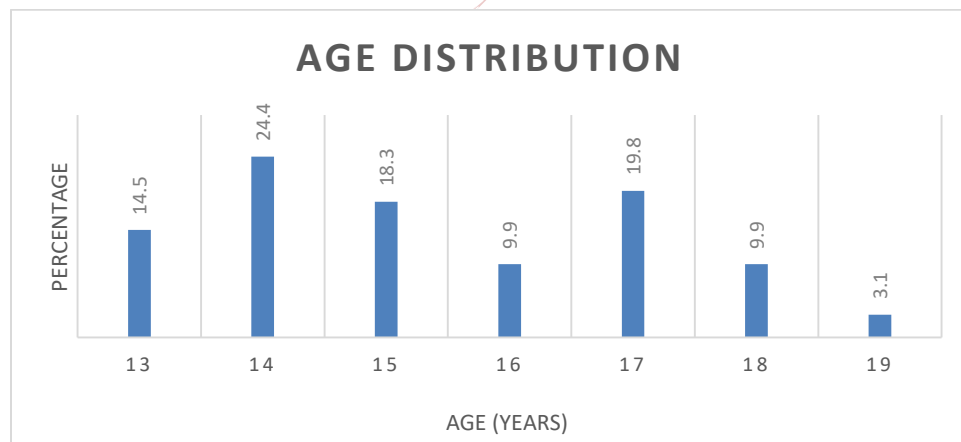
(physical, mental and emotional), the type of relationships they possess with the family, friends and peers and, finally, their sexuality and sexual orientation.

## 6.1 Demographic Profile of Respondents

This section presents the basic demographic profile of the survey respondents.

### Gender and Age Distribution

The actual sample of 131 respondents is made up of 55% of males and 45% of females. The age distribution of the sample is as follows.



*Figure 19: Age distribution of sample*

### School and Class/Form Distribution

As mentioned before, the survey involved three secondary schools which have been assigned numbers 1-3 for sake of anonymity. The table below shows the number of respondents from

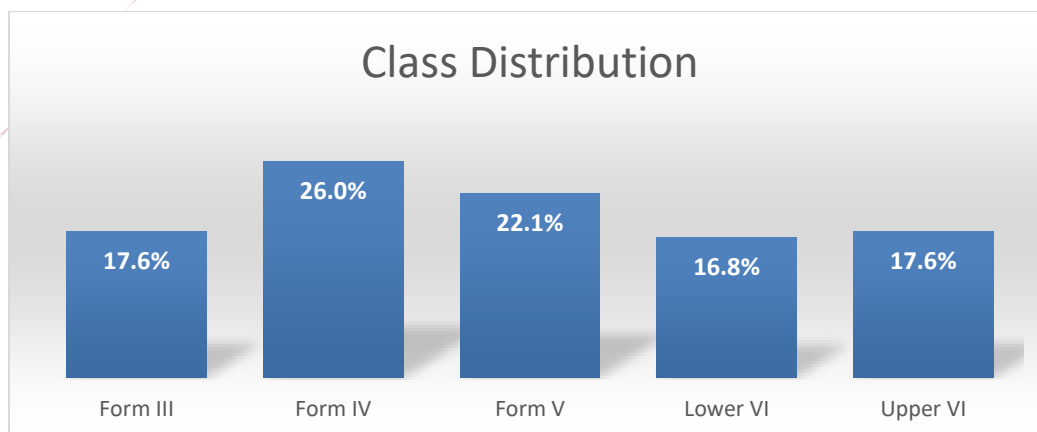
each school. School number 1 is a mixed school, whereas school number 2 and 3 are boys school and girls schools respectively.

*Table 20: Number of respondents from each school*

<b>School Number</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>1</b>	43	32.8
<b>2</b>	48	36.6
<b>3</b>	40	30.5
<b>Total</b>	131	100

From each school, only students from Form III and upwards were administered the survey questionnaire. The table below shows the percentage of respondents from each school form. The majority of respondents were from Form IV, followed by 22.1% from Form V. Form III and Upper VI had the same number of respondents (17.6%) and Lower VI had the lowest number of respondents (16.8%). By and large these figures are proportional to the aggregate size distribution of these forms at the level of the 3 different schools.

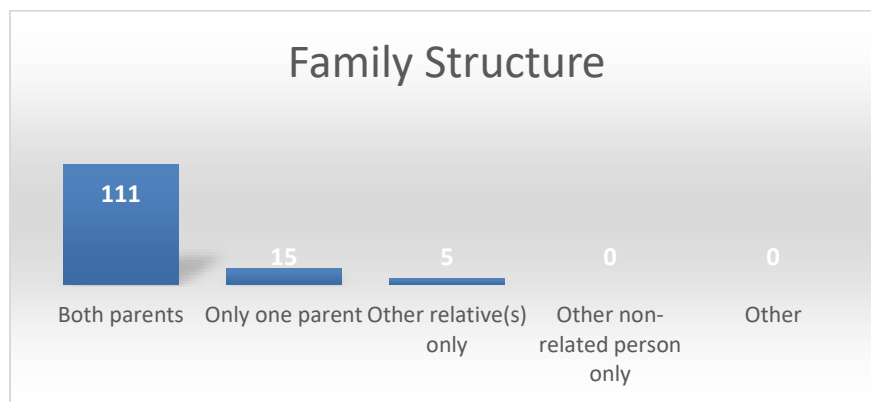
*Table 21: Class/Form distribution of sample*





## **Family Structure of Respondents**

Respondents were asked to state their current family structure. The diagram below depicts their responses. A majority of respondents (84.7%) live with both their parents. 11.5% live with a single parent; 3.8% live with other relatives(s) only. No respondents live with either other non-related persons or another type of family structure.



*Figure 20: Family structure of respondents*

## **6.2 Teenage Suicidal Behaviour**

The module in the questionnaire about self-harm and suicidal behaviour generated some findings which are sources of concern and which arguably requires the authorities to take precautionary measures to address. Although as discussed before, it is not always clear whether thinking about self-harm and suicidal ideation always culminates in suicide attempts or actual suicide, a precautionary approach should be adopted. The minority segments, which are by no means negligible as shown below, which answered in the affirmative to the questions about whether they have thought about hurting or harming themselves intentionally; whether they have had suicidal thought and whether they have

actually attempted to take their own lives, indicate that these issues should not be taken lightly.

### 6.2.1 Thoughts of hurting oneself intentionally

The following table which indicates whether respondents have ever thought to hurt or harm themselves intentionally, as a matter of fact, indicates that slightly above 15% of the sample have done so. As mentioned before, although a majority of 84% have had no such thoughts, as possible precursors to suicidal ideation this minority of 15% shows that there is need for intervention of relevant stakeholders to address this concern.

*Table 22: 'Have you ever thought of hurting or harming yourself intentionally?'*

		Frequency	Percent
<b>Valid</b>	<b>yes</b>	20	15.3
	<b>no</b>	110	84.0
	<b>Total</b>	130	99.2
<b>Missing</b>	<b>System</b>	1	.8
<b>Total</b>		<b>131</b>	<b>100.0</b>

An analysis of this response by gender of respondents indicates that slightly more boys (55%) than girls (45%) have ever thought of hurting themselves intentionally (Refer to Table 23 below). In addition when run by the Form in which the students are, we notice that the majority of the students who have ever thought of harming themselves are from Lower VI (8 out of the 20 students in question). It is also a matter of concern that even in lower Forms such as Forms III and IV, there are on aggregate 6 out of the 20 students who have had such thoughts.

Table 23: 'Have you ever thought of hurting or harming yourself intentionally?' by gender

		sex	
		female	male
		Count	Count
Have you ever thought of hurting or harming yourself intentionally	yes	9	11
	no	50	60

Table 24: 'Have you ever thought of hurting or harming yourself intentionally?' by class/form

		Class				
		Form III	Form IV	Form V	Lower VI	Upper VI
		Count	Count	Count	Count	Count
Have you ever thought of hurting or harming yourself intentionally	yes	2	4	3	8	3
	no	21	29	26	14	20

### **First-Hand Reasons why respondents have thought of hurting themselves**

It was also deemed important to understand from the perspective of the students why they have thought of hurting themselves. The following provides the reasons provided first-hand by the students. These reasons as can be seen below, by and large, concur with similar problems/factors which we saw in the previous chapter, and in many ways in the wider literature on suicidal behaviour. These tend to cluster around issues such as adolescent turmoil and existential issues, conflicts with parents and victimisation by peers and also relationship difficulties which potentially lead to problems of belongingness and burdensomeness and possibly even depression.

- Because I am sad in life
- Because I thought no one will love me and I will remain alone. I was like a burden on someone
- Because of past poor results and people intentionally add more problems
- because of some love problems
- been through hard time in life, but strong enough to resist
- bullying and feeling useless depressing about life
- cause trouble by hurting my parents emotions or when my parents shouted at me now its okay
- Don't like life because of too many troubles
- due to a feeling of rejection
- Due to poor results her parents were rude to her
- For some reason.
- generally when get scolded by parents or in love of a girl
- i was depressed and sad and things were going bad
- I was so stressed about life.
- mentally stress because of crisis family going through tendency to hurt myself
- problem with friends, mother, father, siblings & other relatives have problem with my love. nobody loves me
- sensitive person, keep helping people, in return hurt myself emotionally not physically.
- to obtain something that i want (e.g. a mobile)
- when i feel nobody is paying attention to me
- When my parent talk rudely with me. When I hate myself.

***Source: Pilot Survey Data (2015)***

### **6.2.2 Intentional Harm on Oneself**

It is widely acknowledged that thinking about and harming oneself intentionally do not happen automatically. Not all those who think about harming themselves necessarily end

up doing so. A follow-up question in the study prompted the students to state whether they have ever hurt or harmed themselves intentionally and we find that 6.1% i.e. a total of 8 students compared to the initial of 20 students have actually done so. (Refer to Table 25)

*Table 25: 'Have you ever hurt or harmed yourself intentionally?'*

		Frequency	Percent
<b>Valid</b>	<b>yes</b>	8	6.1
	<b>no</b>	120	91.6
	<b>Total</b>	128	97.7
<b>Missing</b>	<b>System</b>	3	2.3
<b>Total</b>		131	100.0

An interesting finding is that as opposed to the previous question where boys seemed to have edged girls in terms of thinking of hurting themselves intentionally, here an analysis by gender reveals that out of the 8 students who have affirmed that they have hurt or harmed themselves intentionally, girls make up the majority (Refer to Table 26) Although these figures are small and should therefore be treated with caution, nonetheless this also reflects the trends in terms of official figures in suicide attempts.

*Table 26: 'Have you ever hurt or harmed yourself intentionally?' by gender*

		<b>sex</b>	
		<b>female</b>	<b>male</b>
		<b>Count</b>	<b>Count</b>
<b>Have you ever hurt or harmed yourself intentionally?</b>	<b>yes</b>	5	3
	<b>no</b>	53	67

### **First-Hand Reasons why respondents have actually hurt themselves**

The main reasons as given by the students for having ever hurt or harmed themselves intentionally are given in the following indicating once again similar factors as before, more particularly relationship issues.

- Angry/sad about someone/
- Because my (love) does not love me. Boy broke my heart
- Because my friend humiliated me
- because of some love problems
- Because my life is very difficult. Because of friends.
- problems facing in school at home
- thought of being unwanted child

**Source: Pilot Survey Data (2015)**

### 6.2.3 Suicide Ideation

A revealing finding of this study is that as high as 13% of the students surveyed in this study have ever thought of committing suicide. The earlier question about whether respondents have ever thought of harming themselves intentionally was to control for consistency when subsequently confronted with the question about whether this involved thinking of committing suicide. Rather similar response rates therefore confirm this consistency.

*Table 27: 'Have you ever thought of committing suicide?'*

		Frequency	Percent
<b>Valid</b>	<b>yes</b>	17	13.0
	<b>no</b>	112	85.5
	<b>Total</b>	129	98.5
<b>Missing</b>	<b>System</b>	2	1.5
<b>Total</b>		131	100.0

**It is also interesting to note that girls are nearly twice as many as boys in terms of having ever thought of committing suicide.** Again as mentioned earlier this is a point which corroborates available official statistics on this issue. (Refer to Table 28)

*Table 28: 'Have you ever thought of committing suicide?' by gender of respondent*

		<b>yes</b>	<b>no</b>	<b>Total</b>
		<b>Count</b>	<b>Count</b>	<b>Count</b>
<b>sex</b>	<b>female</b>	11	48	59
	<b>male</b>	6	64	70

#### **6.2.4 Suicide Attempt**

**The survey also reveals that a total of 4 students out of the 131 surveyed have affirmed having ever made a suicide attempt.** This finding in a pilot survey may indicate that this is a phenomenon which is likely to be of a wider magnitude among the wider student population. As it is notorious in the victimisation literature that what comes to official attention may only be the tip of the iceberg, there is room to argue that there is a need for more regular nationwide studies in order to ascertain the prevalence, as well as to monitor and evaluate this phenomenon at the level of secondary schools.

Further related questions reveal that of these 4 respondents who have attempted suicide, there were 2 boys and 2 girls (Refer to Table 29) across all 3 schools. All four affirm that they have made a detailed plan before attempting suicide. All four affirm having also undergone psychological follow-up.

Table 29: 'Have you ever made a suicide attempt?'

		sex	
		female	male
		Count	Count
Have you ever made a suicide attempt?	yes	2	2
	no	57	69

### 6.2.5 Students' Knowledge and Perceptions of the Phenomenon of Suicide

The study also sought to explore the level of knowledge, conceptions or misconceptions, as well as attitudes with respect to the phenomenon of suicide by asking respondents how far they agreed on a likert scale of 1-5 to a series of pertinent statements. The table below summarises in tabular format this knowledge and perceptions by aggregating the 5 point likert scale to a more simple 3-point scale keeping the neutral component 'not sure' unchanged.

Table 30: Students' knowledge and perceptions of the phenomenon of suicide.

	Agree (%)	Not sure (%)	Disagree (%)
Most people who attempt suicide are lonely and depressed	70.2	16.8	13
People with no family ties are more likely to attempt suicide	37.4	35.9	26.7
Those who threaten to commit suicide rarely do so	34.4	48.9	16.8
People who attempt suicide are usually mentally ill	34.3	29	34.4
People who attempt suicide and live should be required to undertake therapy	66.4	22.9	10.7
People who attempt suicide usually seek sympathy and attention	59.5	28.2	12.3
The issue of suicide should be discussed among friends	59.5	19.8	20.7
Talking about suicide may help prevent a person from committing suicide	71.8	19.1	9.1
The problem of youth suicide is very serious	84.7	11.5	3.8
People don't have enough knowledge about suicide	60.6	26.7	12.7
Talking about suicide in schools will lead to increased attempts by students	27.7	41.2	30.8



Talking about suicide in schools will prevent some students attempting suicide	61	26.7	12.3
If someone wants to commit suicide it is their business and we should not interfere	16.8	20.6	62.6
Suicide usually occurs without warning	59.5	29.0	11.5
It's none of my business if a friend says he/she wants to kill themselves or attempts to	12.9	13.7	73.4
If a suicidal friend asked me not to tell anyone I would keep that promise	6.9	19.1	74
If someone is talking about suicide I would ignore/joke about it	15.3	20.6	64.1
It would be helpful to a suicidal friend if I tried to cheer him/her up	72.5	15.3	12.2
It would be helpful to a suicidal friend if I distracted him/her	63.3	22.1	14.6
I am very confident that I could identify if my friend was suicidal	45	48.9	6.1
I am very confident that I would be able to help a suicidal friend	65.6	26	8.4
<b>Source: Compiled from Pilot Survey Data (2015)</b>			

In many respects as seen from the above table, there is room for further sensitisation and education of students about this phenomenon, although there also seem to be some misconceptions and possibly an undercurrent of apprehension to the idea that talking about suicide in schools may not be favourable.

Overall it is useful to highlight that there is a widespread acknowledgement by a majority of nearly 85% of respondents that the problem of youth suicide is very serious and that people don't have enough knowledge of this phenomenon.

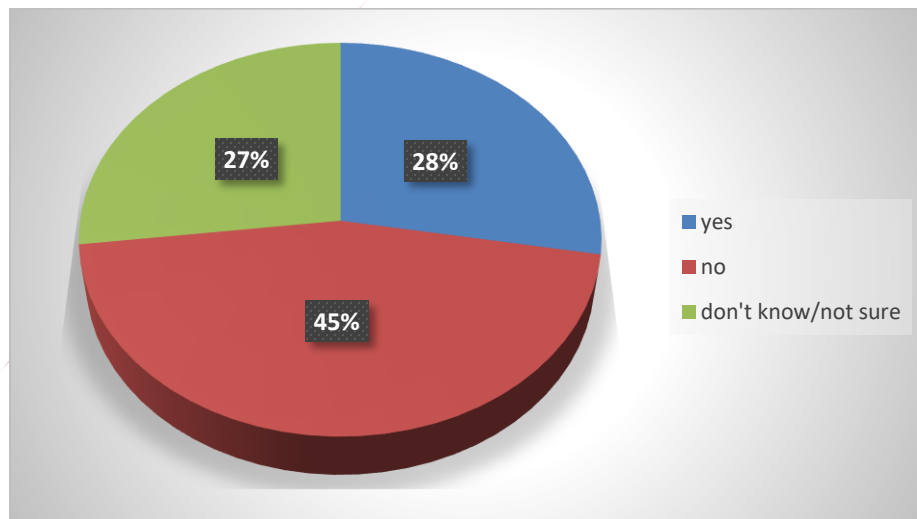
There is also an undercurrent of ignorance or indifference among a minority of students as to what how they would react if they come to know about a friend who wants to commit suicide. For instance, nearly 13% of students agreed to the statement that 'it's none of my business if a friend says he/she wants to kill himself/herself or attempts to do so.' Likewise, only nearly 7% agree to the statement that 'if a suicidal friend asked me not to tell anyone I would keep that promise' while slightly above 19% state that they don't know what they would do.

It can be argued that such findings as shown in the above table can help in the design of educational and communication campaigns to help students at the level of schools.

### 6.2.6 Knowledge of Close Friends or Relatives who have Attempted or Committed Suicide

As the diagram below indicates, there is a significant minority of respondents (27.5%) who indicate that they have friends, siblings or family members who have attempted or committed suicide.

*Figure 21: 'Have any of your friends, siblings or family members attempted or committed suicide?'*



## 6.2.7 Future Outlook

It is also worth noting that somewhat in line with the afore-mentioned findings, while for a majority of students, there is a majority of slightly above 80% who consider that their future ranges from good to very good, there are others who as from this tender age feel that they are either uncertain or not quite optimistic about their future. Even worse, some 5.3% of the students are rather pessimistic about their future.

Deeper probing into this minority who have selected 'not so good' or 'bad' as well as the 'don't know/not sure' as responses include those who have attempted suicide or have had suicidal ideation.

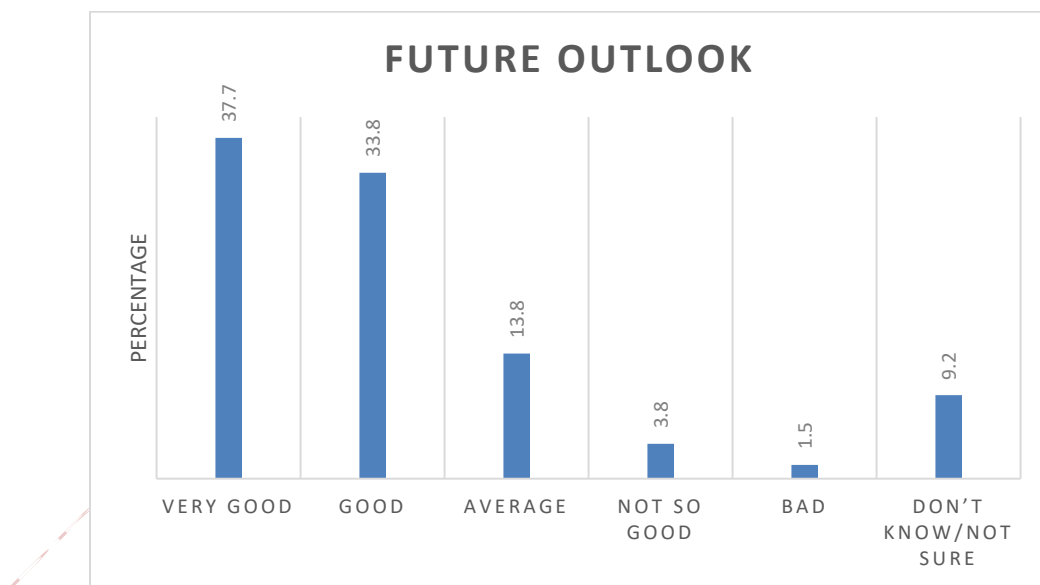


Figure 22: 'How does your future look?'

## 6.3 Alcohol, Cigarette & Drug Consumption Patterns

As part of this survey, other risky behaviours of teenagers were also assessed. Once again as will be noted in the following, there are certain bleaker sides to the process of adolescence and schooling which warrant attention from all quarters. For instance, aside from alcohol and cigarette consumption, at least a minority of students, more specifically boys, have indicated that they have engaged in drug consumption. The table below presents the current alcohol, cigarette and drug consumption patterns of the respondents. These patterns have also been disaggregated by gender.

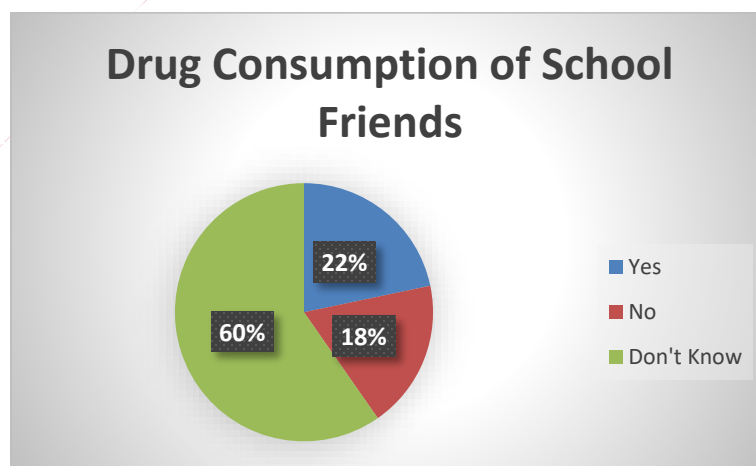
*Table 31: Alcohol, cigarette and drug consumption patterns of respondents disaggregated by gender*

		Male		Female		Both	
		Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
<b>Alcohol Consumption</b>	<b>Yes</b>	14	53.8	12	46.2	26	20
	<b>No</b>	58	55.7	46	44.2	104	80
<b>Cigarette Consumption</b>	<b>Yes</b>	19	86.4	3	13.6	22	17.1
	<b>No</b>	53	50.5	52	49.5	105	82.7
<b>Drug Consumption</b>	<b>Yes</b>	6	100	0	0	6	4.6
	<b>No</b>	66	52.8	59	47.2	125	95.4

The percentage of respondents who currently consume alcohol, smoke cigarettes and consume drugs are 20%, 17.1% and 4.6% respectively. A majority of alleged alcohol drinkers (53.8%), cigarette smokers (86.4%) and drug users (100%) are boys.

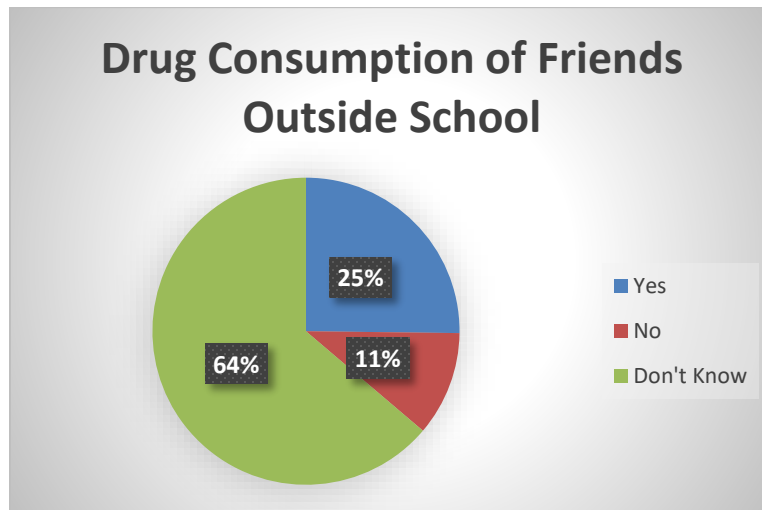
Questions were also asked as to which type of drinker or smoker respondents would categorise themselves as. As such, 80.8% described themselves as social drinkers (drink only in the company of others) and 19.2% described themselves as occasional drinkers (drink socially and when alone). 50% described themselves as light smokers, 18.2% described themselves as social smokers, 31.8% described themselves as average smokers. However, no respondents described themselves as heavy smokers.

In terms of drug usage, as mentioned above 4.6% of all respondents are current drug users, while 8% have consumed drugs at least once before. The current drug users are all boys and they state that they consume drugs either on a monthly basis or less frequently. When respondents were asked if they have any school friends who consume drugs, responses were as follows.



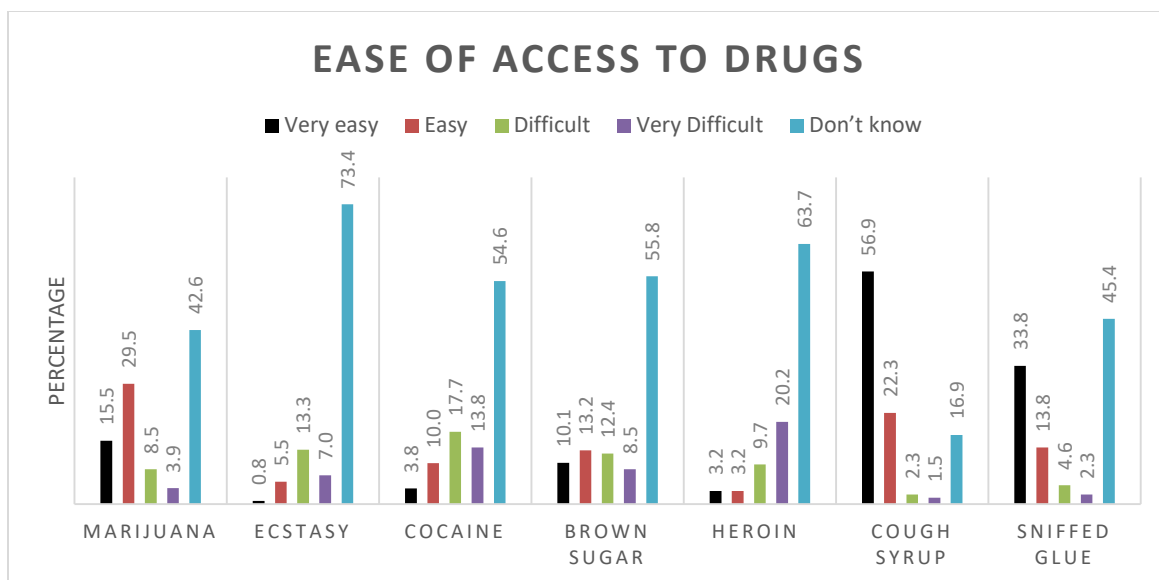
*Figure 23: Drug consumption of school friends*

When asked about the drug consumption of their friends from outside school, the responses were fairly similar as shown in the figure below.



*Figure 24: Drug consumption of friends outside school*

Ease of access to drugs was also examined. From a list of seven soft and hard drugs, respondents were asked to report their ease of access to these drugs. Their responses are presented below.



*Figure 25: Ease of access to drugs*

According to the respondents, cough syrup (56.9%) was the most easily accessible drug, followed by sniffed glue (33.8%), marijuana (15.5%), brown sugar (10.1%), cocaine (3.8%), heroin (3.2%) and ecstasy (0.8%).

Although these responses are based on perceptions rather than fact, yet these issue of drug consumption and ease of access to drugs are matters of concern for one and all.

Alcohol, cigarette and drug consumption were also disaggregated by age group as shown in the table below.

Table 32: Alcohol, cigarette and drug consumption patterns of respondents disaggregated by age-group

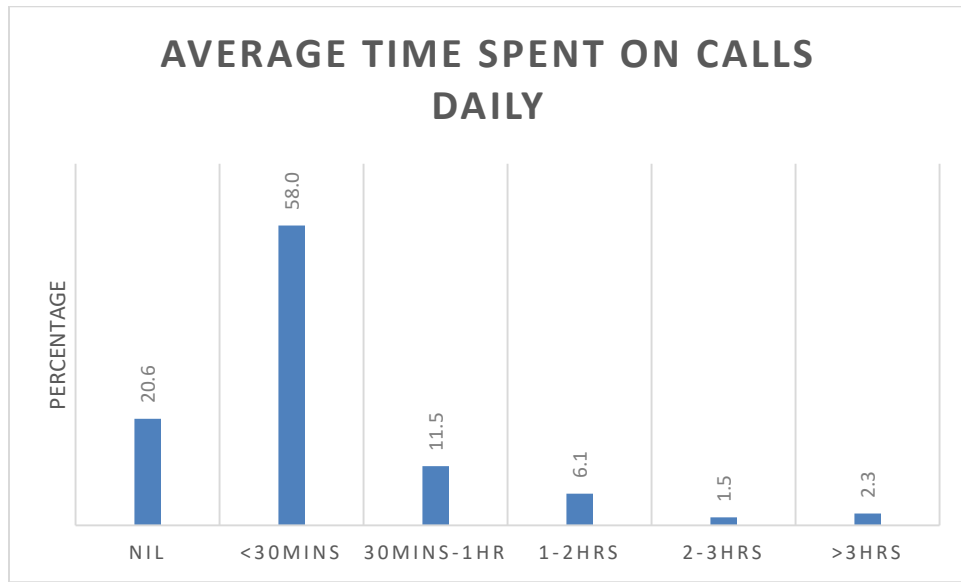
Age Group							
Alcohol Consumption	13-15		16-17		18-19		Total
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	
	12	46.2	6	23.1	8	30.8	26
	6	27.3	10	45.5	6	27.3	22
	1	16.7	3	50.0	2	33.3	6

The 13-15 age group is the highest consumer of alcohol while the highest cigarette and drug consumers are found in the 16-17 age group.

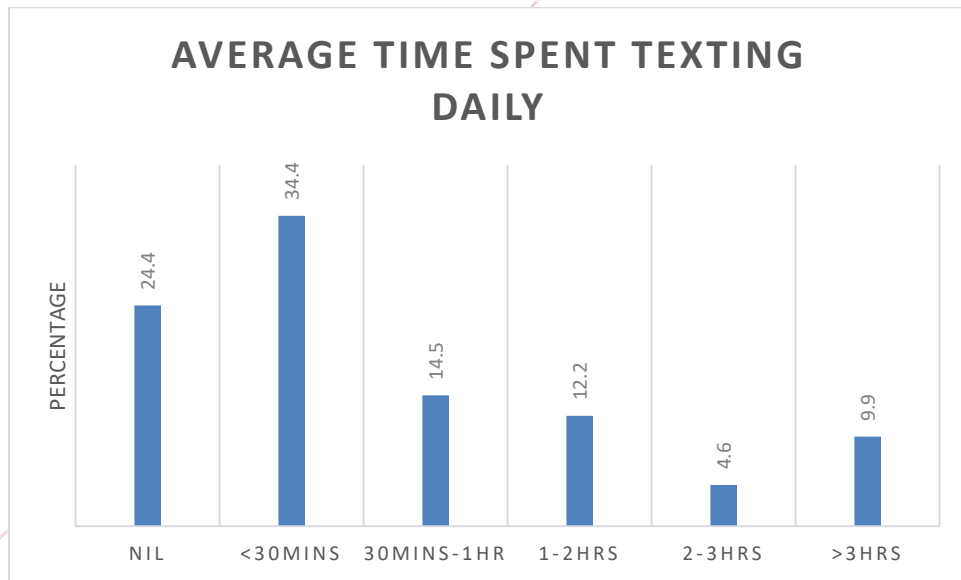
## 6.4 Mobile Phone & Internet Usage

The mobile phone/PC usage, including internet usage of the respondents were assessed. Out of all the respondents, 94% own a mobile phone, and out of those 91% have internet connection on their phones. 90% of all respondents own a PC, laptop or tablet and out of those 90% have internet on their device. The amount of time a respondent spent on average calling, texting or on the internet daily via their mobile phones or other devices was assessed. The responses were as follows. The majority of respondents spend less than 30 minutes daily on calls (58.0%) and 2.3% spend more than three hours calling per day. Similarly, a majority (34.4%) spend less than 30 minutes texting daily while 24.4% do not text at all daily and 9.9% spend more than three hours texting. Daily internet usage including Facebook, Twitter and other social media is shown in Figure 26. A majority of 26.0% spend more than three hours on the internet daily.

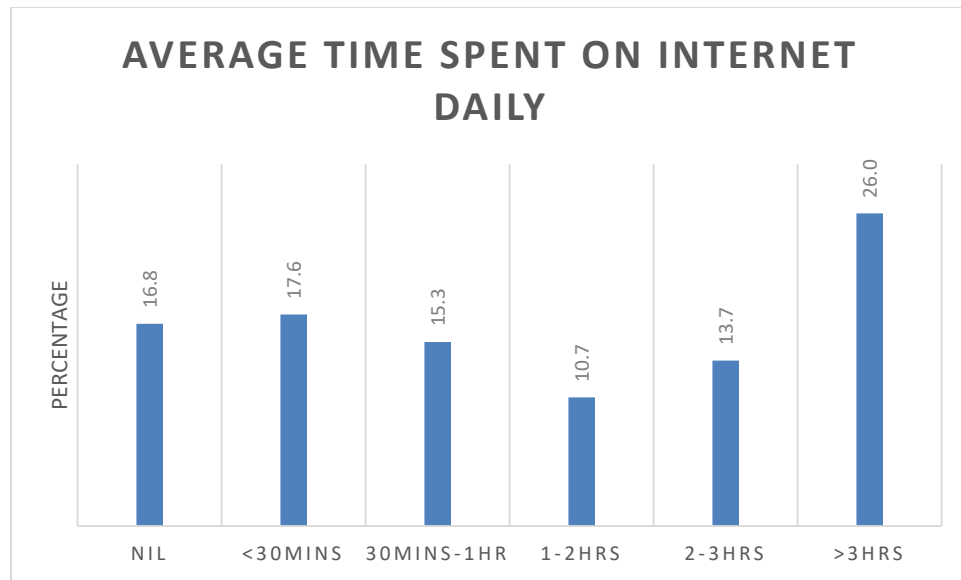




*Figure 26: Average time spent on calls daily*



*Figure 27: Average time spent texting daily*

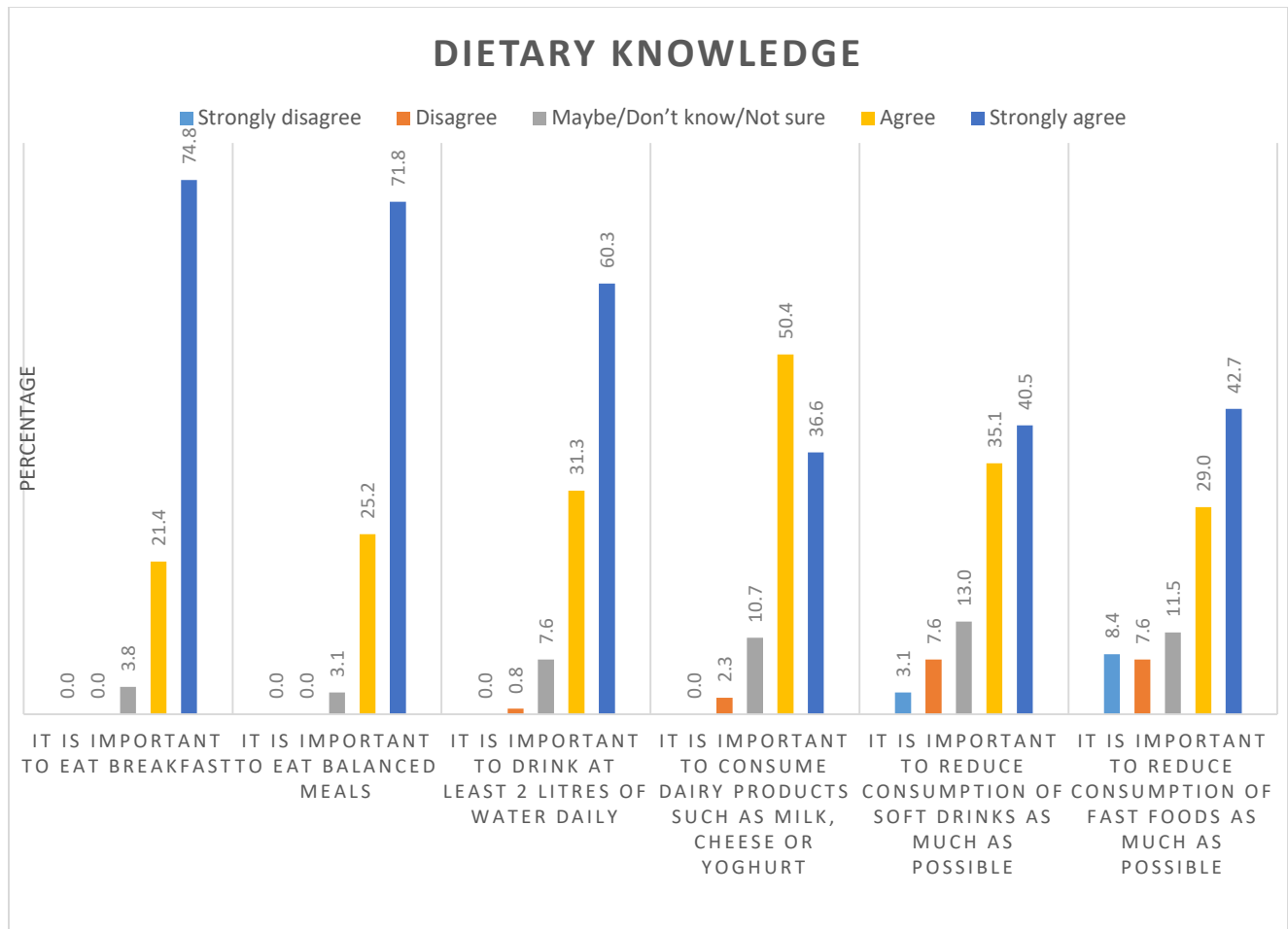


*Figure 28: Average time spent on internet daily*

## **6.5 Knowledge & Practices pertaining to Dietary Lifestyles and Physical Activity**

### **6.5.1 Dietary Lifestyles of Respondents**

The knowledge and practices pertaining to the dietary lifestyles of the respondents were also assessed and presented in the next two sub-sections. Their dietary knowledge is shown in the figure below.



*Figure 29: Knowledge pertaining to dietary lifestyles*

By and large, it is interesting to note that the majority of respondents overall seem to have sound overall knowledge of good dietary habits. This is indicated in the following chart by the high levels of agreement to the questions asked. In fact for these questions there are high levels of strong agreement which have been noted. For instance, 74.8% and 71.8% strongly agree that eating breakfast and balanced meals, respectively, are important dietary practices. Similarly, 60.3% and 36.6% of respondents strongly agree that drinking at least two litres of water and consuming dairy products, respectively, are important. Moreover, 40.8% and 43.0% strongly agree that consumption of soft drinks and fast foods, respectively, should be reduced.

On the other hand, it is also worth highlighting that for those who have indicated disagreement or ignorance, there is a need for sensitisation and education in order for them to understand the importance of such important knowledge which can potentially contribute to an improvement of their dietary lifestyles.

### 6.5.2 Dietary Practices of Respondents

The dietary practices of respondents are shown in the figure below. The chart depicts that only a minority of respondents **do not** practice healthy dietary habits. The majority possess average to very good dietary habits. 51.1% of respondents always eat breakfast (3.8% never eat breakfast), 25.2% always eat balanced meals (0.8% never eat balanced meals), 25.4% always drink at least two litres of water daily (9.2% never drink at least two litres of water daily), 22.3% always consumes dairy products (3.1% never consume dairy products), 10.9% always consumes soft drinks (1.6% never consume soft drinks) and 3.8% always eat fast foods (1.5% never eat fast foods).

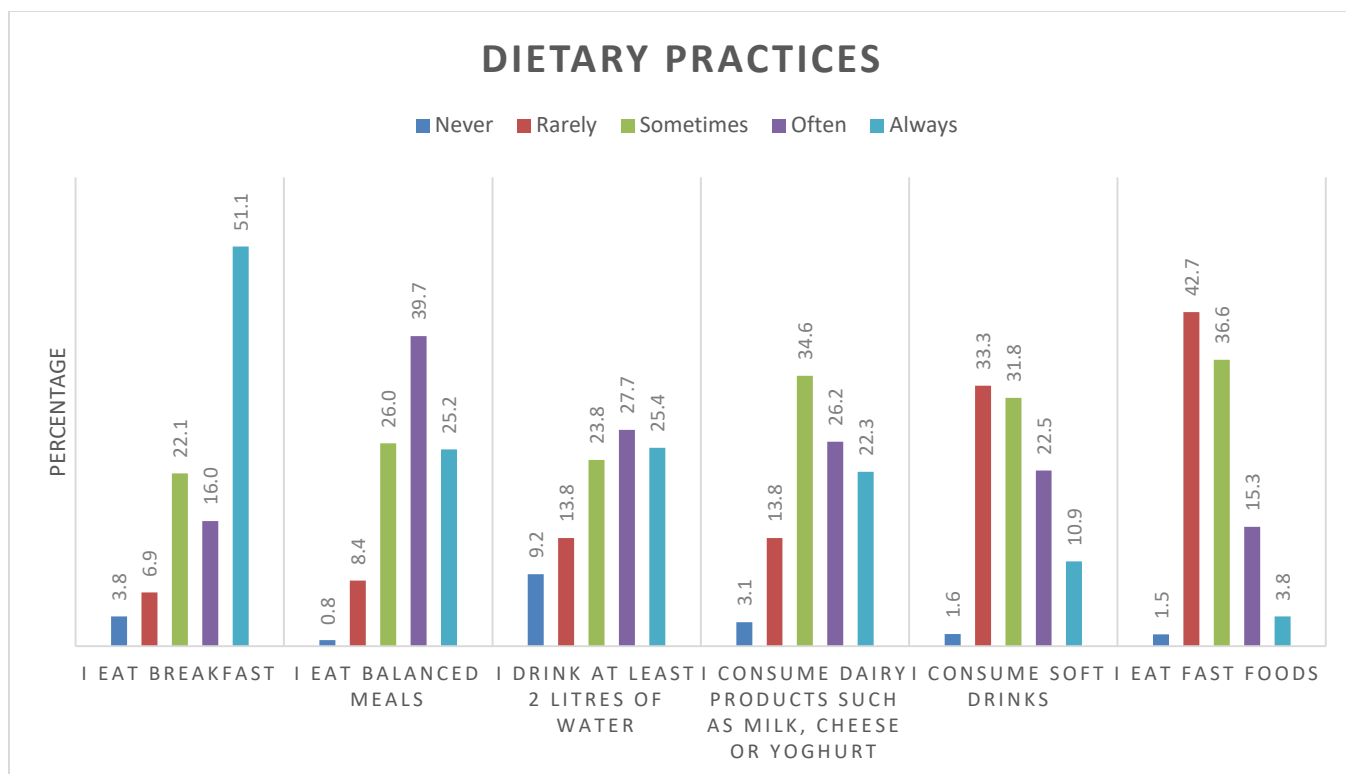


Figure 30: Practices pertaining to dietary lifestyles

## 6.5.2 Physical Activity of Respondents

The amount of physical activity of students was also analysed. The results are shown in the figure below. Only a minority of students **do not** practice any physical activity at school or outside school daily (12.2%). For the majority of respondents, their daily physical activity ranges from less than 30 minutes to more than three hours.

Their level of sedentarity was also assessed. 18.5% spend more than three hours watching television, 13.7% spend more than three hours playing video games and 28.2% spend more than three hours on the internet. Here also there are some strong pointers towards education and sensitisation of not only students but also the family and the wider community as to encourage children to have a more balanced lifestyle.

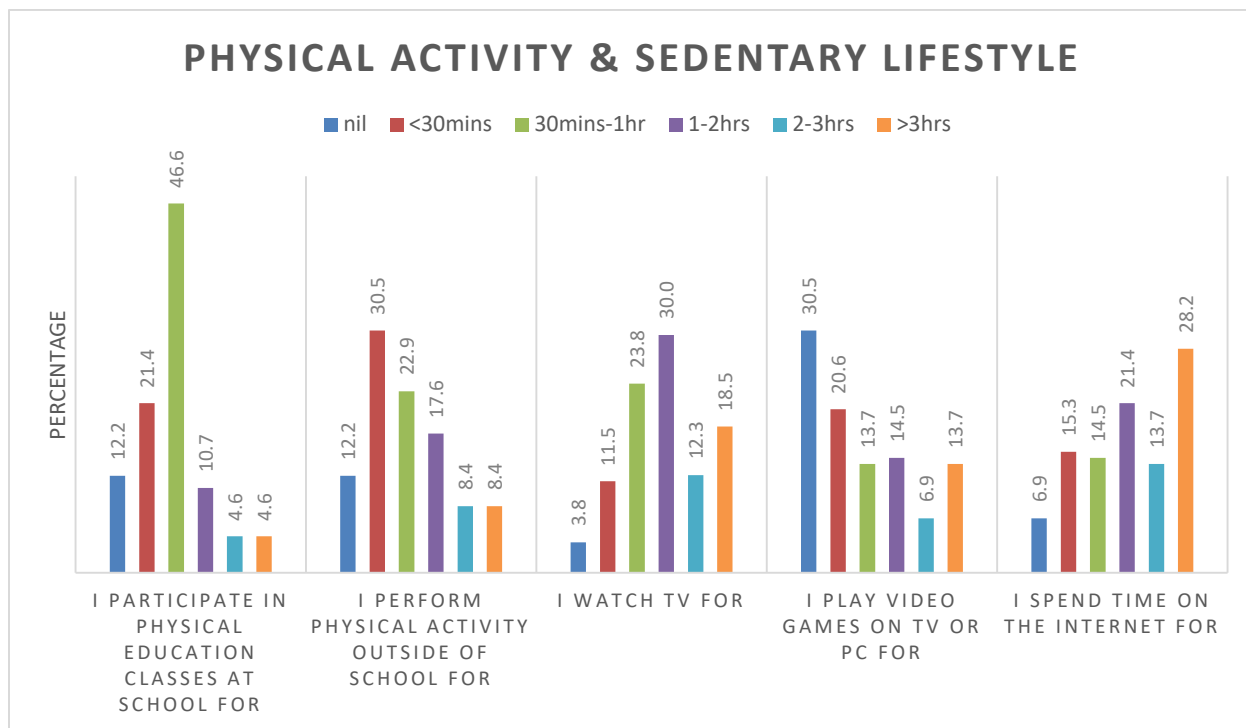


Figure 31: Physical activity & sedentary lifestyle

## 6.6 School Environment and Academic Level

Low attendance, loss of interest in studies, poor academic results, use of illicit substances, victimisation or perpetration of bullying among others are all factors associated with risky behaviour. An assessment of the school environment and academic level of the respondents was carried out to highlight any potential problems faced by the respondents. 10.0% of those interviewed responded that they have high academic problems and 18.3% to a slightly lower extent. 10.0% rated their loss of interest in their studies as 'quite a bit' while 6.9% rated it as 'very much'. This is a matter of concern that nearly 17% of students surveyed indicate that they lose interest in their studies.

6.1% reported that they do not have any friends at school. 5.4% reported that they have a lot of difficulties paying attention in class and 12.4% rated their poor attention in class as 'quite a bit'.

Similarly, 6.2% of those interviewed do not understand what teachers teach in class to a high extent and 12.3% to a lower extent.

Only one respondent reported having high attendance problems, the majority (70.8%) reported not having attendance problems at all. Only 3.8% of students have lateness problems. Moreover, 3.1% reported feeling very much inferior to their fellow classmates and 17.6% reported feeling a lot of pressure because of studies and exams. Finally, 3.8% reported having a lot of difficulties getting along with their teachers.

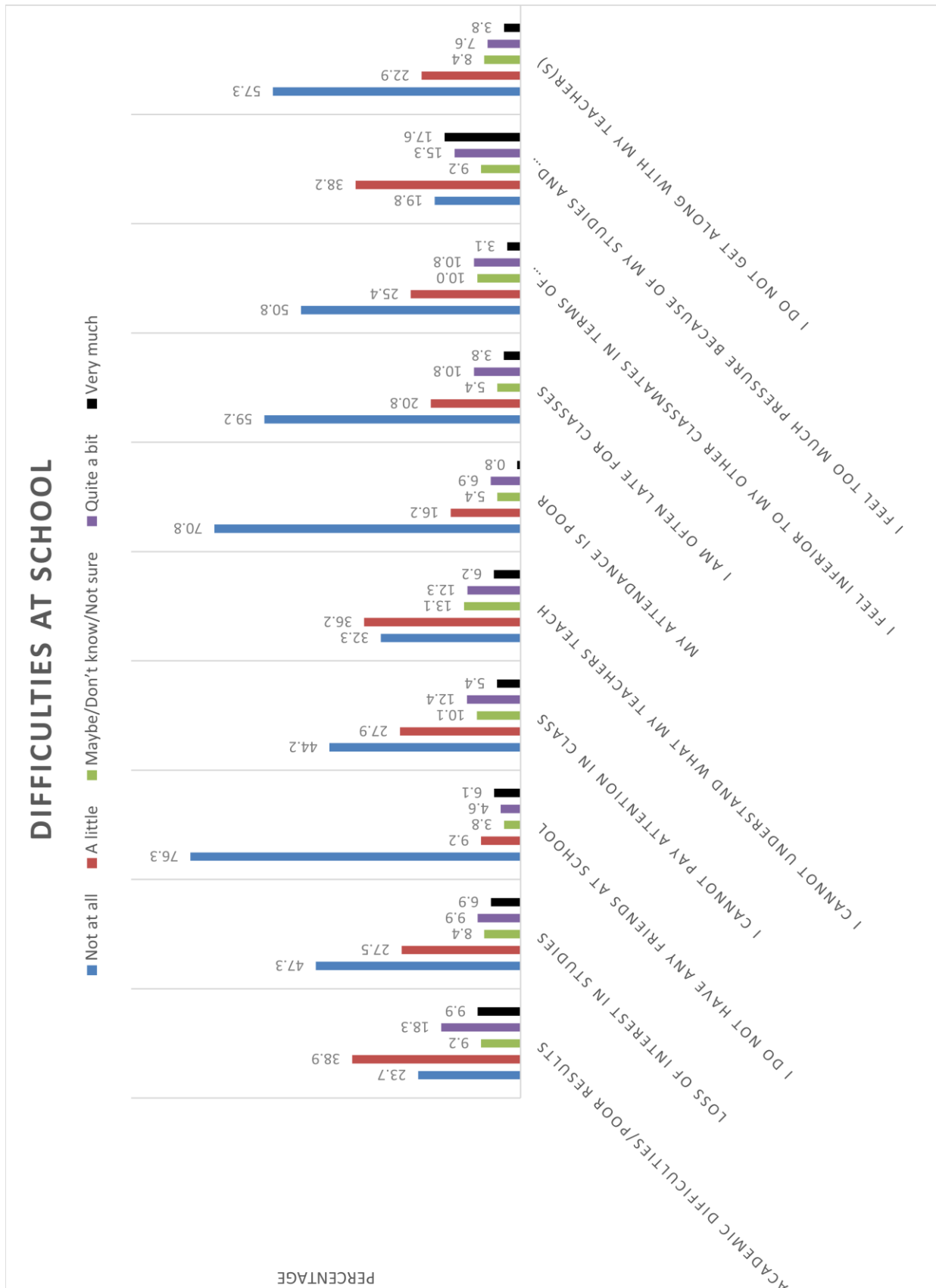


Figure 32: School environment and academic level of respondents



### 6.6.1 Bullying and Victimisation at School

Another area of concern which this study has uncovered pertains to the presence of different forms of bullying at school. The following table provides a breakdown of victimisation of forms of bullying at school.

*Table 33: Bullying at school*

	<b>Physical abuse</b>	<b>Verbal abuse</b>	<b>Social abuse</b>	<b>Electronic abuse</b>
<b><i>Never victimised</i></b>	71.0	45.8	61.1	75.6
<b><i>Reported as being victimised</i></b>	29.0	48.9	29.0	19.1
<b><i>Don't Know</i></b>	0.0	5.3	9.2	5.3

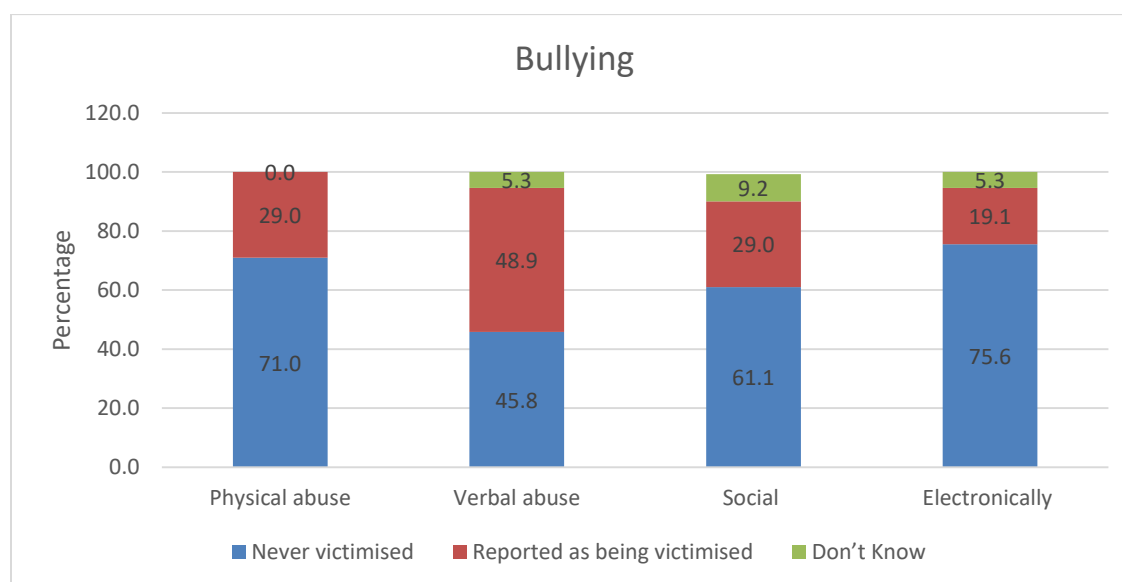
It is worthwhile to note that 29% of students have reported having ever been victims of physical abuse construed as being hit, pushed, slapped, kicked, spat at, had property stolen, etc. at school.

Verbal abuse is by far the most common form of bullying with as high as 48.9% of students having reported having ever being a victim of verbal abuse construed as being called names, teased hurtfully, insulted, humiliated, threatened, etc... at school.

Social bullying in the forms of being excluded from a group, made to look dumb, gossiped about, rumoured about is also quite significant with 29% of respondents having reported ever being victimised.

In the age of the internet and social media, it is equally interesting to note that some 19% of respondents have reported electronic forms of bullying i.e. harassed by mail or on social networking sites).

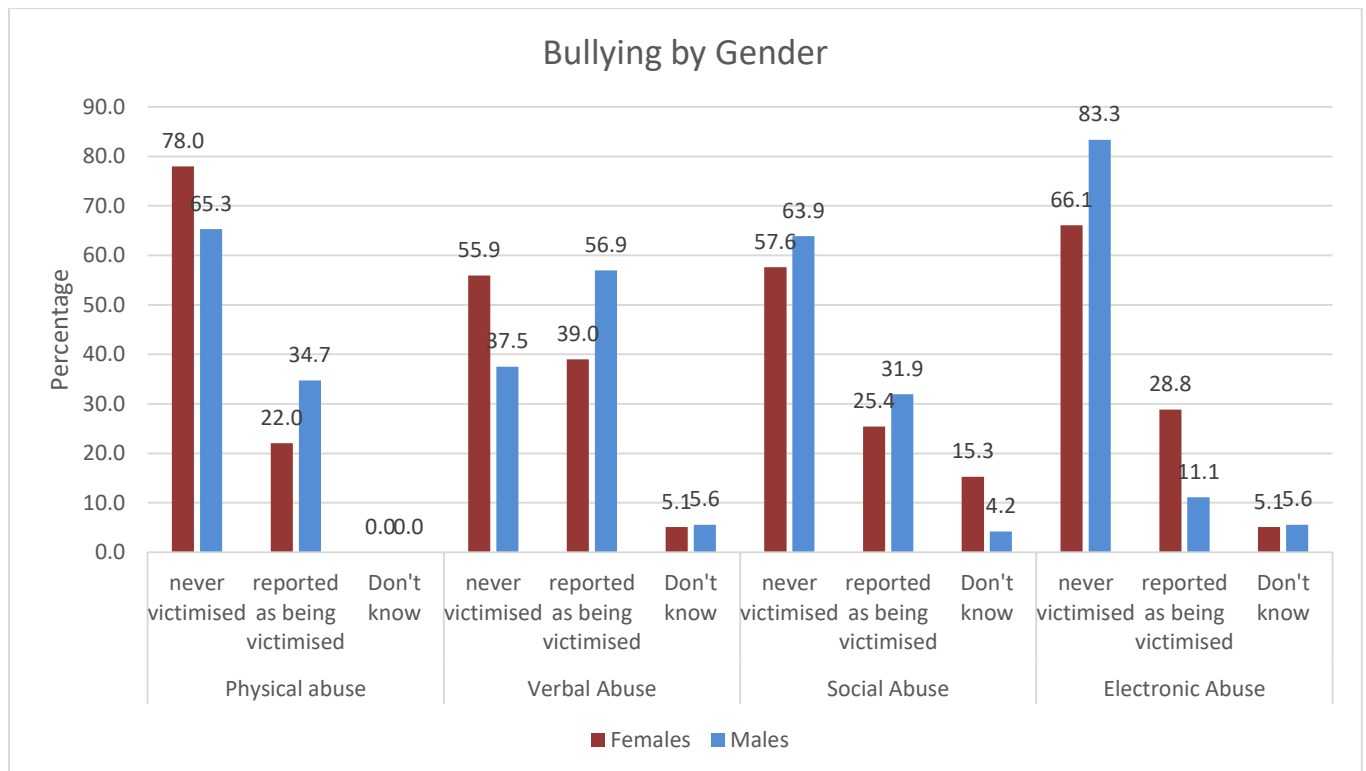
It was beyond the scope of the study to probe deeper into such dimensions of bullying such as intensity and impacts. Nonetheless, bullying whichever the form poses as obstacles to the smooth development of the child in a school milieu and preventing him/her to fulfil his/her potential to the fullest. In some respects, as we saw earlier, these as part of wider peer pressure, these can even be part of the cluster of factors which expose vulnerable children to risks of suicidal behaviour.



*Figure 33: Different forms of bullying at school*

### **Bullying by Gender of Respondents**

An analysis of these different forms of bullying by gender reveals some interesting gender differentials (Refer to Figure 34 below). As such, it appears that girls are less likely to be victims of physical bullying than boys. Although at face value, this is somewhat to be expected given that socialization processes tend to condition aggressiveness in boys, it is nonetheless a matter of concern that no less than 22% of girls have been victims of physical bullying. On the other hand, considerably more girls than boys have reported having been victims of electronic abuse than boys. The other forms of abuse studied i.e verbal and social abuse seem to be somewhat higher for boys than girls.



*Figure 34: Bullying by gender*

## 6.7 Physical, Mental and Emotional Health Status

Respondents were also asked to rate their current physical, mental and emotional health as excellent, very good, good, fair and poor. The results are presented in the figure below. Only one respondent out of 131 respondents reported poor physical health (0.8%) and nine reported fair physical health status (6.9%), while the remainder rated their physical health status from excellent to good (92.4%). Two respondents (1.5%) reported poor mental health status and 7.6% reported a fair mental health status, while the remainder rated their mental health status from excellent to good (90.8%). As for emotional health, 7.6% reported their health to be poor and 14.5% reported it to be fair, while the remainder rated their emotional health status from excellent to good (77.9%).

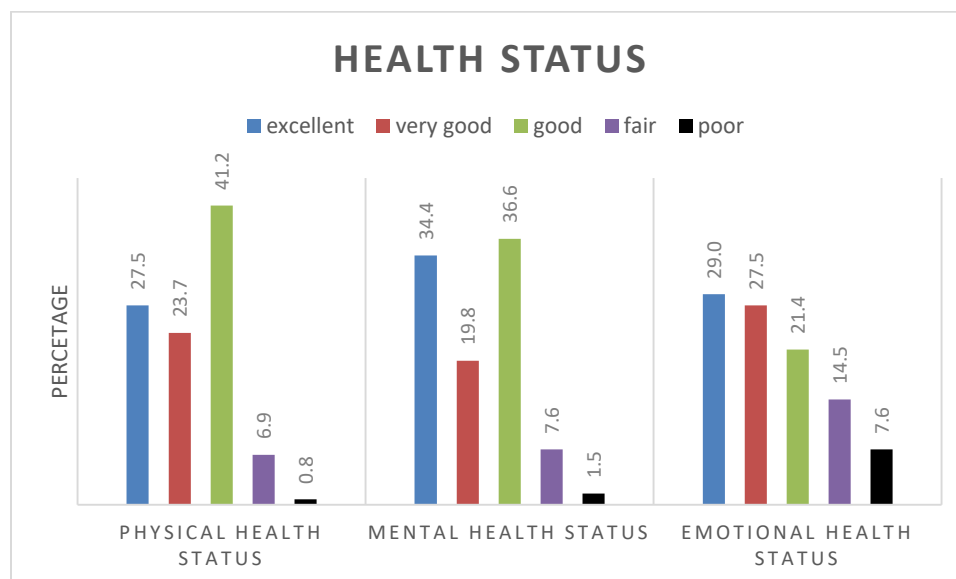


Figure 35: Physical, mental and emotional health of respondents

Respondents were also asked to state whether they have ever experienced certain symptoms directly or indirectly associated with mental illness. The chart below depicts their responses.

67.2% of respondents have felt symptoms related to moodiness, temper or angry outburst; 27.5% have felt feelings of panics 28.2% felt depressed and anxious in the past. Bulimia and anorexia have been experienced by 16.0% and 11.5% respectively. 17.6% have had hallucinations in the past.

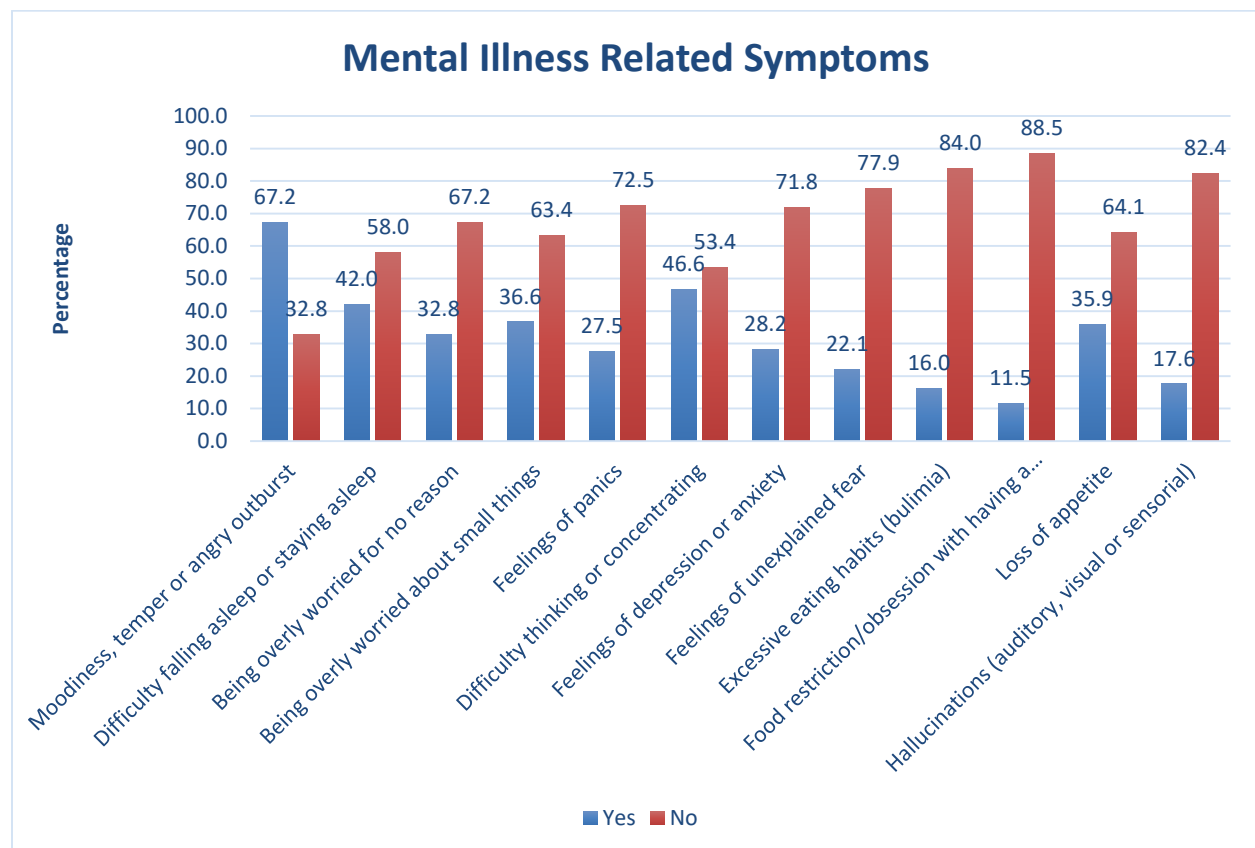


Figure 36: Mental illness related symptoms

Similarly, respondents were also asked to rate a series of physical and mental states to what they are currently or have been feeling lately. Responses are illustrated in the chart below.

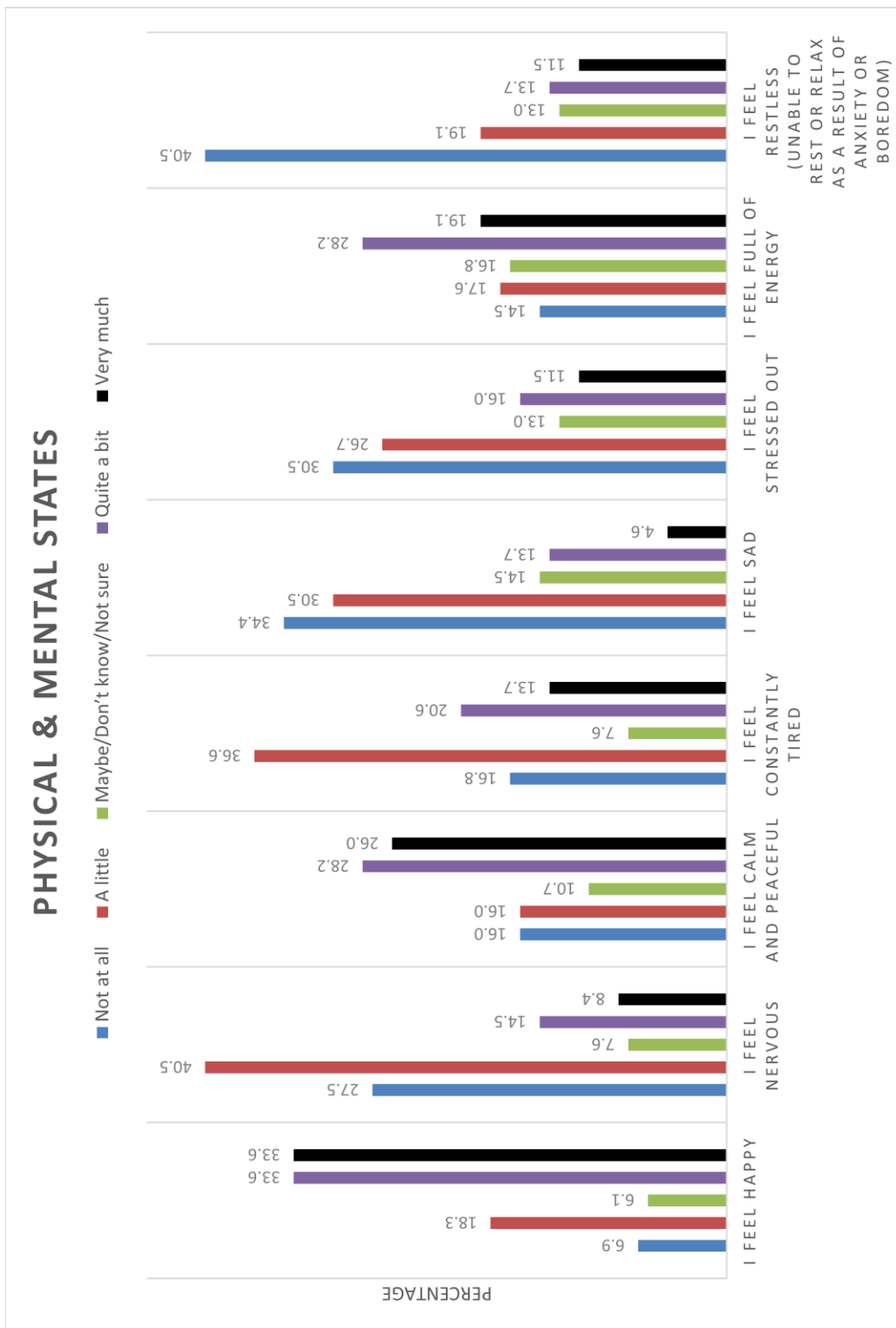


Figure 37: Rating of physical & mental states

Finally, respondents were asked if they have ever sought professional psychological or psychiatric help. 13% responded that they have ever sought such help.

## **6.8 Personal & Private Life of Respondents**

This section presents the findings about the type of relationships that respondents have at home with parents and siblings. Their social relationships (intimate and others) have also been assessed. Moreover, the presence of abusive relationships has also been examined.

47% of those interviewed are presently engaged in an intimate relationship.

Although in general, the large majority of respondents have positive personal and family relationships as noted in the figure below, there are nonetheless some minority segments which claim to have less positive relationships. For instance, 7.3% of respondents claim to have very poor relationships with their parents and 6.1% describe this relationship as “quite” poor. Similar findings were obtained for relationship with siblings where only a minority describe the relationship as “very” poor or “quite” poor (See figure 38 below).

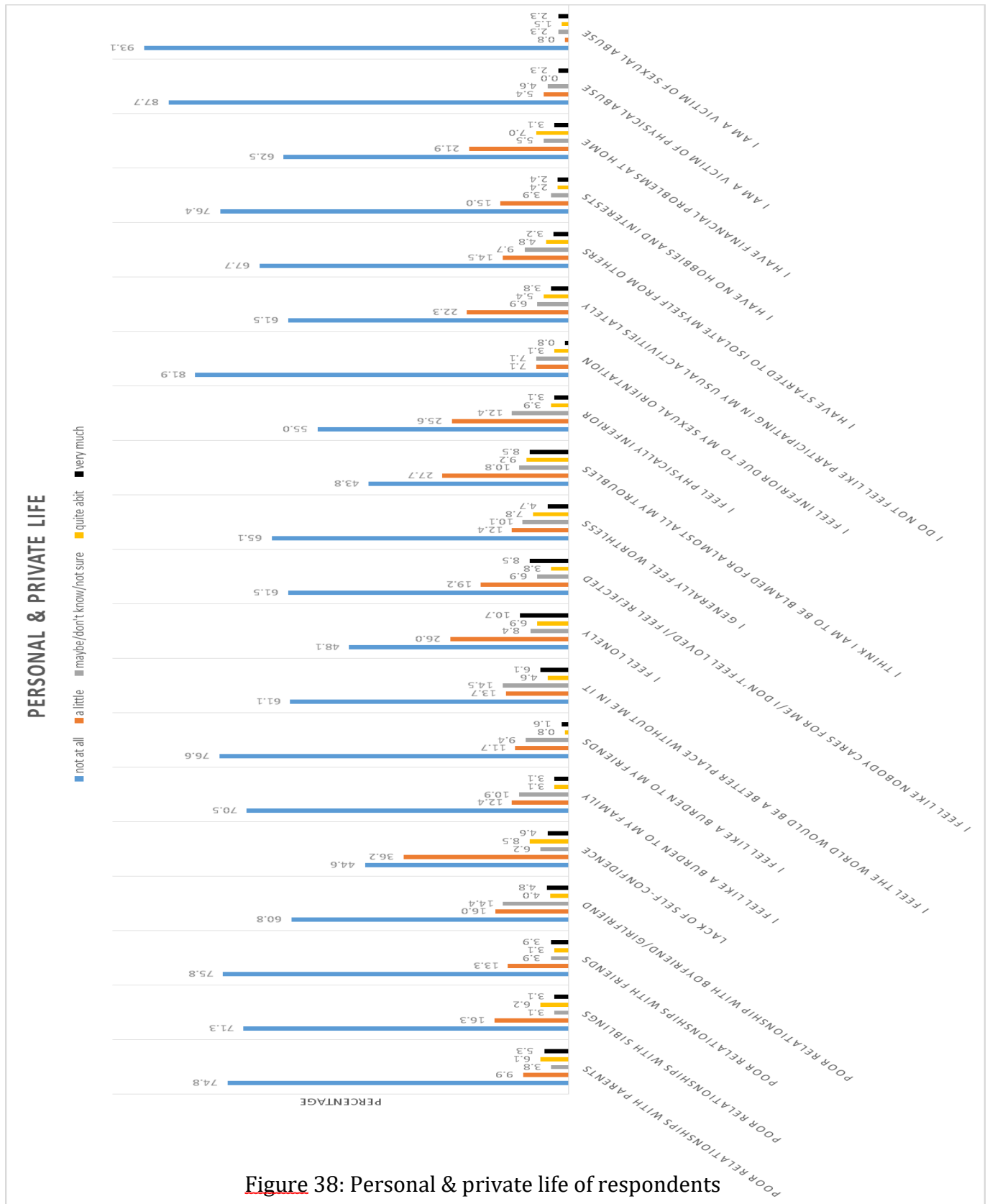


Figure 38: Personal & private life of respondents



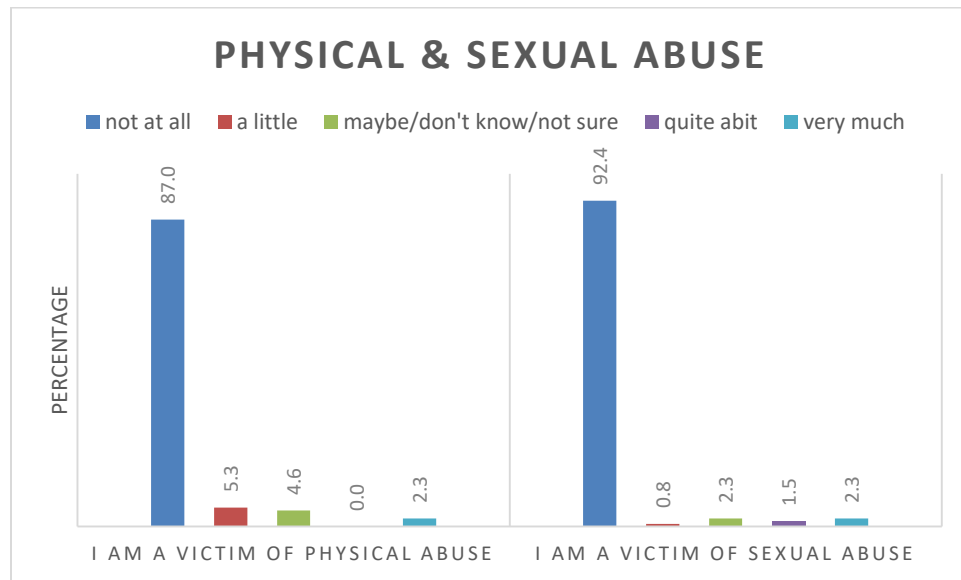
## 6.8.1 Physical and sexual abuse

Another important finding which is a source of concern pertains to forms of physical and sexual abuse which some respondents have argued they have ever been victims of at the level of the domestic arena. Findings are presented in the table 34 and figure 39 below.

Table 34: Physical & sexual abuse

	I am a victim of physical abuse	I am a victim of sexual abuse
	<b>Frequency (Total=130)</b>	
<i>not at all</i>	114	121
<i>a little</i>	7	1
<i>maybe/don't know/not sure</i>	6	3
<i>quite a bit</i>	0	2
<i>very much</i>	3	3

While for the grand majority, such forms of abuse are not a concern, there is no argument that a single case of abuse is one too many. As such, more particularly in the case of sexual abuse it is a matter of serious concern that no less than 6 students out of the 131 surveyed have ever been victims of sexual abuse and this figure can even go as high as 9 if account is taken of those who have answered (maybe/don't know/not sure)



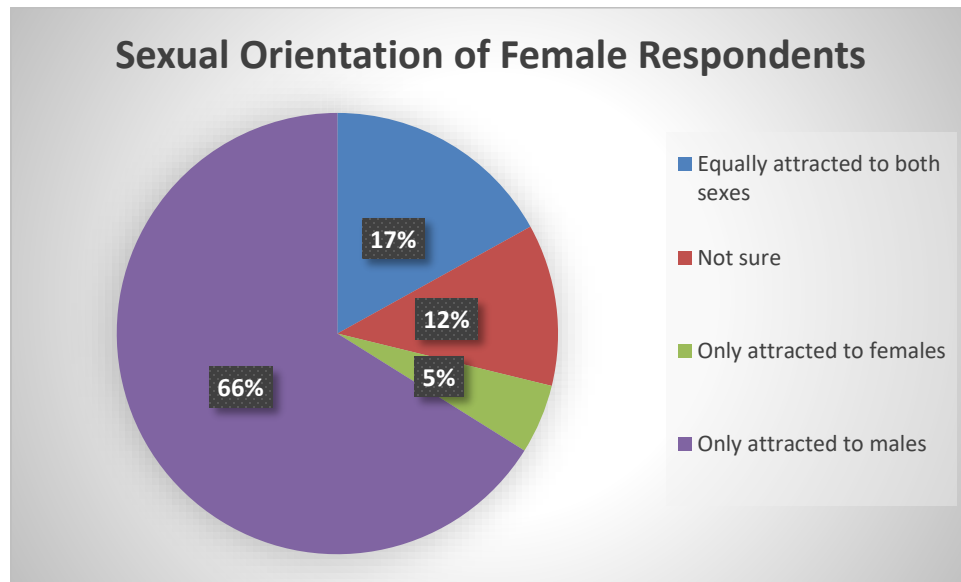
*Figure 39: Physical & sexual abuse*

## 6.9 Sexuality and Orientation

Sexual orientation has been a debated risk factor of suicidality in adolescents. In the literature, some studies have revealed that gay, lesbian, bisexual, or “not sure” youth (sexual minorities) have reported a significantly increased frequency of suicidal behaviours as compared to heterosexual youth.

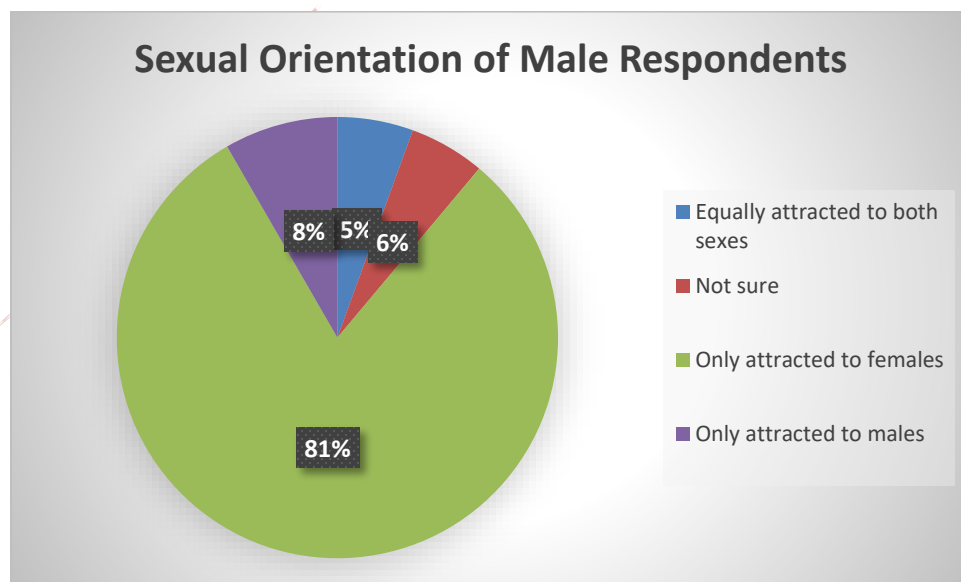
From the survey questionnaire, respondents were asked to state their sexual attraction to males or females, to both sexes and whether they were unsure of their sexual orientation. The findings reveal the majority of female respondents fall into the heterosexual category as expected.

However, it is also worth noting that 17% state that they are equally attracted to both sexes: 5% are only attracted to females whereas 12% are unsure of their sexual orientation.



*Figure 40: Sexual orientation of female respondents*

Similarly, heterosexual male respondents are predominant (81%). 8% of the male respondents claim to have a preference for males, 5% claim to be attracted to both sexes and 6% are unsure about their sexual orientation.



*Figure 41: Sexual orientation of male respondents*

A noteworthy point is that an analysis of sexual orientation and emotional health status reveals that those who report gay tendencies seem to have a disproportionately ‘poor’ emotional health status. This is shown in figure 42 below.

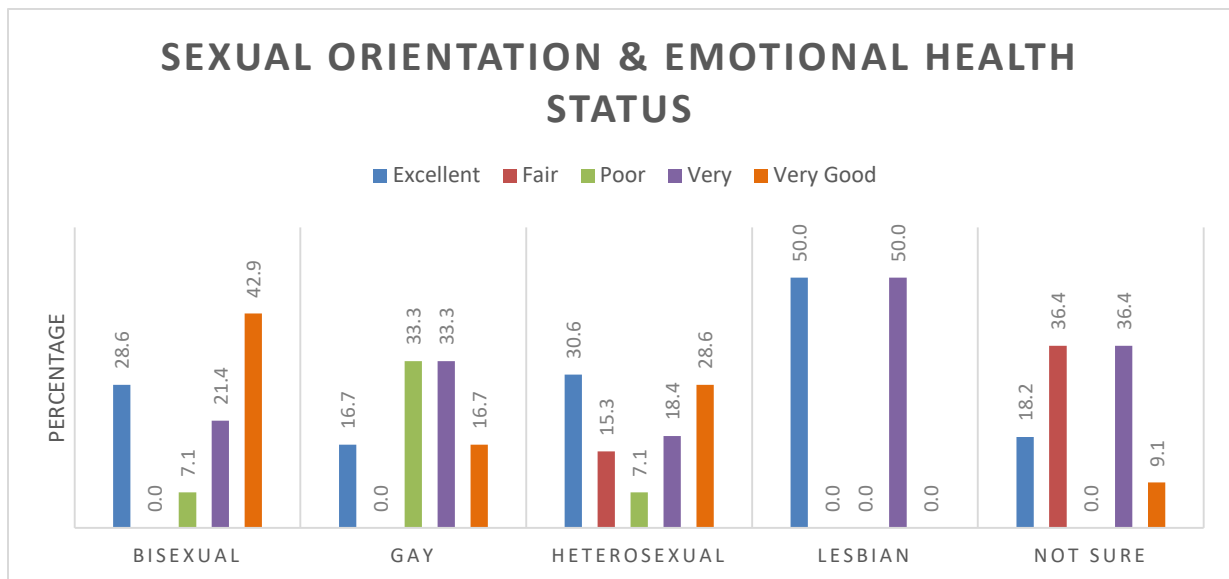


Figure 42: Sexual orientation & emotional health status

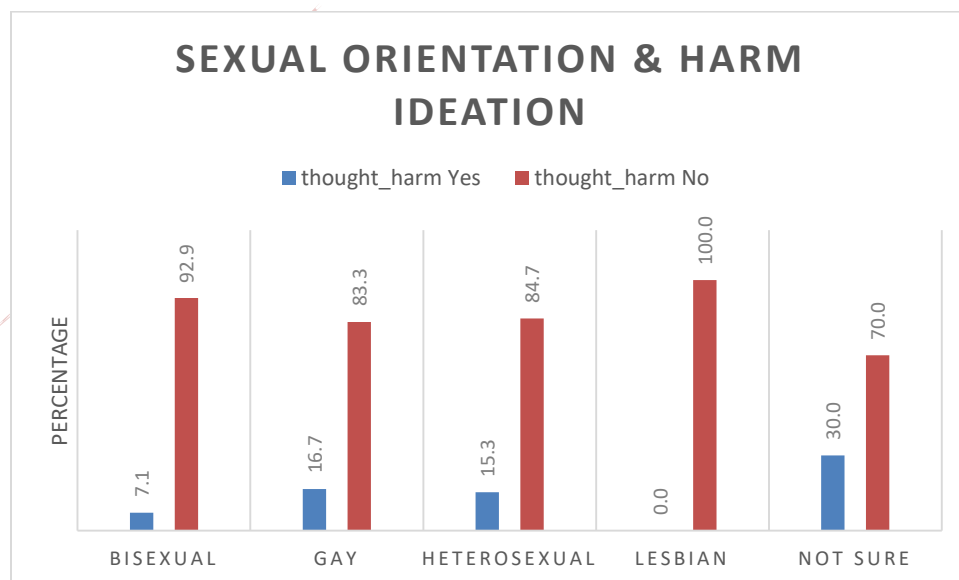


Figure 43: Sexual orientation & harm ideation

There is a possibility that sexual orientation of respondents have an incidence on harm ideation as revealed in figure 43. Although 15.3% of respondents having a normal sexual orientation also report harm ideation, it is also interesting to note that those having alternative sexual orientations (with the exception of girls who have a preference for girls) seem to have ever thought of harming themselves intentionally. Given that these figures are too small for more advanced statistical analyses, there is a need for further research in this area which is acknowledged in the literature to be a risk factor in suicidal behaviour.

## 6.10 Summary

In a nutshell, this chapter has reported some of the most salient findings which have emerged from the pilot survey of secondary school students. In many ways these findings both supplement and complement the findings from the qualitative phase of the study. It has given an indicative picture of the prevalence of suicidal behaviour at the level of those 3 secondary schools as well as attracting attention to certain forms of abuse and practices which take place at school level. From these findings it is clear that the picture which emerges is one which invites concerted action. The next chapter will draw relevant conclusions and provide some policy implications of the above findings.

## CHAPTER SEVEN – CONCLUSION & RECOMMENDATIONS

### 7.1 Conclusion

Suicide and suicidal behaviour are amongst the most alarming and perplexing of all human behaviours. This study has attempted to shed light on the causes and consequences of suicidal behaviour among teenagers, using in the main, qualitative datasets based on multiple case studies constructed from semi-directive interviews. These interviews, as mentioned before were administered by trained psychologists to attempters of suicide (30 teenagers including 20 girls and 10 boys who attempted suicide over period 2011-2013) as well as to close relatives of suicide completers in order to extend our understanding albeit retrospectively of the causes and consequences of these acts. An innovative aspect of the study has also been in terms of complementing the findings of the qualitative phase of the study with a pilot school-based survey on prevalent risky behaviours as well as knowledge, attitudes, beliefs and practices pertaining to such behaviours – including but by no means limited to suicidal behaviour.

Altogether the findings obtained have extended our understanding of how this phenomenon manifests itself and affects teenagers, the multiple and often inter-related factors which bring up suicidal behaviour, the main methods employed as well as the consequences mainly on self and family. In fact, it is clear that across the interviews, it is generally clusters of factors rather than clear-cut singular factors, that tend to compound the individual's inability to cope thereby prompting depression and suicidal behaviour.

As explained earlier, there are nevertheless clear indications that point towards the following factors which tend to account for the majority of suicide (actual and attempts) often in related manners:

- Conflicts or inadequacies in the participant-parental relationship (difficult communication between parent and teen, dysfunctional families and history of abuse, inability of the family to stabilise teenage personality), at times further compounded with material deprivation and which bring up issues of hopelessness, burdensomeness or thwarted belongingness, appears to be the leading cause among the cases interviewed.
- Intimate relationship problems including rejection, teen dating violence and family objections are also a common cause of suicidal behaviour among both boys and girls alike.
- Psychiatric disorders including a vicious cycle of depression including self-focus and self-blame, depressed mood, cognitive and behavioural consequences and negative experiences.
- Adverse peer pressure particularly at the level of school including the impacts of emotional bullying but also getting caught in a downward spiral of deviant behaviour including problems with authority, substance abuse, poor educational attainment etc... which also bring about a sense of low self-esteem and hopelessness for the future.

The findings also indicate that the consequences of suicidal behaviour differ depending on whether the suicide act has resulted in death or not. In cases of suicide attempts, it was found that victims are left with physical damage, whose extent was dependent on factors which include how serious the intent was and the method used. Moreover, it was noted that following a suicide attempt, victims suffer from acute trauma and since their mental health impairment is further amplified, a relapse is possible. Evidently, the need for both emotional and psychological support is crucial after such an event. An interesting finding is that a number of suicide attempters have reported experiencing a wake-up call and having no intention to die or reciprocate following their attempt. They also report that their relationships with their kins have improved significantly after their attempt. Moreover, those who have reported peer pressure as a cause for their attempt, have revealed to have abandoned their peers following their attempt.

The aftermath of a suicide attempt or a completed one can be particularly devastating for relatives and friends left behind. Our findings revealed that in cases of completed suicide, the main consequences on family members and friends include an intense feeling of despair and guilt experienced, which has led in some cases has led to shattered families. This can, in turn, give rise to serious psychological problems, including depression and post-traumatic stress disorder. It is, therefore, unequivocal that psychological help be provided as a natural recourse to close family/friends circle of suicide victims, especially parents and siblings, after such an event.

Pertaining to the school-based pilot survey, a central objective of that research technique was to identify the extent to which secondary school students are exposed to or are engaged in risky behaviours at the level of the school, as well as their knowledge, attitudes and practices related to risky behaviours. The pilot survey has revealed many points of concern which are summarised below. In fact, based on the results of the pilot survey, it is clear that the phenomenon of suicidal behaviour is indeed a source of concern at the level of secondary schools given that a non-negligible percentage of students admitted to have had suicidal ideation or attempted to commit suicide. As high as 13% of the students surveyed in this study have at least once thought of committing suicide. It is also interesting to note that girls are nearly twice as many as boys in terms of having ever thought of committing suicide. The survey also reveals that a total of 4 students out of the 131 surveyed have affirmed having ever made a suicide attempt.

The thought of harming oneself intentionally is a possible precursor to suicidal ideation. Another revealing finding of the survey is that slightly above 15% of the sample have had such thoughts. An analysis of this response by gender of respondents indicates that slightly more boys (55%) than girls (45%) have ever thought of hurting themselves intentionally. It is also a matter of concern that even in lower Forms such as Forms III and IV, there are on aggregate 6 out of the 20 students who have had such thoughts. Moreover, it is widely acknowledged that thinking about harming oneself does not necessarily lead to the act of intentionally harming oneself. Thus, 8 students compared to the initial of 20 students have actually done so. These



findings show that there is need for intervention from relevant stakeholders to address this concern.

Reasons provided first-hand by the students as to why they have thought of hurting themselves tend to cluster around issues such as adolescent turmoil, existential issues, conflicts with parents, victimisation by peers and also relationship difficulties which potentially lead to problems of belongingness, burdensomeness and possibly even depression. The main reasons as given by the students for having ever hurt or harmed themselves intentionally indicate once again similar factors as before, more particularly relationship issues.

The study also sought to explore the level of knowledge, conceptions or misconceptions, as well as attitudes with respect to the phenomenon of suicide. Findings show that there is room for further sensitisation and education of students about this phenomenon, although there also seem to be some misconceptions and possibly an undercurrent of apprehension to the idea that talking about suicide in schools may not be favourable.

As part of this survey, other risky behaviours of teenagers were also assessed. Once again it is noted that there are certain bleaker sides to the process of adolescence and schooling which warrant attention from all quarters. For instance, aside from alcohol and cigarette consumption, a minority of students, more specifically boys, have indicated that they have engaged in drug consumption. The percentage of respondents who currently consume alcohol, smoke cigarettes and consume drugs are 20%, 17.1% and 4.6% respectively. A majority of alleged alcohol drinkers (53.8%), cigarette smokers (86.4%) and drug users (100%) are boys.

Another area of concern which this study has uncovered pertains to the presence of different forms of bullying at school. It is worthwhile to note that 29% of students have reported having ever been victims of physical abuse, 48.9% of students have reported having ever being a victim of verbal abuse, 29% of respondents have reported ever being a victim of victimised social

bullying (excluded from a group, made to look dumb, gossiped about, rumoured about) and 19% of respondents have reported electronic forms of bullying i.e. harassed by mail or on social networking sites.

Another important finding, which is a source of concern, pertains to forms of physical and sexual abuse which some respondents have argued they have been victims of at the level of the domestic arena. While for the grand majority, such forms of abuse are not a concern, a single case of abuse is one too many. As such, more particularly in the case of sexual abuse, it is a matter of serious concern that no less than 6 students out of the 131 surveyed have been victims of sexual abuse and this figure can even go as high as 9 if account is taken of those who have answered (maybe/don't know/not sure).

Sexual orientation has been a debated risk factor of suicidality in adolescents. The findings reveal that the majority are heterosexual individuals, as expected. For females, 17% indicate bisexual tendencies, 5% lesbian tendencies and 12% being unsure of their sexual orientation. As for males, 8% of the male respondents claim to have a preference for males, 5% claim to be attracted to both sexes and 6% are unsure about their sexual orientation. Although 15.3% of the sample having a normal sexual orientation also report harm ideation, it is also interesting to note that a significant percentage of those having alternative sexual orientations (with the exception of girls who have a preference for girls) seem to have 'ever thought of harming themselves intentionally'. Another noteworthy point is that an analysis of sexual orientation and emotional health status reveals that those who report gay tendencies seem to have a disproportionately 'poor' emotional health status.

In many ways these findings both supplement and complement the findings from the qualitative phase of the study. It has given an indicative picture of the prevalence of suicidal behaviour at the level of those three secondary schools and has highlighted certain forms of abuse and practices which take place at the school level. There is strong suspicion that this phenomenon of teenage suicidal behaviour can be much more prevalent among school

population than this study reveals. However, from our findings, it is clear that the picture which emerges is one which invites concerted action. The next step would be to expand the study into a full-blown nation-wide survey.

## 7.2 Recommendations

This section reviews a number strategies that can be adopted at different level to ensure effective suicide prevention.

In the spirit of not having to reinvent the wheel, it is useful to note that the WHO proposes a list of suicide prevention strategies and prevention which can be adapted to the local context as elaborated in the next sub-section. The WHO has also identified some Best Practices in terms of suicide prevention around the world which is presented in the second sub-section.

### 7.2.1 WHO Suicide Prevention Strategies & Programmes

For effective suicide prevention, the WHO (2014) identified a combination of three resulting types of prevention strategies: universal, selective, and indicated strategies.

**“Universal” prevention strategies** which are population centered and may aim to increase access to health care, promote mental health, reduce harmful use of alcohol, limit access to the means for suicide and promote responsible media reporting.

**“Selective” prevention strategies** target vulnerable groups such as persons who have experienced a trauma or abuse, among other tragic incidents, by training “gatekeepers” who assist the vulnerable and by offering services such as help lines.

**“Indicated” prevention strategies** target specific vulnerable individuals with community support and focus on the follow-up for those leaving health-care facilities, education and training for health workers, and improved identification and management of mental and substance use disorders.

Moreover, according to the WHO (2014), national suicide prevention strategies need to:

- adopt a multisectoral approach that involves both the health and education sectors,
- employment, social welfare, the judiciary and other relevant institutions,
- tailor the strategy to each country’s cultural and social context,
- allocate resources for achieving both short-to-medium and long-term objectives,
- encourage effective planning, and the strategy should be regularly evaluated, with findings feeding into future planning

Such characteristics should ideally inform suicide prevention programmes. Rather similarly according to the American Foundation for Suicide Prevention (2011), the key principles of effective suicide prevention programmes include:

- a clear relationship between programme goals and suicide risk;
- components are thoughtfully considered;
- communication materials are easily understood;
- focus on multiple levels, when appropriate;
- provide multiple helping resources;
- support by evaluation results (to further strengthen its evidence-base); and
- multi-faceted collaboration

The following sub-section provides an overview of Best Practices from around the world before proposing recommendations relevant to the local context, with regard to the prevention of teenage suicide.

### **7.2.2 Best Practices in Suicide Prevention Strategies & Programmes**

The following Best Practices have been recently observed according to the WHO (2014):

1. Twenty-eight countries today have a national suicide prevention strategy in place (arguably inclusive of Mauritius), while World Suicide Prevention Day, organised by the International Association for Suicide Prevention, is observed worldwide on September 10 each year. Strategies appear to be articulated mainly around:
  - surveillance to strengthen the evidence-base of activities;
  - means restriction;
  - media guidelines;
  - stigma reduction and raising public awareness, as well as
  - training for health workers, educators, police and other gatekeepers and include crisis; and
  - intervention services and postvention.

In the U.S., the 2012 National Strategy for Suicide Prevention developed by the U.S. Surgeon General and of the National Action Alliance for Suicide Prevention is organised into four interconnected strategic directions namely (U.S. Surgeon General and of the National Action Alliance for Suicide Prevention, 2012): (1) Healthy and Empowered Individuals, Families, and Communities; (2) Clinical and Community Preventive Services; (3) Treatment and Support Services and (4) Surveillance, Research, and Evaluation (see figure 44 below). It makes use of an intensive consultation process

coordinated by the National Action Alliance for Suicide which is composed of more than 200 representatives from the public and private sectors.

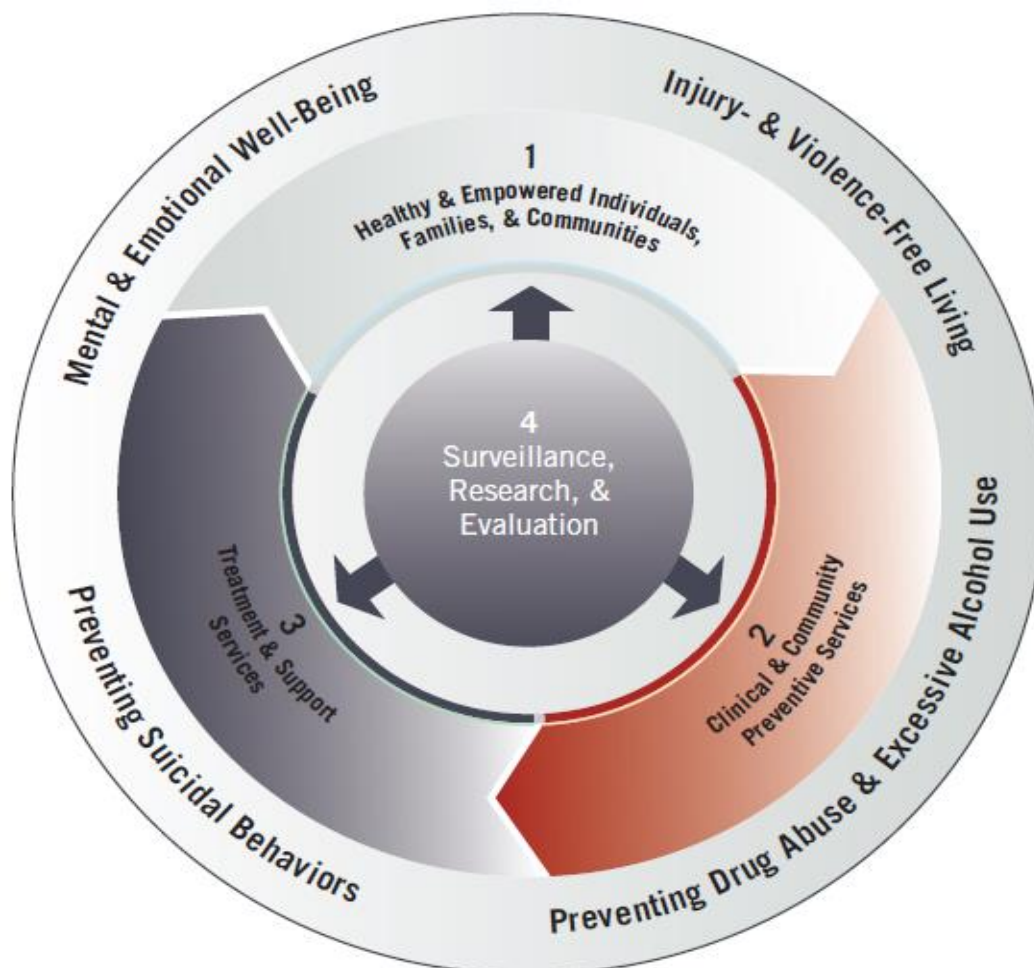


Figure 44: Organization of the 2012 National Strategy for Suicide Prevention (Source: U.S. Surgeon General and of the National Action Alliance for Suicide Prevention, 2012)

2. Suicide research units have been set up worldwide and there are academic courses that focus on suicide and its prevention.
3. Non-specialised health professionals are being used to improve assessment and management of suicidal behaviours, self-help groups of bereaved have been established

in many places, and trained volunteers are helping with online and telephone counselling.

4. Many countries have decriminalised suicide, making it much easier for those with suicidal behaviours to seek help.

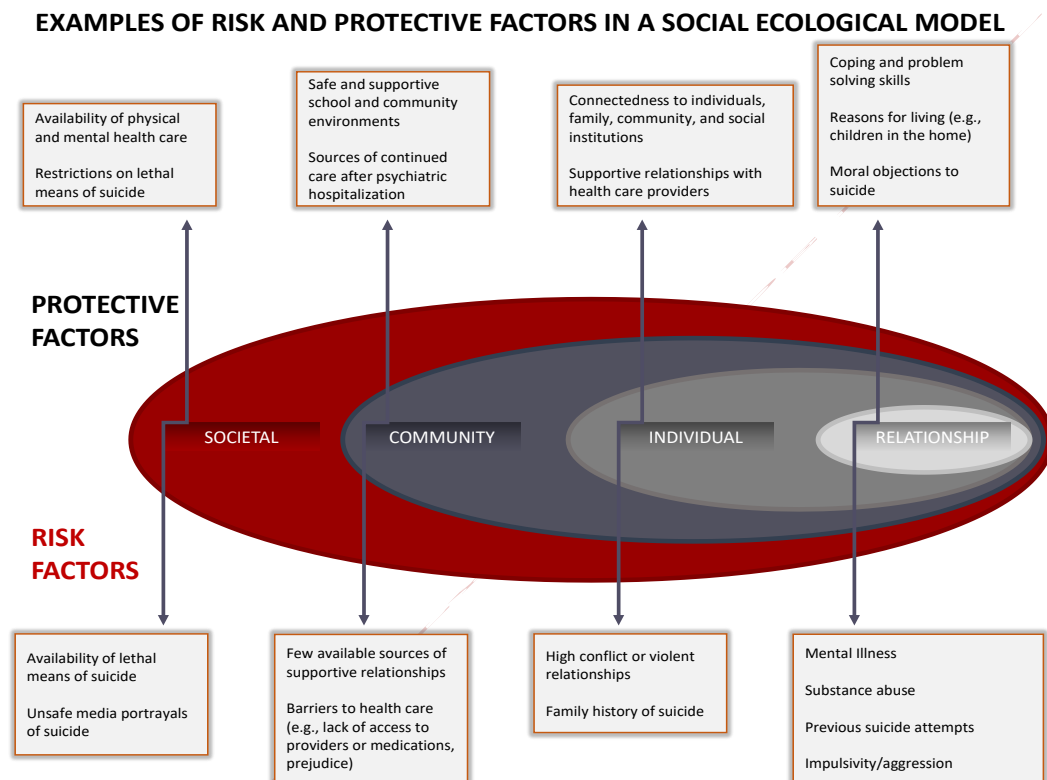
### **7.2.3 Recommendations for Prevention of Teenage Suicide in Mauritius**

This section provides some pointers towards areas of intervention in order to address the phenomenon of teenage suicidal behaviour in Mauritius. Suicide prevention can be understood in terms of the different types of risk factors which, when acting cumulatively, may lead an individual, on the pathway to suicide. Thus, it seeks to decrease these risk factors while increasing the protective factors that support and protect individuals from suicide.

As seen in previous chapters, such risk factors are usually common to both adults and teenagers who either attempt or complete suicide, although the weights assigned to these factors differ. At the population level, these factors include the availability of the means for suicide, inappropriate media reporting that sensationalises suicide and increases the risk of “copycat” suicides, stigma against people displaying suicidal behaviours, substance abuse problems and lack of access to appropriate care. Most common risks linked to the community and relationships include discrimination, a sense of isolation, abuse, violence and conflictual relationships. Risk factors at the individual level include previous suicide attempts, mental disorders, harmful use of alcohol, financial loss, chronic pain and a family history of suicide.

On the other hand, protective factors are conditions that ensure that the vulnerable individuals are supported and connected during those difficult times, through the promotion of strength and resilience. The result is a decrease in the number of suicidal behaviours. Like for risk factors, protective factors for suicidal behaviours can be found at many levels, from the individual to the community and society at large. The social ecological model (Figure 45) serves

as a framework which identifies the major factors identified in the literature along four levels of influence: individual, relationship, community, and societal (U.S. Surgeon General and of the National Action Alliance for Suicide Prevention, 2012).



*Figure 45: Examples of risk and protective factors in the social ecological model (Source: U.S. Surgeon General and of the National Action Alliance for Suicide Prevention, 2012)*

The recommendations made are three-fold as some relate to the problem of suicide in general, which would also benefit the prevention of teenage suicide, before being more specific.



## **1. Universal prevention strategies and initiatives recommended include:**

- I. Adopting a multisectoral approach that allows stakeholders in the health, social welfare, education, youth and gender sectors, among others, to share practices and collaborate. In practice this could take the form of a National Platform or Longstanding Committee with all relevant stakeholders to coordinate and work in concert to address this phenomenon. In particular, cases where there is possibility of contagion at the level of schools, there should be the adoption of a predefined protocol for containment purposes.
- II. Creating a central and ethical system for the collection of statistics on attempted suicide and completed suicides, as opposed to duplicating efforts and resources.
- III. Systematic evaluation and monitoring of the outcomes of previous national actions plans on suicide prevention.
- IV. Providing adequate incentives to academics, researchers, students and individuals with an interest in the matter and granting access to information and resources available.
- V. Launching a national campaign to demystify the causes of suicide, tackle stigma and raise awareness on services available. Over the last few years this campaign has seemed to be limited to one day a year in the context of the World Suicide Prevention Day.
- VI. Better targeting of vulnerable groups at the population level, community (neighbourhood, family, school) and individual level by using the profiles devised for both teenagers and adults who die from suicides.

- VII. Use of new technologies (mobile phones, Facebook, YouTube, etc) to raise awareness and reach the young people.
- VIII. More ethical reporting of suicide in the papers, as per WHO guidelines. Section 7.2.4 presents a media content analysis of some press articles covering teenage suicide which reveals some important shortcomings which are antithetical to the WHO guidelines.

## **2. Selective prevention strategies and initiatives recommended include:**

- I. Training of gate keepers such as youth club/community leaders, teachers, school personnel, school/regional psychologists, to recognise external signs of suicidal ideation which may include the following according to [www.teen.us](http://www.teen.us):
  - Expressed thoughts of death, dying and a desire to leave this life
  - Changes in normal habits, such as eating and sleeping, and spending time with friends and family
  - Dramatic weight fluctuations,
  - Evidence of substance abuse
  - Dramatic mood swings
  - Lost interest in schoolwork and extracurricular activities (including declining grades).

These strategies are particularly important in the light of 'post-vention' strategies after a case of suicide or attempted suicide in order to prevent contagion or copy-cat suicides. It is now held that post-vention counselling should not be limited to close friends and significant others of the attempters/completers but instead be extended to wider context in order to access and deter the potential 'contemplators'.

- II. Dispensing regular and context specific mental health promotion modules similar to those developed by the U.S. "Society for the Prevention of Teen Suicide" to empower teenagers with the coping and communication skills required when faced with situations which could lead to stressful, depressive and anxious states such as

parental divorce, bullying, the suicide or unforeseen death of family, peers, etc. An important component of such modules would also be to equip teenagers with the ability to identify and support peers going through difficult times.

- III. Close monitoring (with regard to availability of means) and support provided to teenagers who have attempted suicide/parasuicide by peers and gatekeepers alike.
- IV. Raising awareness of services available through posters of suicide help lines.

### **3. Indicated prevention strategies and initiatives recommended include:**

- I. Training of health and social workers to recognise external signs of suicidal ideation when in contact with clients displaying signs of risky behaviours such as substance abuse.
- II. Making online resources (such as those designed by the U.S. “Society for the Prevention of Teen Suicide”), psychological support and training available for parents, siblings and relatives of teenagers with either problematic behaviours or who have attempted/completed suicide.

In addition to these generic recommendations, there is a clear need to reinforce the current arm of the Government i.e. Life Plus Unit in terms of staffing, resources and logistics in order to operate optimally. In the same vein the only NGO which operates systematically in this area (Befrienders) could also benefit from state assistance to reinforcing its structure and operational activities.

In particular there is a need for more education and sensitisation of students about this phenomenon within the school setting. As the study has uncovered evidence of limited knowledge and misconceptions about suicide there is a need for addressing this gap. While there has been misinformed resistance to the idea of ‘suicide talks’ at school on account that this might incite some vulnerable students to contemplate this possibility, there is now an

extensive literature and expert agreement that sensitisation and education campaigns will act as a deterrent.

Last but not least, given the prominence of adverse family dynamics and conflict with parents as an important element in the causal explanations for teenage suicide, there is a crucial need need for wider educational and communication campaigns to sensitise and empower parents about the handling of teenagers with coping difficulties. These proposed measures can potentially contribute to addressing this public health concern.

## 7.2.4 Media Coverage of Teenage Suicide

### Press Article 1

#### Teenager committed suicide by setting herself on fire

Source: Anonymised 2012. Teenager committed suicide by setting herself on fire. [Online]. (Accessed: 2014, June 17)



A tragedy has shocked people at Midlands on Tuesday. A Form 4 student at a college in Plaines-Wilhems committed suicide by setting herself on fire in her room. The girl used an inflammable substance to commit this act. At the time of the tragedy, the girl was at home with her younger sister, a Form 1 student while her mother, a school official, was away. The young sister received a phone call from one of her elder sister's school friends, asking her to look after her. While taking a shower, the younger sister heard a loud scream. She immediately got out and saw smoke coming from her sister's room. Unfortunately the door was locked. The latter immediately alerted her mother before calling

neighbours for help. Hearing the distress call, a neighbour rushed to the scene. "My neighbour woke me up and I was informed that there was a fire next door and a teenager was trapped inside. The bedroom door had no handle and I tried to push it open but in vain. I went out and broke the aluminium window with a hammer," he confided to reporters. "I saw the flames. I thought that it was a pillow which had caught fire. I tried to extinguish the flames with water barrels. It was then that I realised that the girl was lying on the floor; she had burns all over her body. I did not know whether she was still alive at that moment," said the neighbour. The police and firefighters were alerted but it was too late as the girl had already passed away. An autopsy performed by Dr. Sudesh Kumar Gungadin, head of 'medico-legal', attributed death to an 'asphyxiation due to smoke.' The teenage girl had suffered multiple burns. Her parents had parted ways two years ago, and her mother then moved to 16th Mile, Midlands, with her daughters. According to the uncle of the victim, "she was very dynamic. She was very popular in her surroundings. This tragic news was a bombshell for us. We could not believe that she committed the irreparable." According to sources, the teenager had attempted suicide in the past. Investigators rule out the thesis of a "foul play." Police believe the teenager has committed suicide because of heartbreak.

### Who Guidelines-Preventing Suicide- A Resource for Media Professionals

1. Take the opportunity to educate the public about suicide
2. Avoid language which sensationalises or normalises suicide
3. Avoid prominent placements and undue repetitions of stories about suicide
4. Avoid explicit description of the method used in a completed or attempted suicide
5. Avoid providing detailed information about the site of a completed or attempted suicide

6. Word headlines carefully
7. Exercise caution in using photograph or video footage
8. Take particular care in reporting celebrity suicide
9. Show due consideration for people bereaved by suicide
10. Provide information about where to seek help
11. Recognise that media professionals themselves may be affected by stories about suicide
12. Take the opportunity to educate the public about suicide
13. Avoid language which sensationalises or normalises suicide
14. Avoid prominent placements and undue repetitions of stories about suicide
15. Avoid explicit description of the method used in a completed or attempted suicide
16. Avoid providing detailed information about the site of a completed or attempted suicide
17. Word headlines carefully
18. Exercise caution in using photograph or video footage
19. Take particular care in reporting celebrity suicide
20. Show due consideration for people bereaved by suicide
21. Provide information about where to seek help
22. Recognise that media professionals themselves may be affected by stories about suicide
23. Take the opportunity to educate the public about suicide
24. Avoid language which sensationalises or normalises suicide
25. Avoid prominent placements and undue repetitions of stories about suicide
26. Avoid explicit description of the method used in a completed or attempted suicide
27. Avoid providing detailed information about the site of a completed or attempted suicide
28. Word headlines carefully
29. Exercise caution in using photograph or video footage
30. Take particular care in reporting celebrity suicide
31. Show due consideration for people bereaved by suicide
32. Provide information about where to seek help
33. Recognise that media professionals themselves may be affected by stories about suicide

## **Analysis for Press Article 1**

From the above article, it is clear that several WHO guidelines have been breached.

**Guideline No. 1:** The press article does not consist in any information which can inform the public about the impacts and consequences of suicide. No mention of the direct impacts of the act on the family has been made e.g. stigmatisation, feeling of guilt or abandonment. As such, the act and its impacts are simplified and the wrong impression is passed on to readers. Moreover, as per this article, the cause of death can be attributed to a single individual event i.e. heartbreak. At any point, does the reader get the sense that suicide is due to a series of complex causes. The WHO Guideline No. 1 clearly discourages such a reporting style.

**Guideline No. 2:** Several terms and expressions have been used in the above press article with the sole aim to sensationalise, for instance, the title of the article itself. Moreover, as per the WHO Guideline no. 2, the use of proper language is crucial in such articles. The term 'commit' for 'commit suicide' tends to criminalise the act. Instead, the expression to 'complete suicide' is more suited. On 5 different occasions the expression to 'commit suicide' has been utilised in the above article. In addition, the use of language that normalises the suicide act should be avoided. This normalisation of suicide as a solution for problems is shown in the last sentence of the article: "Police believe the teenager has committed suicide because of heartbreak."

**Guideline No. 3:** The location of the article in the news could not be identified.

**Guideline No. 4:** From the article, the suicide method used was mentioned as being an inflammable substance. No further details were given about the particular substance used.

**Guideline No. 5:** Details on the site of the completed suicide is limited to the locality: Midlands. However, a more appropriate description of the site could have been: the centre of the island rather than the exact location.

**Guideline No. 6:** The term suicide should be avoided in titles and headlines. This guideline has been breached in the above article. The title of the article is phrased to create sensationalism intended to provoke public interest or excitement, at the expense of accuracy.

**Guideline No. 7:** This guideline has clearly been breached by the author of the article. The photograph juxtaposed next to the text clearly depicts most certainly the house where the act has been completed and the family members or neighbours of the victim. When visual images are used, permissions should be sought from the relevant persons.

**Guideline No. 8:** Not applicable.

**Guideline No. 9:** The interviews of several people have been captured in the above article. Those people are in most cases close family members of the victims who tend to be vulnerable and working through grief and are thus at heightened risk of suicide themselves. As per the WHO Guidelines No. 9, these interviews should be performed with care so as to protect their privacy and not add to their suffering by showing consideration.

**Guideline No. 10:** No information about help seeking has been provided in the above article. The WHO Guidelines No. 10 highly recommends the provision of hotlines or contact numbers of physicians at the end of such articles to cater for vulnerable readers



**Guideline No. 11:** This guideline recommends that proper support be provided to media professionals in charge of reporting on suicide cases. It would be surprising that such an approach is adopted in the media companies in Mauritius.

## **Press Article 2**

### **Drame à Camp-Ithier: elle se suicide pour défendre son amour**

*Source: Anonymised. 2014. Drame à Camp-Ithier: elle se suicide pour défendre son amour. [Online]. (Accessed: 2014, June 17)*



Une adolescente de 16 ans s'est donnée la mort par pendaison vendredi à Camp-Ithier à la suite d'une vive dispute avec sa mère. Celle-ci reprochait à la jeune fille sa relation amoureuse avec un jeune homme. Après cette dispute, elle a quitté sa maison pour se rendre chez sa grand-mère qui occupe une maison en bois et recouverte de feuilles de tôle. Sa grand-mère n'était pas là à ce moment. Peu avant midi quand la grand-mère est rentrée chez elle, elle devait découvrir avec effroi, sa petite-fille pendue à une poutre dans sa maison. Prise de panique, elle s'est mise à hurler et à appeler à l'aide. Des voisins se sont rapidement précipités sur place. Et peu après ce fut au tour de la police. L'adolescente a été immédiatement transportée à l'hôpital de Flacq où les médecins n'ont pu que constater son décès. La Criminal Investigation Division de Rivière-Sèche qui s'est saisie de l'enquête cherche à établir les raisons exactes qui ont poussé la jeune fille au suicide. Ce suicide constitue le troisième cas frappant les jeunes depuis ces dix derniers mois. Le geste de cette jeune fille est lié à une affaire de cœur, sa mère ayant eu auparavant une dispute avec elle au sujet d'une relation qu'elle entretenait avec un jeune homme. En mars 2013 une élève de Form IV, âgée de 16 ans avait été retrouvée pendue au moyen d'un tissu dans sa salle de bains. Son corps avait été découvert par son benjamin, âgé de 14 ans. La cause de son acte

désespoir n'a pas encore été établie. La mémoire du téléphone portable de l'adolescente a été examinée et l'enquête policière n'a pas encore abouti et ne peut déterminer si ce geste est lié à une affaire de cœur. Les proches de la victime s'interrogent toujours sur les raisons de cette disparition brutale. Le 26 septembre, un autre suicide par pendaison – celui d'un élève de 15 ans – avait secoué le village de Montagne-Blanche. Selon la police, l'adolescent aurait eu une dispute avec ses proches et par la suite, il aurait commis cet acte de désespoir. Les raisons de cet acte de désespoir serait une affaire de cœur.

## **Analysis for Press Article 2**

From the above article, it is clear that several WHO guidelines have been breached.

**Guideline No. 1:** This article presents three different suicide events; it does not contain any additional information which could inform the public about suicide and its negative impacts as is recommended by the WHO Guideline No. 1. Moreover, all three cases of suicide have been attributed to ‘une affaire de coeur’, where clearly suicide is depicted in all three instances as a means of coping with personal problems and as being due to a single individual event.

**Guideline No. 2:** This article tends to normalise suicide as a ‘normal’ solution to relationship problems. The title of the article: “Drame à Camp-Ithier: elle se suicide pour défendre son amour”, implies that suicide is a means to save one’s love relationship. Sensationalism is also present in this article, for example, in the title itself.

**Guideline No. 3:** The location of the article in the news could not be identified.

**Guideline No. 4:** From the article, the suicide methods used in all three acts have been clearly described in order to make the deaths seem more newsworthy. However, the WHO guideline No.4 discourages such reporting as this may trigger other people to use this means e.g.: pendue à une poutre dans sa maison” or “pendue au moyen d’un tissu dans sa salle de bains”.

**Guideline No. 5:** In two out of the three suicide cases in the above article, the locality is mentioned. No further detail is provided about the site of the completed suicides.

**Guideline No. 6:** According to the WHO Guideline No. 6, usage of the term suicide in the title of an article should be avoided. This guideline has been breached in this article.

**Guideline No. 7:** This guideline has clearly been breached by the author of the article. The photograph used in the article is that of the house where the suicide act for the first case has been completed. The caption clearly indicates that this is the actual site.

**Guideline No. 8:** Not applicable.

**Guideline No. 9:** Not applicable.

**Guideline No. 10:** No information about help seeking has been provided in the above article. The WHO Guidelines No. 10 is highly recommends the provision of hotlines or contact numbers of physicians at the end of such articles to cater for vulnerable reader susceptible of being affected by such news.

**Guideline No. 11:** This guideline recommends that proper support be provided to media professionals in charge of reporting on suicide cases. It would be surprising that such an approach is adopted in the media companies in Mauritius.

## ANNEX 1 – SURVEY QUESTIONNAIRE

# Youth Risk Behaviour Survey in Secondary Schools in Mauritius (Pilot Survey)

**DO NOT WRITE YOUR NAME ON THE QUESTIONNAIRE.**

**IF YOU ARE NOT COMFORTABLE ANSWERING A QUESTION, YOU CAN LEAVE IT BLANK.**

**ANSWER ALL QUESTIONS HONESTLY.**

**INSTRUCTIONS: WHERE APPROPRIATE CIRCLE/TICK THE ANSWER OF YOUR CHOICE OR WRITE IN THE SPACE PROVIDED**

<b>SECTION 1</b>	<b>THIS SECTION IS FOR OFFICE USE ONLY.</b>	
<b>1.1</b>	<b>Questionnaire No.</b>	<b>LEAVE BLANK</b>
<b>1.2</b>	<b>School Code</b>	<b>LEAVE BLANK</b>

<b>SECTION 2</b>	<b>GENERAL INFORMATION</b>
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<b>2.1</b>	<b>How old were you on your last birthday? (Age)</b>	
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<b>2.2</b>	<b>Sex</b>	<b>F</b>	<b>M</b>
<b>INSTRUCTIONS</b>	<b>Please specify</b>	<b>1</b>	<b>2</b>

<b>2.3</b>	<b>In which class are you right now?</b>	<b>Form .....</b>
<b>INSTRUCTIONS</b>	<b>If in Upper 6 or Lower 6, Please specify.</b>	<b>.....</b>

<b>2.4</b>	<b>Where do you currently live?</b>	
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<b>2.5</b>	<b>With whom do you currently live?</b>	
<b>INSTRUCTIONS</b>	<b>Please circle only one appropriate number</b>	
<b>A</b>	Both parents	<b>1</b>
<b>B</b>	Only one parent	<b>2</b>
<b>C</b>	Other relative(s) only	<b>3</b>
<b>D</b>	Other non-related person only	<b>4</b>
<b>E</b>	Other. Please specify (siblings, etc).....	<b>5</b>

<b>SECTION 3</b>	<b>ALCOLHOL CONSUMPTION (E.g.: Beer, Wine, Rum, Champagne, Whisky, Vodka etc...)</b>
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<b>3.1</b>	<b>Do you currently consume alcohol?</b>	<b>Yes</b>	<b>No</b>
		<b>1</b>	<b>2</b>
		<b>If Yes, move to next question</b>	<b>If No, move to section 4</b>

<b>3.2</b>	<b>How would you describe yourself as a drinker?</b>	
<b>INSTRUCTIONS</b>	<b>Please circle only one appropriate number</b>	
<b>A</b>	Social (Only in the company of others)	<b>1</b>
<b>B</b>	Occasional (Socially and when alone)	<b>2</b>
<b>C</b>	Heavy (Almost daily)	<b>3</b>

<b>SECTION 4</b>	<b>CIGARETTE CONSUMPTION</b>
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<b>4.1</b>	<b>Do you currently smoke cigarettes?</b>	<b>Yes</b>	<b>No</b>
		<b>1</b>	<b>2</b>
		<b>If Yes, move to next question</b>	<b>If No, move to section 5</b>

<b>4.2</b>	<b>How would you describe yourself as a cigarette smoker?</b>	
<b>INSTRUCTIONS</b>	<b>Please circle only one appropriate number</b>	
<b>A</b>	Light smoker (Only very rarely, when under stress or when being offered a cigarette)	<b>1</b>
<b>B</b>	Social smoker (Only in the company of others or while drinking)	<b>2</b>
<b>C</b>	Average smoker (Between 5 and 10 cigarettes daily but can stop for extended periods without complaining)	<b>3</b>
<b>D</b>	Heavy smoker (Smoke many daily)	<b>4</b>

<b>SECTION 5</b>	<b>DRUG CONSUMPTION</b> (E.g.: Marijuana, Ecstasy, Brown Sugar, Cocaine, Heroin etc...)
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<b>5.1</b>	<b>Have you ever consumed drugs?</b>	<b>Yes</b>	<b>No</b>
		<b>1</b>	<b>2</b>
		<b>If Yes, move to next question</b>	<b>If No, move to question 5.4</b>

5.2	Do you still consume drugs?	Yes	No
		1	2
		If Yes, move to next question	If No, move to questions 5.4 & 5.5

5.3	On average, how often do you consume drugs?	
INSTRUCTIONS	Please circle only one appropriate number	
A	Daily	1
B	Weekly	2
C	Monthly	3
D	Less often than the above	4

5.4	Do any of your friends from school consume drugs?	Yes	No	Don't know
		1	2	3

5.5	Do any of your friends outside school consume drugs?	Yes	No	Don't know
		1	2	3

5.6	According to you, how easy is it to obtain the following substances?					
INSTRUCTIONS	Please tick all that apply					
		1	2	3	4	5
		Very easy	Easy	Difficult	Very Difficult	Don't know
A	Marijuana					
B	Ecstasy					
C	Cocaine					
D	Brown sugar					
E	Heroin					
F	Cough syrup					
G	Sniffed glue					

6.1		To what extent do you agree with the following statements?				
INSTRUCTIONS		Please tick only one per row				
		1	2	3	4	5
		Strongly disagree	Disagree	Maybe/ Don't know/ Not sure	Agree	Strongly agree
A	It is important to eat breakfast					
B	It is important to eat balanced meals					
C	It is important to drink at least 2 litres of water daily					
D	It is important to consume dairy products such as milk, cheese or yoghurt					
E	It is important to reduce consumption of soft drinks as much as possible					
F	It is important to reduce consumption of fast foods as much as possible					

6.2		How would you rate the following statements?				
INSTRUCTIONS		Please tick only one per row				
		1	2	3	4	5
		Never	Rarely	Sometimes	Often	Always
A	I eat breakfast					
B	I eat balanced meals					
C	I drink at least 2 litres of water					
D	I consume dairy products such as milk, cheese or yoghurt					
E	I consume soft drinks					
F	I eat fast foods					



<b>SECTION 7</b>	<b>PHYSICAL ACTIVITY &amp; SEDENTARY LIFESTYLE</b>
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7.1	How much time do you spend in the following activities per day?						
INSTRUCTIONS		Please tick only one per row					
		0	1	2	3	4	5
		Nil (0 mins)	Less than 30 mins	30 mins - 1 hr	1 - 2 hrs	2 - 3 hrs	More than 3 hrs
A	I participate in physical education classes at school for						
B	I perform physical activity outside of school for						
C	I watch TV for						
D	I play video games on TV or PC for						
E	I spend time on the internet for						

<b>SECTION 8</b>	<b>MOBILE &amp; INTERNET USAGE</b>
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8.1	Do you own a mobile phone?	Yes	No
		1	2
		If Yes, move to next question	If No, move to question 8.3

8.2	Do you have internet connection on your mobile phone?	Yes	No
		1	2

8.3	Do you own a PC/laptop/tablet?	Yes	No
		1	2
		If Yes, move to next question	If No, move to question 8.5

8.4	Do you have internet connection on PC/laptop/tablet?	Yes	No
		1	2

8.5	How much time do you spend on average in a day for the following?						
INSTRUCTIONS		Please tick only one per row					
		0	1	2	3	4	5
		Nil (0 mins)	Less than 30 mins	30 mins - 1 hr	1 - 2 hrs	2 - 3 hrs	More than 3 hrs
A	Calls						
B	Text						
C	Internet (Facebook, Twitter etc...)						

SECTION 9	SCHOOL ENVIRONMENT AND ACADEMIC LEVEL
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9.1	To what extent do (es) the following problems trouble you?					
INSTRUCTIONS		Please tick only one per row				
		1	2	3	4	5
		Not at all	A little	Maybe/Don't know/Not sure	Quite a bit	Very much
A	Academic difficulties/Poor results					
B	Loss of interest in studies					
C	I do not have any friends at school					
D	I cannot pay attention in class					
E	I cannot understand what my teachers teach					
F	My attendance is poor					
G	I am often late for classes					
H	I feel inferior to my other classmates in terms of performance					
I	I feel too much pressure because of my studies and examinations					
J	I do not get along with my teacher(s)					

9.2	Have you ever experienced the following forms of bullying at school?					
INSTRUCTIONS		Please tick only one per row				
		1	2	3	4	5
		Never	Once or twice	Every week	Many times	Don't Know
A	Physical abuse (hit, pushed, slapped, kicked, spit at, beaten up, had property stolen)					
B	Verbal abuse (called names, teased hurtfully, insulted, humiliated, threatened)					
C	Social (excluded from a group, made to look dumb by someone, gossiped about, rumoured about)					
D	Electronically (harassed by mail, on social networking sites)					

<b>SECTION 10</b>	<b>PHYSICAL, MENTAL &amp; EMOTIONAL HEALTH STATUS</b>
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10.1	How would you rate your current physical health status?	
DEFINITION	Physical health is a condition where one is free from illness, injury or pain; it ranges from physical fitness to overall wellness.	
INSTRUCTIONS	Please circle only one appropriate number	
A	Excellent	1
B	Very Good	2
C	Good	3
D	Fair	4
E	Poor	5

10.2	How would you rate your current mental health status?	
DEFINITION	Mental health is state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.	
INSTRUCTIONS	Please circle only one appropriate number	
A	Excellent	1
B	Very Good	2
C	Good	3

<b>D</b>	Fair	<b>4</b>
<b>E</b>	Poor	<b>5</b>

<b>10.3</b>	<b>How would you rate your current emotional health status?</b>	
<b>DEFINITION</b>	Emotional health involves perceived life satisfaction, happiness, cheerfulness, peacefulness.	
<b>INSTRUCTIONS</b>	<b>Please circle only one appropriate number</b>	
<b>A</b>	Excellent	<b>1</b>
<b>B</b>	Very Good	<b>2</b>
<b>C</b>	Good	<b>3</b>
<b>D</b>	Fair	<b>4</b>
<b>E</b>	Poor	<b>5</b>

<b>10.4</b>	<b>Have you ever experienced any of these symptoms?</b>	
<b>INSTRUCTIONS</b>	<b>Please circle all that apply</b>	
<b>A</b>	Moodiness, temper or angry outburst	<b>1</b>
<b>B</b>	Difficulty falling asleep or staying asleep	<b>2</b>
<b>C</b>	Being overly worried for no reason	<b>3</b>
<b>D</b>	Being overly worried about small things	<b>4</b>
<b>E</b>	Feelings of panics	<b>5</b>
<b>F</b>	Difficulty thinking or concentrating	<b>6</b>
<b>G</b>	Feelings of depression or anxiety	<b>7</b>
<b>H</b>	Feelings of unexplained fear	<b>8</b>
<b>I</b>	Excessive eating habits (bulimia)	<b>9</b>
<b>J</b>	Food restriction/obsession with having a thin figure and an irrational fear of weight gain (anorexia)	<b>10</b>
<b>K</b>	Loss of appetite	<b>11</b>
<b>L</b>	Hallucinations (auditory, visual or sensorial)	<b>12</b>
<b>M</b>	Other. Please specify.....	<b>13</b>

<b>10.5</b>	<b>Please rate the following statements with regards to how you feel these days.</b>					
<b>INSTRUCTIONS</b>		<b>Please tick only one per row</b>				
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		<b>Not at all</b>	<b>A little</b>	<b>Maybe/Don't know/Not sure</b>	<b>Quite a bit</b>	<b>Very much</b>
<b>A</b>	I feel happy					
<b>B</b>	I feel nervous					
<b>C</b>	I feel calm and peaceful					
<b>D</b>	I feel constantly tired					
<b>E</b>	I feel sad					
<b>F</b>	I feel stressed out					
<b>G</b>	I feel full of energy					
<b>H</b>	I feel restless (unable to rest or relax as a result of anxiety or boredom)					

<b>10.6</b>	<b>Have you ever consulted a psychologist or psychiatrist or sought any professional help?</b>	<b>Yes</b>	<b>No</b>
		<b>1</b>	<b>2</b>

<b>SECTION 11</b>	<b>PERSONAL LIFE (SELF-ESTEEM, RELATIONSHIPS, FINANCES ETC...)</b>
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<b>11.1</b>	<b>Are you currently dating someone?</b>	<b>Yes</b>	<b>No</b>
		<b>1</b>	<b>2</b>

<b>11.2</b>	<b>To what extent do (es) the following statements apply to you?</b>					
<b>INSTRUCTIONS</b>		<b>Please tick only one per row</b>				
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		<b>Not at all</b>	<b>A little</b>	<b>Maybe/Don't know/Not sure</b>	<b>Quite a bit</b>	<b>Very much</b>
<b>A</b>	Poor relationships with parents					
<b>B</b>	Poor relationships with siblings					
<b>C</b>	Poor relationships with friends					

<b>D</b>	Poor relationship with boyfriend/girlfriend					
<b>E</b>	Lack of self-confidence					
<b>F</b>	I feel like a burden to my family					
<b>G</b>	I feel like a burden to my friends					
<b>H</b>	I feel the world would be a better place without me in it					
<b>I</b>	I feel lonely					
<b>J</b>	I feel like nobody cares for me/I don't feel loved/I feel rejected					
<b>K</b>	I generally feel worthless					
<b>L</b>	I think I am to be blamed for almost all my troubles					
<b>M</b>	I feel physically inferior					
<b>N</b>	I feel inferior due to my sexual orientation					
<b>O</b>	I do not feel like participating in my usual activities lately					
<b>P</b>	I have started to isolate myself from others					
<b>Q</b>	I have no hobbies and interests					
<b>R</b>	I have financial problems at home					
<b>S</b>	I am a victim of physical abuse					
<b>T</b>	I am a victim of sexual abuse					

<b>11.3</b>	<b>People are different in their sexual attraction to other people. Which of the following best describes your feelings?</b>	
<b>INSTRUCTIONS</b>	<b>Please circle only one appropriate number</b>	
<b>A</b>	Only attracted to females	<b>1</b>
<b>B</b>	Mostly attracted to females	<b>2</b>
<b>C</b>	Equally attracted to females and males	<b>3</b>
<b>D</b>	Mostly attracted to males	<b>4</b>
<b>E</b>	Only attracted to males	<b>5</b>
<b>F</b>	Not sure	<b>6</b>

<b>11.4</b>	<b>Are you currently sexually active?</b>	<b>Yes</b>	<b>No</b>
		<b>1</b>	<b>2</b>

**SECTION 12**
**PERCEPTIONS ABOUT SELF-HARM & RISKY BEHAVIOUR**

12.1		What are your thoughts about the following statements?				
INSTRUCTIONS		Please tick only one per row				
		1	2	3	4	5
		Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
A	Most people who attempt suicide are lonely and depressed					
B	People with no family ties are more likely to attempt suicide					
C	Those who threaten to commit suicide rarely do so					
D	People who attempt suicide are usually mentally ill					
E	People who attempt suicide and live should be required to undertake therapy					
F	People who attempt suicide usually seek sympathy and attention					
G	The issue of suicide should be discussed among friends					
H	Talking about suicide may help prevent a person from committing suicide					
I	The problem of youth suicide is very serious					

J	People don't have enough knowledge about suicide					
K	Talking about suicide in schools will lead to increased attempts by students					
L	Talking about suicide in schools will prevent some students attempting suicide					
M	If someone wants to commit suicide it is their business and we should not interfere					
N	Suicide usually occurs without warning					
O	It's none of my business if a friend says he/she wants to kill themselves or attempts to					
P	If a suicidal friend asked me not to tell anyone I would keep that promise					
Q	If someone is talking about suicide I would ignore/joke about it					
R	It would be helpful to a suicidal friend if I tried to cheer him/her up					
S	It would be helpful to a suicidal friend if I distracted him/her					
T	I am very confident that I could identify if					



	my friend was suicidal					
U	I am very confident that I would be able to help a suicidal friend					

<b>SECTION 13</b>	<b>SELF-HARM &amp; RISKY BEHAVIOUR – PART I</b>
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13.1	Have you ever thought of hurting or harming yourself intentionally?	Yes	No
		1	2

13.2	If yes, why? (in words)

13.3	Have you ever hurt or harmed yourself intentionally?	Yes	No
		1	2

13.4	If yes, why? (in words)

13.5	Have you ever thought of committing suicide?	Yes	No
		1	2

13.6	If yes, why? (in words)

13.7	Have you ever made a suicide attempt?	Yes	No
		1	2

13.8	If yes, why? (in words)

13.9	Have any of your friends, siblings or family members attempted or committed suicide?	Yes	No	Don't know/Not sure
		1	2	3

<b>SECTION 14</b>	<b>SELF-HARM &amp; RISKY BEHAVIOUR - PART II</b>
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<b>INSTRUCTIONS</b>	<b>THIS SECTION SHOULD ONLY BE COMPLETED BY THOSE WHO ANSWERED 'YES' TO ANY OF THE QUESTIONS 13.1, 13.3 13.5 &amp; 13.7</b>
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14.1	Did you ever make a detailed plan before harming or attempting suicide?	Yes	No
		1	2

14.2	Which of the following have you ever done to yourself?	
INSTRUCTIONS	Please circle all that apply	
A	Cut yourself on purpose in order to bleed out	1
B	Intentionally overdosed on drugs	2
C	Burned yourself on purpose	3
D	Attempted to strangle or hang yourself	4
E	Swallowed poisons or caustic substances	5
F	Stabbed or punctured yourself on purpose	6
G	Attempted to jump from height	7
H	Attempted to shoot yourself with a firearm	8
I	Attempted to drown yourself	9
J	Other. Please specify.....	10
K	None of the above	11

<b>SECTION 15</b>	<b>FUTURE OUTLOOK</b>
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<b>INSTRUCTIONS</b>	<b>THIS SECTION SHOULD BE COMPLETED ALL RESPONDENTS</b>
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<b>15.1</b>	<b>How does your future look?</b>	
<b>INSTRUCTIONS</b>	<b>Please circle only one appropriate number</b>	
<b>A</b>	Very good	<b>1</b>
<b>B</b>	Good	<b>2</b>
<b>C</b>	Average	<b>3</b>
<b>D</b>	Not so good	<b>4</b>
<b>E</b>	Bad	<b>5</b>
<b>F</b>	Don't know/Not sure	<b>6</b>

<b>15.2</b>	<b>What things make you want to go on living? (in words)</b>	<div></div> <div></div>
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<b>15.3</b>	<b>What would make your future look more hopeful? (in words)</b>	<div></div> <div></div>
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**\*\*\*END OF QUESTIONNAIRE\*\*\***

**Thank you for your time**

## BIBLIOGRAPHY

AAS, American Association of Suicidology. 2008. [Online] Available: <http://www.suicidology.org/resources/facts-statistics> [2015, May 10]

Athal, K. 2012. *Suicide Hotline Please Hold*. [Online]. Available: <http://www.lemauricien.com/article/suicide-hotline%E2%80%A6please-hold> [2015, May 10]

Auckel, T. 2013. *Suicide Tendencies Amongst Students In Secondary Education In Mauritius*. University of Mauritius Dissertations.

Barlow, C., & Coleman. H. 2003. The healing alliance: how families use support after a suicide. *Journal of Death and Dying*. 47(3): 187-201.

Barrett, T. W. & Scott, T. B. 1990. Suicide Bereavement and Recovery Patterns Compared with Nonsuicide Bereavement Patterns. *The American Association for Suicidology*. 20(1): 1-15.

Belle Rose, M. C. 2004. **Prevalence of suicide in Mauritius**. University of Mauritius Dissertations.

Berman, A. L. 2011. Estimating the Population of Survivors of Suicide: Seeking an Evidence Base. *The American Association for Suicidology*. 41(1): 110-116.

Bertolote, J. M. & Fleischmann, A. 2002. Suicide and psychiatric diagnosis: a worldwide perspective. *World Psychiatry*. 1(3): 181-185.

Brent, D. A., Bridge, J., Johnson, B. A. & Connolly, J. 1996. Suicidal behaviour runs in families. A controlled family study of adolescent suicide victims. *Archives and General Psychiatry*. 53(11): 45-1152.

Brent, D. A., Perper, J. A., Allman, C. J., Moritz, G. M., Wartella, M. E. & Zelenak, J. P. 1991. The presence and accessibility of firearms in the homes of adolescent suicides. *Journal of the American Medical Association*. 266(21): 2989-2995.

Brent, D. A., Perper, J. A., Moritz, G., Baugher, M., Schweers, J. & Roth, C. 1993. Firearms and adolescent suicide: A community case-control study. *American Journal of Diseases of the Child*. 147(10): 1066-1071.

Bridge, J. A., Goldstein, T. R. & Brent, D. A. 2006. Adolescent suicide and suicidal behaviour. *Journal of Child Psychology and Psychiatry*. 47:3-4: 372-394.

Butchart, A., Brown, D., Khanh-Huynh, A., Corso, P., Florquin, N. & Muggah, R. 2008. *Manual for estimating the economic costs of injuries due to interpersonal and self-directed violence*. Geneva: World Health Organization.

Campbell, F. R. 1997. Baton Rouge Crisis Intervention Center's LOSS Team Active postvention Model Approach. In J. R. Jordan & J. L. McIntosh (Eds). 2011. *Grief After Suicide: Understanding the Consequences and Caring for the Survivors*. New York & London: Routledge.

Carballo, Juan J., Currier, D., Figueroa, A. E., Giner, L., Kelly, S. A., Sublette, M. E. & Oquendo, M. A. 2009. Neurobiological underpinnings of suicidal behavior: Integrating data from clinical and biological studies. *The European Journal of Psychiatry*. 23(4): 243-259.

CASA, Clinical Advisory Services Aotearoa. 2009. *Risk factors and triggers for suicidal behaviour in youth*. [Online]. Available: [www.casa.org.nz](http://www.casa.org.nz) [2015, May 10]

CDC, Center for Disease Control. 2013. *Injury Prevention & Control : Division of Violence Prevention*. [Online]. Available: <http://www.cdc.gov/violenceprevention/suicide/definitions/html> [2015, May 8]

CDC, Centre for Disease Control. 2014. *Injury Prevention and Control*. [Online]. Available: <http://www.cdc.gov/violenceprevention/suicide/datasources.html> [2015, May 9]

Centre for Disease Control. 2005. *Suicide Consequences*. [Online]. Available: <http://www.cdc.gov/violenceprevention/suicide/consequences.html> [2014, June 20]

Centre for Suicide Prevention. 2010. *The Cost of Suicide*. [Online]. Available: [https://suicideinfo.ca/LinkClick.aspx?fileticket=jz\\_OfDJ9HUc%3D&tabid=538](https://suicideinfo.ca/LinkClick.aspx?fileticket=jz_OfDJ9HUc%3D&tabid=538) [2015, May 10]

Cerel, J., Jordan, J. R. & Duberstein, P. R. 2008. The Impact of Suicide on the Family. *Crisis*. 29(1): 38 44.

Chang, S. S., Stuckler, D., Yip, P. & Gunnell, D. 2013. Impact of 2008 global economic crisis on suicide: time trend study in 54 countries. *British Medical Journal*. 347.

Colt, G. H. 1991. *The enigma of suicide*. New York: Simon & Schuster.

Commonwealth of Australia. 2005. *Defining Suicidal Behaviour*. [Online. Available: [www.responseability.org](http://www.responseability.org) [2015, May 8]

Commonwealth of Australia. 2005. *Defining Suicidal Behaviour*. [Online]. Available: [www.responseability.org](http://www.responseability.org) [2015, May 9]

Cutler, D. M., Glaeser, E. L & Norberg, K. E. 2001. Explaining the Rise in Youth Suicide. In *Risky Behavior among Youths: An Economic Analysis*. J. Gruber. Ed. Chicago: University of Chicago Press.

Davis, D. & Hinger, B. 2005. Assessing the needs of survivors of suicide: A needs assessment in the Calgary Health Region (region 3), Alberta. [Online]. Available: <http://www.albertahealthservices.ca/injuryprevention/hi-ip-pipt-chc-pro-assessing-needs-of-survivors-report-lit.pdf> [2015, May 10]

Gould, M. S., Fisher, P., Parides, M., Flory, M., Shaffer, D. 1996. Psychosocial risk factors of child and adolescent completed suicide. *Archives of General Psychiatry*. 53(12):1155-1162.

Gould, M., Petrie, K., Kleinman, M. H. & Wallenstein, S. 1994. Clustering of attempted suicide: New Zealand national data. *International Journal of Epidemiology*. 23(6): 1185-1189.



Gvion, Y. & Apter, A. 2012. Suicide and suicidal behavior. *Public Health Reviews*. 34(2): 1-20.

Hagell, A., Coleman, J. & Brooks, F. 2013. *Key Data on Adolescence 2013*. London: Association for Young People's Health.

Hamermesh, D. & Soss, N. 1974. An economic theory of suicide. *Journal of Political Economy*. 82(1): 83-98.

Hazen, E., Scholzman, S., & Beresin, E. 2008. Adolescent psychological development: A review. *Pediatrics in Review*. 29: 161-168.

Hepp, U., Stulz, N., Unger-Koppel, J. & Ajdacic-Gross, V. 2012. Methods of suicide used by children and adolescents. *European Child & Adolescent Psychiatry*. 21(2): 67-73.

Hur, J., Kim, W. & Kim, Y. 2011. The Mediating Effect of Psychosocial Factors on Suicidal Probability among Adolescents. *Archives of Suicide Research*. 15(4): 327-336.

Jensen, F. & Urion, D. 2008. *Harvard Magazine: A work in Progress: The Teen Brain*. [Online]. Available: <http://harvardmag.com/pdf/2008/09-pdfs/0908-8.pdf> [2015, May 9]

Jordan , J. R. 2001. Is Suicide Bereavement different? A reassessment of the literature. *Suicide Life-Threatening Behavior*. 31(1): 91-102.

Jordan, J. R., Kraus, D. R. & Ware, E. S. 1993. Observations on loss and family development. *Family Process*. 32(4): 425-440.

Kandel, D. B., Ravies, V. H. & Davies, M. 1991. Suicidal ideation in adolescence: Depression, substance use, and other risk factors. *Journal of Youth and Adolescence*. 20: 289–309.

Kessler R. C., Borges G. & Walters E. E. 1999. Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Archives of General Psychiatry*. 56: 617–26.

Lewisonh, P. M., Rohde, P. & Seeley, J. R. 1994. Psychosocial risk factors for future adolescent suicide attempts. *Journal of Consulting and Clinical Psychology*. 62(2):297-305.

LifePlus. 2013-14. *Strategy, Programme & Activities: 2011 up to now*.

MPF, Mauritius Police Force. 2014. Data on Completed Suicides. *Criminal Records Office 2001-2013*.

MIH, Mauritius Institute of Health. 2005. In collaboration with MRC, Mauritius Research Council & MoSS Ministry of Social Security, National Solidarity and Reform Institutions. *Risk and Protective Factors associated with Suicide in Mauritius*.

MIH, Mauritius Institute of Health. 2006. *Youth Health Risk Behaviour in Mauritius/Rodrigues: Prevalence and Determinants*.

MOH, Ministry of Health and Quality of Life & WHO, World Health Organization. 2011. *Global School based Student Health Survey, 2006, 2011*. [Online]. Available: <http://www.who.int/chp/gshs/mauritius/en/> [2015, May 10]

Moran, P., Coffey, C., Romaniuk, H., Olsson, C., Borschmann, R., Carlin, J. B & Patton, G. C. 2011. The natural history of self-harm from adolescence to young adulthood: a population-based cohort study. *Lancet*. 379: 236-243.

Moran, P., Coffey, C., Romaniuk, H., Olsson, C., Borschmann, R., Carlin, J. B. & Patton, G. C. 2011. The natural history of self-harm from adolescence to young adulthood: a population-based cohort study. *Lancet*. 379(9812): 236-243.

MoSS, Ministry of Social Security, National Solidarity and Reform Institutions. 1997. *Research Study on Suicide in Mauritius*.

Mpiana, P. M., Marincowitz, G. J. O., Ragavan, S. & Maleta, N. 2004. Why I tried to kill myself"-an exploration of the factors contributing to suicide in the Waterberg District. *South Africa Family Practice*. 46(7): 21-25.

MRC, Mauritius Research Council, CASR, Centre for Applied Social Research, UoM, University of Mauritius. 2003. *Survey of Smoking, Drinking and Illicit Drug use among Secondary school students in Mauritius*.

MRC, Mauritius Research Council. 2011. *Needs Assessment on Neurological Rehabilitation in Mauritius*.

NESC, National Economic and Social Council. 2012. *Violence and Indiscipline in Schools*.

Neuroanthropology. n.d. *Culture on the Teen Brain*. [Online]. Available: <http://neuroanthropology.net/2008/08/30/culture-on-the-teen-brain/> [2015, May 9]

Nock, M. K., Borges, G., Bromet, E. L., Cha, C. B., Kessler, R. C. & Lee, S. (2008). Suicide and Suicidal Behavior. *Epidemiologic Reviews*. 30(1): 133–154.

OECD, Organization for Economic Cooperation and Development. 2014. *Child well-being Module: CO4.1: Teenage suicide (15-19 years old)*. [Online]. Available: [http://www.oecd.org/els/family/CO4\\_4\\_Teenage%20Suicide.pdf](http://www.oecd.org/els/family/CO4_4_Teenage%20Suicide.pdf) [2015, May 9]

Pandey G. N., Dwivedi, Y., Rizavi, H. S., Ren, X., Pandey, S. C., Pesold, C., Roberts, R. C., Conley R. R. & Tamminga, C. A. 2002. Higher expression of serotonin 5-HT<sub>2A</sub> receptors in the postmortem brains of teenage suicide victims. *American Journal of Psychiatry*. 159:419-429.

Platt, S., McLean, J., McCollam, A., Blamey, A., Mackenzie, M., McDaid, D., Maxwell, M., Halliday, E. & Woodhouse, A. 2006. *Evaluation of the first phase of Choose Life: The national strategy and action plan to prevent suicide in Scotland*. Edinburgh: Scottish Executive Social Research.

Radhakrishnan, R & Andrade, C. 2012. Suicide: An Indian Perspective. *Indian Journal of Psychiatry*. 54(4): 304-319.

Rutter, P. A. & Behrendt, A. E. 2004. Adolescent Suicide Risk: Four Psychosocial Factors. *Adolescence*. 39(154): 295-302.

Seerungen, G. 1998. *A critical analysis of suicide in Mauritius and its Social Work Implication*. University of Mauritius Dissertations.

Shah, A. 2012. Suicide rates: age-associated trends and their correlates. *Journal of Violence Research*. 4(2):79-86.

The Hong Kong Jockey Club. n.d. *Suicide and the Media: Recommendations on Suicide Reporting for Media Professionals*. [Online]. Available: [https://www.iasp.info/pdf/task\\_forces/HongKong\\_Recommendations\\_Media.pdf](https://www.iasp.info/pdf/task_forces/HongKong_Recommendations_Media.pdf) [2015, May 10]

Tollefsen, I. M., Hem, E. & Ekeberg, O. 2012. The reliability of suicide statistics: a systematic review. *BMC Psychiatry*. 12: 9.

U.S. Department of Health and Human Services. 2012. *National Survey on Drug Use and Health*. [Online]. Available: [http://www.samhsa.gov/data/sites/default/files/2k12MH\\_Findings/2k12MH\\_Findings/NSDUHmhfr2012.htm](http://www.samhsa.gov/data/sites/default/files/2k12MH_Findings/2k12MH_Findings/NSDUHmhfr2012.htm) [2015, May 9]

U.S. Surgeon General and of the National Action Alliance for Suicide Prevention. 2012. *National Strategy for Suicide Prevention: Goals and Objectives for Action*. [Online]. Available: <http://www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/full-report.pdf> [2015, April 5]

van Hooff, A. J. L. 2000. A historical perspective on suicide. In R. W. Maris, A. L., Berman & Silverman (Eds.). *Comprehensive textbook of suicidology*. 96-126. New York: Guilford.

van Orden, K. A, Witte, T. K., Cukrowicz, K. C., Braithwaite, S. Selby, E. A. & Joiner, T. E. Jr. 2010. The Interpersonal Theory of Suicide. *Psychological Review*. 117(2): 575-600.

Walsh, F., & McGoldrick, M. 1991. Loss and the family: A systems perspective. In F. Walsh & M. McGoldrick (Eds.). *Living beyond loss*. 1–29. New York: W. W. Norton.

Wasserman, D. Cheng, Q. & Jiang, G. 2005. Global suicide rates among young people aged 15-19. *World Psychiatry*. 4(2): 114-120.

Welch, S. S. 2001. A Review of the Literature on the Epidemiology of Parasuicide in the General Population. *Psychiatric Services*. 52(3): 368-375.

WHO, World Health Organization. 2002. *World report on violence and health*. [Online]. Available: [http://www.who.int/violence\\_injury\\_prevention/violence/world\\_report/en/](http://www.who.int/violence_injury_prevention/violence/world_report/en/) [2015, May 8]

WHO, World Health Organization. 2008. *Preventing Suicide – A Resource for Media Professionals*. [Online]. Available: [http://www.who.int/mental\\_health/prevention/suicide/resource\\_media.pdf](http://www.who.int/mental_health/prevention/suicide/resource_media.pdf) [2014, June 20]

WHO, World Health Organization. 2009. *WHO Mortality Data Base: Age Specific Death Rates (ASDR) from selected countries*. [Online]. Available: [http://www.who.int/healthinfo/mortality\\_data/en/](http://www.who.int/healthinfo/mortality_data/en/) [2015, May 10]

WHO, World Health Organization. 2010. *Suicide Statistics in Mauritius by Gender 1955-2008*. [Online]. Available: [http://www.who.int/mental\\_health/media/maur.pdf](http://www.who.int/mental_health/media/maur.pdf) [2015, May 10]

WHO, World Health Organization. 2014. *Preventing suicide: A global imperative*. [Online]. Available: [http://www.who.int/mental\\_health/suicide-prevention/world\\_report\\_2014/en/](http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/) [2015, May 8]

Wilburn V. R. & Smith, D. E. 2005. Stress, self-esteem, and suicidal ideation in late adolescents. *Spring*. 40(157): 33-45.