Resilience and Adversity among Institutionalised Children: Contributions towards Health

A thesis submitted to the University of Hyderabad
*for the Degree of **Doctor of Philosophy***
in Psychology

By

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January – 2015

CERTIFICATE

*This is to certify that the thesis entitled **"Resilience and Adversity among Institutionalised Children: Contributions towards Health"** being submitted to the University of Hyderabad by **Swati Agarwal** (Reg. No:10CPPH01), for the award of the degree of **Doctor of Philosophy in Psychology**, is a record of bonafide work carried out by her under my supervision and is free of plagiarism.*

The matter embodied in this report has not been submitted to any other university or institution for the award of any degree or diploma.

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DECLARATION

I, *Swati Agarwal*, declare that the work presented in this thesis entitled *"Resilience and Adversity among Institutionalised Children: Contributions towards Health"* has been carried out by me under the supervision of Dr. B. Sushma, Assistant Professor, Centre for Health Psychology, University of Hyderabad, as per the Ph.D. ordinances of the university, which is also plagiarism free. I declare, to the best of my knowledge, that no part of this thesis has been submitted for the award of a research degree or diploma of any other university. I hereby agree that my thesis can be deposited in Shodhganga/ INFLIBNET.

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ACKNOWLEDGEMENT

It has been a long journey that has culminated successfully with this thesis. This journey has taught me many things about life, about work, and also about myself. In this learning experience there have been contributions of many people and each assistance, small or big, has helped me in my work and by acknowledging their help I would like to convey my thanks to each and everyone.

I would like to begin by thanking Dr. Sushma, my guide and mentor. She has been an inspiration to me and I have learnt a lot from her. Through her compassion and support I have overcome some difficult times.

I would like to thank the head of the department, Prof. Meena Hariharan, who has pushed me to reach higher standards. I am also grateful to her for her support and guidance when I needed it.

Dr. Padmaja and Dr. Suvashisa Rana who were my doctoral committee members, but their help was never restricted to the meetings. They have been there to help me whenever I needed it and I would like to express my heartfelt thanks to them.

I would also like to thank the other faculty members of the centre for health psychology, Dr. Meera Padhy, Dr. Nagaseema and Dr. Thomas Kishore. I am grateful to Prof. C. R. Rao for giving his time and valuable input in conducting the statistical analyses for the study.

I cannot be remiss in thanking the Indian Council of Medical Research (ICMR) for their continuous support during my tenure as an ICMR junior and senior research fellow.

I express my thanks to the office staff, which includes Ms. Sucharita, Mr. Varaprasad, Mr. Suresh and Mr. Shyam for all their help in administrative matters and otherwise. The translation of the tools was an immense task and I would like to thank Prof. Jaikishan, Prof. Tripathi, Ms. Srilakshmi Kusuma, Ms. Rachana for their help.

My fellow research scholars have also been a great source of help and support to me and I would like to thank them.

And last I would like to thank my family, who have believed in me, stood next to me, supported my decisions, taken up my responsibilities so that I would be able to obtain my doctorate degree.

In the end, I would like to thank the Almighty for giving me the strength and the determination to believe in myself and complete what I had started.

Abstract

India has a large number of child population most of whom are considered to be at risk and vulnerable and who encounter numerous adversities in their young lives. Many of these children are under institutional care. Institutionalised children display a wide variety of health problems. The source of poor health among institutionalised children could be the institutional care itself and the adversities they have experienced in their lives because of which they were institutionalised. Resilience is a term used hand in hand with adversities. Highly resilient people have been found to show good life outcomes despite the adversities they have encountered. Researchers have been exploring the influence of resilience on various spheres of an individual's life, however, there is a dearth of research on the influence of resilience on health, particularly in children. The present study was intended to analyse the role of resilience and adversity in the health of institutionalised children. It was also intended to find out if resilience, level of adversity, past impact of adversity and present impact of adversity predict health of institutionalised children. A 3 x 2 factorial design was employed in the study with three levels of resilience – low, medium and high and two levels of adversity- low and high. The criterion variable was health of institutionalised children. The sample consisted of 400 children between the age group of 13 to 18 years, who had been under institutional care for a period of at least one year. Informed consent of the institutional head and assent of the children was obtained before including them in the study. The tools used in the study included the Resilience checklist for children, Healthy Pathways Child report scale and the Lifetime incidence of traumatic events to measure resilience, health and adversity respectively. It was found that there was positive influence of resilience on health and its

domains. The level of adversity had a negative effect only on some domains of health. But an interaction effect of resilience and adversity was seen on the overall health of institutionalised children. It was also found that there was a significant positive contribution of resilience in the health of institutionalised children. The contribution of level of adversity was seen across some of the domains and sub domains and overall health. Past impact of adversity was also a significant predictor of overall health. Present impact of adversity contributed significantly to some domains and sub domains of health. The present study has also found that the health of institutionalised children is not at the optimum level and there is vast scope for improvement of the children's health. The present study also shows how the level of adversity, past impact of adversity and present impact of adversity affect different aspects of child's health. By providing evidence for a resilience and health association the present study adds to the theoretical knowledge base about resilience and its influence on the health of institutionalised children. A resilience based intervention is a proactive, preventive measure to counteract past adverse experiences and initiate present and future good health.

Key words: *Resilience, Adversity, Health, Institutionalised children*

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LIST OF ABBREVIATIONS

ACE	Adverse childhood experience
ADHD	Attention deficit hyperactivity disorder
CD-RISC	Connor- Davidson resilience scale
CVI	Content validity index
CVR	Content validity ratio
HPCRS	Healthy pathways child report scale
ILO	International labour organization
LITE	Lifetime incidence of traumatic events
NGO	Non governmental organization
PTSD	Post traumatic stress disorder
RCFC	Resilience checklist for children
UNCRC	United nations convention on the rights of the child
UNESCO	United nations educational, scientific and cultural organization
UNICEF	United nations children's fund
UNODC	United nations office on drugs and crime
WHO	World health organization

CHAPTER I

INTRODUCTION

INTRODUCTION

1.1 Statement of the problem

India has a large number of child population most of whom are considered to be at risk and vulnerable and who encounter numerous adversities in their young lives. Childhood adversity has been found to have immediate as well as long term repercussions. Health of the individuals who have experienced childhood adversities has been found to be poorer in adulthood. This poor health is seen across physical and psychological aspects. But the impact of adversity on health in childhood and adolescence has not been well established empirically. A huge number of at risk children are placed under institutional care as it is considered an option which would be beneficial to the children. However, the harmful effects of institutionalization seen across all domains of child health, that is, physiological, emotional, social and behavioural aspects have been established by researchers across the world. These adverse effects on children who have been institutionalised has been acknowledged even by policy makers. Despite this likelihood of poor health, there are many who come out of these adversities stronger and seem to excel in many spheres of life. These people are resilient in the face of adversity. Resilience has been found to have positive impact on individual's life and promotes good outcomes across various domains. So, it appears that resilience could also play a role in health promotion and outcomes in at risk individuals. However, there is dearth of research linking resilience and health outcomes. The association between resilience and health in children has not been documented through research. The present study is aimed towards looking at the adversities encountered by children who are

presently under institutional care and its impact on their health. Further, through the present study it is intended to see to what extent resilience contributes towards health outcomes in institutionalised children despite the adversities they have experienced.

1.2 Who is a child?

The United Nations Convention on the Rights of the Child [UNCRC] (UNICEF, 1989) in its first article defines a child and according to it "a child means every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier". To elucidate this clearly, a child is any person who has not reached the age of eighteen unless a different age of maturity is specified in any country's law (Childline India, 2013). This article gives countries discretionary power to delineate the age of childhood as per its culture and law, whatever they deem appropriate.

The society's belief of when a child attains adulthood is the time when all his faculties are fully developed. This includes cognitive, emotional and behavioural maturation. And this is usually the basis of a child attaining majority in that country. This results in varied age criteria across the world for defining children. However, today with the vast research on child development most countries have adopted a more uniform age limit, that is, eighteen, to be an age when the child reaches adulthood as he is believed to have fully attained physical, cognitive and emotional maturity.

The Indian constitution has many laws and acts related to the welfare of children and the age demarcated for childhood varies in these laws. As per the first Article of the Indian Child Rights Commission (Government of India, 2001), any person who is below

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18 years of age is termed as a child. Many laws have an age of 18 years as the basis to categorise people as children. As per the Indian Majority Act (1875), an individual is not considered to have attained his/ her majority unless he /she is at least 18 years of age. Other acts such as the Protection of Women from Domestic Violence Act (2005), Contract Act (1872), Child Marriage Restraint Act (1929), Prohibition of Child Marriage Act (2006) or Representation of the People Act (1950) all consider children to be those people who are under 18 years of age and people over 18 years to be adults. But most importantly, the Juvenile Justice (Care and Protection of Children) Act (2000) defines juvenile or child as "a person who has not completed eighteenth year of age". Hence, a person attains majority; can enter into legal transactions; can be tried for criminal acts only when he turns 18.

Based, on all the above information and legislative acts, in the present study the criteria for defining a child was a person who is below 18 years of age.

1.2.1 Children in India and the world

The world population stands around seven billion today, out of which around 26.2% (1.8 billion approx.) are children. This number includes approximately 950 million males and 887 million females. Further, the number of children born every minute in the world is 252.

India has the second largest population in the world. Its population is 1.21 billion and every year 26 million people are added to this population through the birth of children in India (Government of India, 2012). With about a third of its population being under 18, India has around 440 million children. This is approximately 19 percent of the

children in the world. One in five children in the world lives in India (Mehta, 2007). A large number of these children are in a vulnerable state brought about by familial and societal circumstances.

1.3 Children at risk

"Childhood should be carefree, playing in the sun; not living a nightmare in the darkness of the soul."

— *Dave Pelzer* (1993, p. 98)

India is a developing country with a vast amount of human resources. But the social and economic resources available to its citizens are limited. Further, unequal distribution of these limited resources across the country widens the gap between the haves and have-nots subjecting the latter to many more economic and social problems. These economic and social problems include poverty and its associated factors such as poor living conditions, lack of space, unhygienic environment, low accessibility to social infrastructure like good health care, quality education, safe and secure neighborhood. These circumstances put the children at risk for poor development and growth and preventing them from realizing their full potential, thus, making the child vulnerable. The likelihood of these children having successful outcomes in academic, health and occupational aspects lessens greatly.

Children are vulnerable by nature as they are still growing and developing and are believed to have not attained their full potential. Socio-cultural views in most of the countries deem children to be physically and psychologically vulnerable. This view stems from the belief that children are unable to fend for themselves as their faculties have not

reached the complete development and hence they require the care, support and guidance of adults to meet their needs. However, there are certain groups of children who are deemed more vulnerable because of the circumstances of their lives and hence to be at great risk of having poor life outcomes.

Children are considered to be 'at risk' if the probability of their having poor outcomes is increased because of individual or environmental factors. Another term often used to describe these children is 'vulnerable children'. The children at risk have been classified and grouped in order to understand the context of their past experiences, their current situation and problems that they encounter. The following paragraphs describe these groups.

Street children - 'Street children' is a term to include those children who live on the streets as they do not have a home. The reasons children come to be living on the streets could be because the family is homeless, or they are orphans or they have run away from home (or anywhere else) to escape an abusive situation.

UNICEF (2006) estimated the number of street children to be around 100 million in the world. But current UN estimates place this number to be around 150 million (UNESCO, 2013). However, this estimate is only a conjecture and is not based on any research data. As per UNICEF estimates (2012), there are eleven million street children in India. According to Childline India (2013), a NGO working with children, around one third, that is, 33% of street children are in the age range of 6 to 10 years. Another 40 % street children are between 11 to 15 years.

Street children are at risk of being abused (Ministry of Women and Child Development [Government of India], 2007), exploited for child labour and child prostitution. Exposure to health hazards and lack of access to health care also make them vulnerable. There are numerous Non Governmental Organizations (NGOs) that work towards rehabilitation of street children and may place them under institutional care as part of the rehabilitative process.

Orphans - An orphan has been defined by UNICEF (2013) and its global partners as "a child who has lost one or both parents". Based on this definition the number of orphans in Asia, sub-Saharan Africa, Latin America and the Caribbean is over 132 million for the year 2005. Among these approximately 13 million have lost both parents. SOS Children's villages, an organization that provides residential care to children worldwide, cites UNICEF (2013) in stating that there are 60 million orphans in Asia alone. According to UNICEF (2006), India is home to around 25 million orphaned children. Other estimates (Child Line India, 2013) cite that there are about 44 million destitute children and over 12 million orphan and abandoned children in India. Orphans are placed under institutional care by other family members if they are unable to care for the children themselves. Many NGOs actively mobilize orphans or semi orphans to be placed under orphanages, children's homes, etc.

Missing children - Another vulnerable group is 'missing children'. Varying statistics report the number of children that go missing every year to range from 40,000 (Haq- Centre for child rights, 2005) to 60,000 (The Hindu, July, 2011). A large number of them are not traced back. These children could be those who have run away from home, who get lost from their parents, may be in a crowd, or children who have been

abandoned by their family. These children often end up on the streets or may be placed under institutional care by the government authorities.

Child labour - The International Labour Organization (ILO) defines child labour "as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development" (ILO, 2013). "It refers to work that is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by depriving them of the opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work" (ILO, 2013).

The children engaged in labour are in an exploitative situation and are prevented from developing their potential. Further they may also be exposed to physical, emotional and / or sexual abuse. Many a times children are rescued by the authorities and either rehabilitated with their families or placed under institutional care.

There are other groups of children, besides the above mentioned, who the government of India considers to be in need of protection because of their socioeconomic and political circumstances and geographical location. These groups are clearly stated in the report titled 'Child Protection in the Eleventh Five Year Plan (2007- 2012)' by the Ministry of Women and Child Development, Government of India. These include homeless children (pavement dwellers, displaced/evicted, etc.); refugee and migrants children; orphaned or abandoned and destitute children; children whose parents cannot, or are not able to take care of them; street and working children; child beggars; victims of child marriage; trafficked children; child prostitutes; children of prostitutes; children of

prisoners; children affected by conflict / civil strife; children affected by disasters both natural and manmade; children affected by substance abuse, HIV/AIDS and other terminal diseases; disabled children; children belonging to ethnic, religious minorities and other socially marginalized groups; the girl child; children in conflict with law (those who commit crimes); children who are victims of crime. Children from these groups are rescued by government authorities or NGOs and may be placed under institutional care for their daily needs.

Parents are the guardians of children and are expected to care for the needs and wants of their children. But for the above mentioned groups of vulnerable children, parental care is either unavailable or inadequate. There are also instances of parents themselves putting their children at risk when they abuse them, or force them to work, or neglect to see to the needs of their children. So, there are alternate care options, one of them being institutional care, available for children whose parents cannot or are not caring for them.

1.4 Alternative care or Out-of-home care

The reasons for children being without parental care are diverse and the care provided to these children is termed as out-of-home care. Out-of-home care is a term that describes the entire range of alternative care options available for children without parental care, excluding adoption. Among the varied forms of Out-of-home care that are prevalent, some are elucidated below.

Informal care by family members or others: One of the most prevalent forms of alternative care is when the children are placed with a grandparent, extended family

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member, friend or acquaintance by the parents or they have taken up the responsibility themselves when the parents are unable or unavailable to take care of the children. This was the de facto arrangement in India earlier because of its emphasis on joint family setup. But changes in the socio cultural milieu and economic restrictions in some families have reduced the availability of this care option.

Formal foster care by family members or others: A less prevalent form of care, this is a formal version of alternative care where people related or unrelated to the child take up his / her care. It is mostly seen in developed countries and can be for short or long periods. This type of care usually comes about when a formal agency of the government is involved in any decision that is related to the welfare of the child concerned. This type of care is almost nonexistent in India.

Safe houses and other "protective" environments: These facilities are meant for those children who are considered to be at immediate risk of being exploited or require protection such as victims of trafficking. These facilities act as temporary safe environments till a more permanent solution can be reached.

Transit centres: These are temporary residential facilities for children who are separated from their families and are waiting to be reunited with them. They stay at these centres while their family is traced.

Residential facilities: This form of care is commonly known as residential care or institutional care. These are living facilities for groups of children wherein the staff entrusted with the care of the children, that is, the caregivers or caretakers are employed by the organization. These facilities vary in their size and composition. Some facilities

are small and house only a few children resembling a large family setup. On the other hand there are large facilities that house more children (the number of which could run into hundreds) and employ numerous people with special functions relating to the care of the children. This category also includes those facilities meant for immigrant children separated from their parents.

The above mentioned are various alternative care options available. However, in India there has been a growing reliance on residential or institutional care as a means for children who may not have other options available to them. This over reliance is because of the perception among many that institutional care is the best and the only option at hand for vulnerable children.

1.4.1 Institutional care

Better Care Network [BCN] (2009) has defined institutional care as "the short-term or long-term placement of a child into any non family-based care situation". Other commonly used terms such as residential care, group care, and orphanage all denote institutional care. According to this BCN 'a large institution is characterized by having 25 or more children living together in one building. A small institution or children's home refers to a building housing 11 to 24 children'.

Tolfree (2003) defines residential care as "a group living arrangement for children in which care is by remunerated adults who would not be regarded as traditional carers within the wider society". "An institution or residential care home for children is defined as a group living arrangement for more than ten children, without parents or surrogate parents, in which care is provided by a much smaller number of paid adult carers" is how

Browne (2009) defined institutional care. This type of care has also been called as institutional care as the guardianship resides with the institution and the persons regarded as caretakers or caregivers are considered so because of the position they hold in the institution. Browne concurs with this when he states that "residential care implies an organised, routine and impersonal structure to the living arrangements for children (for eg, all children sleep, eat and toilet at the same time) and a professional relationship, rather than parental relationship, between the adults and children". He operationalised the term 'institutionalised children' as "children who have been living in an institution without a parent for more than three months".

Institutional care is where children due to circumstances (such as poverty, abuse, truancy, abandonment, etc.) reside in a facility or institution that is responsible for their day to day care. This institution is under the purview of the government, or a non-governmental organization (NGO). The children are placed in these institutions either because the parents are unable to care for their children or are not available to do so. The reasons for the children being placed in institutional care could be death of the parents; psychological or physical illness of the parents and their subsequent inability to take care of their children; and many other similar situations. The children may be placed for a temporary period or till they attain adulthood, that is, till they turn eighteen.

There could be many reasons for children being placed under residential or institutional care. The children under institutional care include

- Unaccompanied children, orphaned or semi-orphaned by war, natural disasters, accident or death

- Children whose parents feel unable to cope, have abandoned or rejected them, or who are considered to be 'too poor' to look after them

- Children, who have run away from abusive situations, have been found by authorities and placed in residential care

- Children of divorce and family breakdown, where a single parent is unable to cope financially and has little or no support from family or community

- Street children and homeless young people, put or forced into institutions to rescue and protect them from sexual abuse, prostitution, drugs, becoming or being delinquents

- Children of parents who are missing for whatever reason such as natural calamity, wars, etc

- Children of parents with AIDS or other chronic illness and/or mental illness who are too sick or disabled to care for their children

- Children and babies with HIV/AIDS (with or without parents) who are rejected by families and communities

- Children with disabilities whose parents are unable to care for their needs

- Children of incarcerated parents who may or may not be in prison with them

- Children of parents who are substance abusers

- Children with behavioural problems or socially unacceptable behaviour, for example, drug addicts, etc

There are different kinds of institutions such as Observation Homes, where children accused of crime wait for their cases to be heard; Special Homes where juveniles

are committed as per the decision of Juvenile Justice Board and Children's Homes for children whose parents are unable to provide adequate care. The children stay in these homes till they are able to return to their family, are placed in a different facility or till they turn 18.

Ministry of Women and Child Development of Government of India (2007) has given the classification of various kinds of institutional care. The institutions that are present in India fall into four broad categories: (1) formed as part of the juvenile justice system under Juvenile Justice (Care and Protection of Children) Act, 2000, the statutory institutions house children who are in conflict with law and the enquiry is pending; (2) set up under the Juvenile Justice Act of 2000 and directed by the Child Welfare Committees, the institutions to look after the children in need of care and protection (children's homes and shelter homes); (3) the institutions run by civil society organisations and religious groups to look after children in need of care and protection; (4) government- run institutions for vulnerable children belonging to the scheduled castes and tribes. Besides these institutions there are a large number of hostels / schools which are run by the state and many educational institutions that provide residential facility as well. The information on the number of children in any of the states, except for those in statutory institutions, is inadequate.

1.4.2 Institutionalised children- figures from around the world and India

There has been an increase in the number of institutions the world over (Delap, 2011; Browne, 2009), but more specifically in those countries that are undergoing economic and social turmoil. When Greece underwent an economic crisis some years

back, it saw an increase in the number of children being placed under institutional care. Similarly, countries such as many of those in the African continent have found a spurt of the number of orphaned children who are under institutional care because of the AIDS epidemic. Countries in West Asia, East Europe which have seen armed conflict also find children to be in need of care and protection which is often provided in the form of institutional care.

The number of children who are under institutional care has not been accurately estimated as data is not available from many countries. Further, any data that is available is not comparable across nations as their criteria have variations (Delap, 2011). The estimates for institutionalised children around the world range from 2 million (Browne, 2009) to 8 million (Save the Children, 2009 as cited by Dozier, Zeanah, Wallin & Shauffer, 2012). UNICEF also puts the number at 2.2 million but admits that this is an underestimate. Any estimates made till date have all been termed as an underestimate of the actual statistics. Correct factual data is not available from all countries, but a conservative estimate would also put the figure of institutionalized children to be higher than eight million.

When data from individual countries is looked at, these estimates seem underrated. A study (Save the children UK, 2013) conducted with the support of WHO to map the number of children who were less than three years old and were under institutional care found that the total number of institutionalized children across 32 countries of Europe was 23,099 children. The study also found that only four countries had none or less than one per 10,000 children in institutions, 12 countries had institutionalised children between one and ten per 10,000, seven countries had between

11 and 30 children per 10,000 and, alarmingly, eight countries had between 31 and 60 children per 10,000 in institutional care. However, this number is limited to only children under three years. So the total number of children, that is all children under 18 years of age would be greater.

UNICEF TransMONEE (2010) carried out a survey research through 22 countries of Eastern Europe and Central Asia and found that 600,000 children were under institutional care. But variations exist among the countries with some countries having a higher proportion of children under isntituions when compared to others. Most often those countries that do not have a formal foster or community care option turn to institutional care. Another finding was that though the actual number of children in institution decreased, the proportion of children increased because there was decrease in the child population in the region.

National level data about institutional care and number of institutionalised children is difficult to get as many countries may not have felt the need to carry out any nationwide survey specifically looking into this issue. Gathering data for countries with large population such as China and India is an arduous task (Delap, 2011). Information may be obtainable for small areas but complete national data may be unavailable. For example in Karnataka, India, the government, in an effort to implement the Orphanages and Charitable Homes (Control and Supervision) Act made an attempt to register children's homes within the state. More than 1500 institutions applied for license within a span of two years and these homes had been housing 60,000 - 75,000 children. However, not all the institutions would have registered themselves and there would have been additions since then. Keeping this figure as a basis we can extrapolate about the total

number of institutionalised children in India. We will find that if one state in India has this number of institutionalized children then the number of institutionalized children in all the 28 states and 7 union territories of India could come to be higher than the estimate of 4.5 million given by Aangan Trust (2010). Aangan India, an NGO, has worked in children's homes in 107 districts across 10 states of India, and in its annual report of 2009-2010 states that an estimated 4.5 million children in India are under institutional care.

Children without parental care are at a high risk of being abused, exploited and experience neglect. A large number of children placed under institutional care have lost either one or both the parents. These children could be placed in these residential facilities temporarily or permanently. Permanent stay implies stay till the child turns eighteen and is considered an adult legally. The children who are placed for a brief period of time are rehabilitated with their families after ensuring that the family is able to provide adequate care for them. In India, these are known as Children's homes. These homes are meant to serve as a home away from home and provide comprehensive child care facilities to children for ensuring their all-round development. They are built to work towards enhancing the capabilities and skills of children and work with their families with the view of facilitating their reintegration and rehabilitation into mainstream society.

Though institutional care is aimed at providing protection and care to the children this may not always be the case. According to Save the Children, an international NGO that has worked extensively with vulnerable children, "in the vast majority of cases, institutional care involves large numbers of children living in an artificial setting which effectively detaches them, not only from their own immediate and extended family and

from their community of origin, but also from meaningful interaction with the community in which the institution is located. In residential or institutional care at the worst end of the spectrum, there may be violations of children's rights, whether in the form of systematic sexual abuse, exploitation, life-threateningly poor nutrition, hygiene and health care, educational deprivation or strict, regimented and harsh discipline". In many studies children from an institutional setup report their dislike of staying in it.

In many institutions the number of children is far more than the number for whom adequate care can be provided. The caregiver child ratio may be large. Also, the living space may not be able to accommodate all the children present. So conditions like these may add to the risks of institutionalized children. The prevalence of psychological, emotional, cognitive, behavioural problems is higher in institutionalized children than those who have been living with their parents (Sushma, Padmaja & Agarwal, 2014). Research indicates that children who have been living in institutions for long periods of time and from an early age have greater impact on them (Van IJzendoorn, Luijk & Juffer, 2008; Sonuga-Barke, et al., 2008; Nelson, Zeanah, Fox, Marshall, Smyke & Guthrie, 2007).

On the other hand, at the more positive end of the spectrum, the infrastructure in the institution may be better, the quality of education may be excellent and opportunities for future growth may be available. Children from institutional care report that they are grateful for the support available to them in the form these institutions and also of the prospects that are made possible in residential care. In many instances these children may see residential care as the opportunity to keep themselves away from risk (such as drugs, peer pressure, etc.) and try to bring about a positive change in their lives. This may foster

resilience in them. However, because of their inherent nature, some problems are almost inevitably associated with such forms of residential care.

Children come to be in an institution because of certain situations that make them vulnerable and put them at risk. The institution that they are living may provide them with much needed sanctuary. In some cases, these institutions may further increase the child's vulnerability. Despite all this, there are some children who are able to use the resources that are provided through the institutions and plan and work on their self development. These children can be considered as resilient. Future outcomes of these resilient children are brighter in comparison to non resilient children who have grown up under institutional care.

Institutional care is seen by many countries with inadequate resources as a quick and easy way of looking after the increasing number of orphan and abandoned children. The children quite often come to live in the institutions at a very young age but there are older children as well who are placed under institutional care when they are in early adolescence. But most of the children who are institutionalized have been placed before they turned 12 years old (Pasi, Shinde, Kembhavi & Kadam, 2011). Research studies that have looked into the reasons for institutionalization have found abuse by family (Pasi, Shinde, Kembhavi & Kadam, 2011), child labour, abandonment, orphaned, etc. to be the predominant factors. These children have been through a difficult time and encountered many adversities in their young lives.

1.5 Adversities

"Even a minor event in the life of a child is an event of that child's world and thus a

world event." - Gaston Bachelard (1988, ch.1)

Adversity is defined as '*a difficult or unpleasant situation*' by the Oxford dictionary. It has also been defined as '*an unfortunate event or circumstance*'; '*a state of misfortune or affliction*', *a calamitous event';* and many more along similar lines. Wright and Masten (2006) have defined adversity as "environmental conditions that interfere with or threaten the accomplishment of age-appropriate developmental tasks". They further give examples, such as poverty, homelessness, child maltreatment, political or community violence, of adversities in children's lives.

Trauma refers to any experience that has a negative impact on an individual. There are many variations in the definition of trauma as found in various dictionaries and books. But the underlying meaning in all of them is that trauma constitutes of an event that causes severe damage to the individual experiencing it. The damage could be physical wherein the individual suffers injury or shock to the body. This happens in various accidents or violent events. Events can cause psychological damage also and the individual undergoes emotional distress and disruption. Psychological damage can come about due to physical accidents and events as well as emotionally fraught events. Traumatic events affect the individual at the time of incidence and also have a long lasting effect. Some examples of trauma/ traumatic event include - sexual or physical abuse, natural disaster (hurricane, earthquake, flood), car or plane crashes, war,

witnessing a death, murder or suicide, kidnapping, rape, incest, fires, severe neglect, violence in the home, hostage situations, etc.

Looking at the above explanation about adversity and trauma, it appears that trauma or traumatic events can be counted as adversity. However, there may be other events or situations which though are not categorized as trauma can be included as being an adverse event or adversity. So coming from abject poverty, having poor health, physical disability (congenital), etc. can be considered as adversity only and not trauma. So, adversities can be broadly classified as acute trauma, chronic trauma and difficult circumstances. There are many types of adversities that are encountered and the most common ones in children's lives have been described below.

1.5.1 Types of adversities

The term 'Child Abuse' may have different connotations in different cultural milieu and socio-economic situations. A universal definition of child abuse in the Indian context does not exist. However, the WHO definition is taken as the basis for any policy formulation and research. In the following paragraphs those adversities will be defined which have been included in the present study and the adversities that are experienced by children. Though some of these adversities may also be experienced in adulthood, in the present study and context their use is pertaining to children and childhood only.

WHO states that "child maltreatment is the abuse and neglect that occurs to children under 18 years of age and includes all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development or dignity

in the context of a relationship of responsibility, trust or power. Exposure to intimate partner violence is also sometimes included as a form of child maltreatment".

Physical abuse - It has been defined by the Ministry of Women and Child Development (2007) as "the inflicting of physical injury upon a child. Any intentional physical injury or pattern of injuries inflicted or caused by a parent, parent guardian, and/or caregiver". This may include burning, hitting, punching, shaking, kicking, beating or otherwise harming a child. The parent or caretaker may not have intended to hurt the child. It may, however, be the result of over-discipline or physical punishment that is inappropriate to the child's age.

Sexual abuse – "Child sexual abuse is the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent, or that violate the laws or social taboos of society" (Ministry of Women and Child Development, 2007). Child sexual abuse is evidenced by this activity between a child and an adult or another child who by age or development is in a relationship of responsibility, trust or power, the activity being intended to gratify or satisfy the needs of the other person. A general term for sexual abuse refers to a child being forced or tricked into sexual activity by an adult or older child.

Emotional abuse - Emotional abuse includes "the failure to provide a developmentally appropriate, supportive environment, including the availability of a primary attachment figure, so that the child can develop a stable and full range of emotional and social competencies commensurate with her or his personal potentials and

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in the context of the society in which the child dwells. There may also be acts towards the child that cause or have a high probability of causing harm to the child's health or physical, mental, spiritual, moral or social development. It includes acts or the failures to act by parents or caretakers that have caused or could cause, serious behavioural, cognitive, emotional, or mental trauma" (Ministry of Women and Child Development, 2007). It also refers to rejection, intimidation, or humiliation of a child that undermines his/ her sense of self-esteem and well being. These acts must be reasonably within the control of the parent or person in a relationship of responsibility, trust or power. Emotional abuse is also known as verbal abuse, mental abuse, and psychological maltreatment.

Neglect and negligent treatment – **"**Neglect is the failure to provide for the development of the child in all spheres: health, education, emotional development, nutrition, shelter, and safe living conditions, in the context of resources reasonably available to the family or caretakers and causes or has a high probability of causing harm to the child's health or physical, mental, spiritual, moral or social development. This includes the failure to properly supervise and protect children from harm as much as is feasible" (WHO, 2013). Neglect can be physical, educational, or emotional. It is the failure to provide for the child's basic needs.

Child labour - The International Labour Organization defines child labour "as work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development" (ILO, 2013). This includes experiences where the child was engaged in labour, which may have been in a physically hazardous

place, unhygienic conditions and he /she may have had to work for long hours without food and rest. The children engaged in labour are in an exploitative situation and are prevented from developing their potential. These activities are detrimental to the child's physical health, mental health, education, or spiritual, moral or social-emotional development (ILO, 2013).

Domestic disturbance - This category of adversity includes instances where the child has witnessed violence between family members or violent altercations among family members. Intimate partner violence that is violence between the parents of the children also comes under this category. Separation or divorce of parents is also included as it results in disharmonious family life. Disturbances in the family and living environment can have a negative impact on the child's emotional and psychological health. When children are witness to violent acts particularly among family members it may negatively affect their understanding of attachment resulting in distorted or disturbed attachment formation and hamper future social relationships.

Community violence – Incidences of riots, terrorist attacks, or violence in the neighborhood have been on the rise and children are often witness to these events. Even adults are affected by acts of community violence and display post traumatic stress symptoms after the events. The effect of such incidents on children can be greater.

Accidents, illness and death – This dimension includes experiences where the child has witnessed an accident where a family member or a close friend was severely injured and that may or may not have culminated in the victim's death. This category also includes incidents of hospitalization or death of a family member or friend due to severe

illness. Instances where the child himself was involved in an accident or was hospitalized due to illness are also included in this category.

Natural disasters - This category of adversity includes instances where the child was present in a place where any natural disaster has occurred and experienced the natural disaster. These natural disasters include earthquake, tsunami, hurricane, floods, drought, storms, etc.

Other adversities - This includes experiences that cannot be categorized in the above dimensions such as whether the child had a family member who was in conflict with the law, or had to migrate from his/her hometown, saw someone use drugs, or any other experience that was traumatic for the child.

1.5.2 Adversities among children – statistics from various parts of the world and in India

The adversities elucidated above are quite prevalent throughout the world. WHO has carried out worldwide surveys in order to determine the extent of these problems as their impact on the health and growth of individuals has been identified as a cause for concern by policy makers. Though there is relevant data available from many high income countries, data from African, Asian and Latin American countries on child maltreatment is not available or not reliable. It is also difficult to estimate based on existing data as the criteria or definition used differs among the researchers. resulting in varying estimates.

In the Indian scenario there has been dearth of reliable data on the extent, magnitude and trends of abuse among children. At the same time, the rapidly changing socioeconomic and cultural milieu has played a part in children being exposed to various and newer forms of abuse thus increasing their vulnerability. However, a study by the Ministry of Women and Child development, Government of India that was published in 2007, brings to light the high prevalence of abuse in India. This study was carried out across the length and breadth of the country and included 12,447 children. These children belonged to various categories such as children living in family environment, children in schools, children in institutions, children at work and street children. Out of the total respondents 68.99 % children reported having experienced physical abuse. This percentage was 63.74 % for the state of Andhra Pradesh with more boys than girls reporting physical abuse. Also younger children reported higher rates of abuse than older children. Further 89 % reported being physically abuse by their parents, the primary caregivers. Looking at children living in institutions 56.37% reported physical abuse. This rate was 62.16 % among boys and 37.84 % among girls with regard to children living in institutions in Andhra Pradesh.

With regard to sexual abuse the overall prevalence rate was 53.22 % and the rate was 47.08 % among children in institutions. Specifically looking at the figures in Andhra Pradesh which had among the highest percentages of abuse reported, 54.21% of boys and 45.79 % of girls reported sexual abuse. Most of the abusers were known people and around 70% of the children did not report the matter to anyone.

Emotional abuse is also highly prevalent with close to half of the respondents, which is 48.37%, stating that they had experienced it. Among children in institutions the

percentage was highest for boys 57.75 % and it was 42.25% for girls. 47.15 % of children in Andhra Pradesh - 69.70 % boys and 30.30% girls, reported emotional abuse. Keeping in mind the Indian social and cultural setup, girl child neglect was also studied and it was found that more than two out of every three girls faced neglect because of their gender and were discriminated from their brothers by their parents.

Child labour is also highly prevalent in the world. The approximate number of children less than 18 years of age engaged in child labour as per the ILO estimates is 215 million. Scholastic puts this number at 250 million children who are within the age range of 5 to 14 years. Further of these 250 million, 80 million work under extremely hazardous conditions. UNICEF estimates that in developing countries around 150 million children, aged 5-14, are involved in child labour (UNICEF, 2011). This is about 16 per cent of all children in this age group.

The 2001 Census of India has given the number of child laborers in India as 12,666,377 (12.6 million). This figure shows India to have the largest number of children under the age of 14 years who are engaged in child labour. However, other estimates report that the number could be as high as 60 million.

Charlette, Nongkynrih and Gupta (2012) have cited the prevalence of domestic violence to be around 37.2 % as per the National Family Health Survey III carried out in 29 states in the year 2005-2006. The range varies across the states with some states like Bihar having high and other like Himachal Pradesh having lower rates. The authors also reported the physical and psychological hazards, gynecological problems and economic

loss that stems from domestic violence. Another repercussion is on the family members particularly children who witness domestic violence in their household.

Community violence in the form of riots, terrorist attacks have been on the rise in the past few years. The rural and semi-urban areas quite often witness outbreaks of violence between different groups based on their religion, caste, community, etc. Naxalite and Maoist presence has also been on the rise across the country in the past few years. According to PRS legislative research (2011) a legislative research body, 648 people died and 11,278 people were injured in 4030 incidents of communal violence in the country during the period of 2005 to 2009. The economic, social and psychological repercussions of such violent incidents are immense. A number of people are affected by these violent acts and in particular they may have an adverse impact on children

The Uttarakhand flood in June 2013 to the northeast flood in 2012 which displaced around 6.9 million people, there have been many major disasters in the country. Major natural disasters that claim the lives of hundreds and displace thousands of people may be fewer, but minor incidents that affect many and kill a few people also take their toll with cumulative number of people affected being high.

Despite the high prevalence of childhood adversities and the large number of people affected by them there are many who are able to overcome the adverse effects of these events. They are able to cope with these traumatic events and situations and display resilience in the face of adversity.

1.6 Resilience

"Children's talent to endure stems from their ignorance of alternatives."

- Maya Angelou (1969, ch. 17)

Resilience is a term used hand in hand with adversities. Resilience is commonly understood as being able to excel in adversity or being immune to trauma or having faced difficulties and not succumb to it. Resilience as a phenomenon has become the focus of psychological research in the past 50 years. In the 1960s and 1970s, psychologists in the course of their research on children growing up in high risk environments, recognized a group of youngsters distinct from the others. This group of youngsters did not display maladaptive behaviour despite being at risk for it. Garmezy (1984) looked into risk of maladaptation in children of parents diagnosed with schizophrenia. He found that despite the high risk, there were a significant number of children who were able to have good adaptation. These stress resistant children were called 'invulnerable'.

In the 1970s, Emmy Werner (1989) was among the first scientists who used the term resilience. In her studies she assessed a cohort of children from Kauai, Hawaii and found that children coming from the difficult background as found in Kauai most often showed destructive behaviour in later years. However, a section of these children, about a third, did not show the same destructive behaviour as others and hence were called as resilient. These resilient children were different from the non resilient children in not only behavior but also certain traits. The process by which these special children have become resilient was called as 'resilience'.

Resilience has been defined in numerous by the various researchers who have worked on it. Masten (2001) has described resilience as "a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development". This definition of resilience indicates that resilience is seen when people display results that may have been difficult to achieve due to their encountering difficulties or hardships. A more elaborated definition of resilience given by Masten, Best and Garmezy (1990) is as follows: "Resilience is the process of, capacity for, or outcome of successful adaption despite challenging or threatening circumstances". This definition talks of resilience as including all the three aspects of ability to overcome adversity, the process by which adversity has been overcome and the final result after having overcome the adversity.

Some other definitions of resilience talk about only the abilities, or the process involved or the final outcome. For example, Michael Rutter (1985, 1987) refers to resilience as the phenomenon of overcoming stress or adversity. While, Luthar, Cicchetti and Becker (2000) state that, "resilience is predicated on exposure to significant threat or adversity, and on the attainment of good outcomes despite this exposure." The former definition focuses on the process which results in good outcomes, whereas the latter definition focuses on the outcomes after having been exposed to stressors.

Michael Ungar's (2008) definition of resilience emphasizes the capacity within an individual, that is, the factors that help individuals overcome difficulties in life. He states that

"In the context of exposure to significant adversity, whether psychological, environmental, or both, resilience is both the capacity of

individuals to navigate their way to health-sustaining resources, including opportunities to experience feelings of well-being, and a condition of the individual's family, community and culture to provide these health resources and experiences in culturally meaningful ways."

But underlying all these definitions are two basic tenets of resilience. Firstly, there has to be adversity in an individual's life and second he has been able to overcome this adversity and the outcome or end result has been good or may be even excellent.

In the initial years of resilience research, studies were mainly focused on young people living in social or physical environments considered to be high risk. But soon resilience research expanded to include others such as older people, people affected by natural disasters, wars, chronic illness, etc. It was felt that adversity can be encountered at any stage in life and people may show resilient outcomes after these hardships (Cicchetti & Garmezy, 1993). So resilience research expanded to include people of all ages, culture, socioeconomic status who have faced or are now facing various traumatic events or difficulties in life, thus covering a wide spectrum of areas.

In the early years researchers studying resilience focused on trying to identify the personal characteristics of the resilient children (e.g., self-esteem, personality factors, etc.) that made them capable of overcoming their difficult circumstances. The rationale behind this was to ascertain resilient factors with the possibility of encouraging the development of these among all those who are at risk. With increased work in this area it was recognised that factors external to the individual, including social environment, also contribute to thriving despite significant stress. Individuals are not isolated beings and it

was seen that resilient children had managed to bring about changes in their social interactions and this had an additive effect on their resilience. This realization that changes brought by the resilient children resulted in better outcomes shifted the focus to understanding the process underlying resilience. Researchers felt that resilience was a constantly evolving and dynamic process and could not be narrowed down to just delineating resilient factors. At the same time it was understood that these resilient factors were of importance as they were the ones that started the process of resilience. Today researchers are applying a multidisciplinary approach in understanding resilience. A lot of attention is being paid to the applications of resilience in daily lives and how it can be promoted in various sections of the population. These, according to Wright and Masten (2006), are the three waves of resilience research.

During the earlier years of resilience research, focus was to determine the factors that made certain individuals resilient. Researchers compared resilient and non resilient individuals who had encountered similar risk factors and thus were expected to have similar outcomes. The differences among the resilient and non resilient people on certain personality traits, attitudes helped in pinpointing the features in a resilient individual. Researchers have also looked into the contextual effects on developing resilience. They have studied the environmental factors that have elicited or enhanced these 'resilient factors'. These factors are generally referred to as protective factors as they act as buffer against adverse effects and reduce the probability of negative outcomes in individuals considered to be at risk, thus protecting them. Most of the earlier research work was limited to children in high risk environment and hence the factors identified as being relevant to resilience are specific to children. The factors delineated by various

researchers overlap and differ with some factors being reported by many and some reported by few.

Most of the earlier research work was limited to children in high risk environment and hence the factors identified as being relevant to resilience are specific to children. The factors delineated by various researchers overlap and differ with some factors being reported by many and some reported by few. Many researchers (Werner, 1989; Grotberg, 2003) have determined a number of factors that are related to resilience. These can be segregated into categories of personal/ individual factors; interpersonal or family factors and community factors.

After identifying the factors that promote resilience, researchers shifted their attention to understanding how these factors promote resilience. So various models were developed that showed the operations working towards developing resilience. These models included simple systems as well as complex multilevel systems. The systems show the interaction among the various protective factors within the individual, the family and the community.

Bernard (1991) in his work on resilience identified characteristics that helped in predicting outcomes for those children who had been or were still in risk laden environments. These were:

1. A meaningful relationship with at least one caring and supportive adult.
2. The presence of high expectations for the child's future.
3. The chance for meaningful participation.

According to Michael Rutter (1993), the protective factors by themselves do not make a child resilient. It is the way in which they operate that a child becomes resilient or non resilient. He states that the protective factors initiate processes within the child that lead to resilience. These processes create resilience by building a positive self image, reducing the effect of the risk factors and breaking a negative circle and opening up new opportunities for the child.

Linda Winfield (1994) has said in relation to the resilience processes that they are not mutually exclusive and work in conjunction with one another. These processes are interdependent and mutually enhancing. She also states it is not always possible to have resilient children with certain protective factors and the protective processes interacting with one another. Resilience is dynamic in nature. It depends on the protective factors and processes as well as the risk and vulnerabilities present at any given point of time in a child's life. So the child may be resilient at certain moments and non resilient at others, due to circumstances surrounding an even or moment. So it is important to keep in mind a few characteristics of the processes fostering resilience. According to the author these are:

1. The process is long-term and developmental.

2. The process views children with strengths rather than with deficits/risks.

3. The process nurtures protective processes so that children can succeed, by changing systems, structures, and beliefs within schools and communities.

Gunnestad (2006) has also taken into consideration Rutter's belief about protective factors and processes and maintains that resilience is cumulative in nature. He

further states that protective factors accumulate over a period of time beginning from the time of birth through childhood and into youth. The process of resilience is a lifelong and developmental process. Schoon reiterates this in stating that resilience is not a static state and it is manifested by individuals at different points of time and across different groups of behaviour. And to understand the dynamic nature of resilience requires studies that are longitudinal in nature.

Extensive research on resilience has shown that it has immense potential for improving well being and quality of life of individuals through intervention programmes, particularly since its focus is on at risk population. This is because it does not limit itself to reducing psychopathology or other negative outcomes, but tries to direct the individual towards positive outcomes. It focuses on the strengths and assets in an individual and tries to boost them. According to Kate McAlpine (2009), "from the perspective of national development the benefits accrued to society from well functioning adults start as the foundations for resilience (processes and trajectories) are built in childhood and youth. If interventions and processes that build resilience can be identified, then there can be a consequent reduction in dysfunction of health in later years".

1.7 Child health

The concept of health has undergone numerous changes over the years. However, since the all encompassing definition by WHO was formulated there have been fewer alterations for the last few decades to this definition. Earlier health was restricted to its relation with physical infirmity or any biological diseases. However, as knowledge about the factors that have a role in health and that influence health has increased, definition of

health has also transformed. Now besides the absence of illness and diseases, the presence of wellness and well being has also been an integral part of the study of health.

So keeping in mind the illness and wellness factors, WHO came up with a definition of health in 1948,

"Health is a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity."

and till date this is taken as the global standard for health.

This definition though followed and accepted till today has been criticized as being too encompassing and thus not appropriate for measuring health. But an important aspect of this definition is that it looks into health at a multi dimensional level. It thus brings to light the point that health is not determined by any one dimension – such as physical, mental, social or spiritual alone. But there is interaction among all of these and good health cannot be measured through any one dimension but all have to be considered and measured as well.

Another important point to note is that when one is looking at these varied dimensions to define health, then health will differ for children and adults. Children are in the developmental stages and thus undergo numerous changes which are normal for that age group. Similar symptoms may not be considered normal in adults who are fully grown and matured. Potential for future development is another important aspect of child health that is not a part of adult health consideration. Flexibility and adaptability is more

commonly seen in children than adults as they are learning many new behaviours and thus health interventions focusing on children can be more successful.

A report titled Children's Health, the Nation's Wealth, (2004) by 'The Committee on Evaluation of Children's Health: Measures of Risk, Protective, and Promotional Factors for Assessing Child Health in the Community' emphasizes that there are three domains of child health – health conditions, functioning and health potential. These three are distinct but related domains: "*health conditions*, a domain that deals with disorders or illnesses of body systems; *functioning*, which focuses on the manifestations of individual health in daily life; and *health potential*, which captures the development of health assets that indicate positive aspects—competence, capacity, and developmental potential".

The above report also states that "health is a characteristic of a child or group of children, whether current, past, or future". It was recommended by the committee to define children's health as "the extent to which individual children or groups of children are able or enabled to (a) develop and realize their potential, (b) satisfy their needs, and (c) develop the capacities that allow them to interact successfully with their biological, physical, and social environments" (National Research Council and Institute of Medicine, 2004, p.194).

1.7.1 Effect of childhood adversity on health

"We cannot begin to improve the lives of disadvantaged and vulnerable children unless we identify their needs and understand what is happening to them in order to take appropriate action." (Hutton, 2000 cited in Aldgate, 2006, p. 17)

Childhood adversity refers to various traumatic events occurring during childhood that may affect the development of a child and hamper the normal growth progression. Wright and Masten (2006) define adversity as "environmental conditions that interfere with or threaten the accomplishment of age appropriate developmental tasks". If development and growth are affected and hindered it can be inferred that this will have consequences on later health, thus early life adversities have long term consequences on health. Numerous studies have looked into the relationship between adversities experienced in childhood and the long term effect they may have on the health of an individual.

Adverse circumstances may act as a hindrance to good health and development in children and to achieving the full potential of a child. There is a derailment or disruption of the developmental process because of traumatic events and the subsequent effect on a child experiencing these events can either be ameliorating or can further potentiate the effect of the early damage (Aldgate cites Jones & Ramchandani, 2006).These adverse circumstances if present from a very early age may have greater effect then if the circumstances had come later in life. Jones and Ramchandani (as cited by Aldgate, 2006) also state that three factors determine the outcomes after trauma, the child's experiences before the trauma, the timing and duration of the trauma and the subsequent events in the child's life post trauma.

Acute trauma or traumatic events have a huge impact on an individual's life particularly in the case of children. Quite often children have normal functioning and growth till they face a traumatic event. The traumatic event has a considerable impact on the child. The extent of the impact depends upon various factors such as the type of

event, age of the child, the support and help provided to the child in the aftermath of the event to cope better. The effect of chronic or complex trauma on a child is different from the above adversities. The chronic nature of the trauma makes it difficult for the child to attain age appropriate norms of growth and he may display developmental lags.

A major effect of trauma and adversity on children is on their reaction to stress and their ability to cope successfully with it. This sets the basis for future ability to deal with stressors. Besides this, childhood is an important time for learning healthy behaviour. Poor behaviour patterns learned early in life are difficult to break and can result in harmful consequences.

Researchers across the world have looked into the long term effects of early childhood adversity and have found strong links between early adversity and poor health in adulthood. In most of the studies, people who had experienced early childhood adversity were identified based on their retrospective self reports and assessments of their current health status were made. The most common childhood adversities that have been studied include physical abuse, emotional abuse, sexual abuse, maltreatment, emotional neglect, domestic violence, parental mental illness, etc. The range of health problems studied includes physical as well as psychological health problems. The results show that people who had experienced early childhood adversity had increased risk of developing various health problems, irrespective of the type of adversity, gender and age of experience.

One of the largest studies examining the myriad health repercussions of traumatic events experienced in childhood is the Adverse Childhood Experiences study or the ACE

study (Felitti et al., 1998) which included about 17,000 participants. This study elicited information about childhood maltreatment – physical, psychological or sexual abuse, neglect, and household dysfunction – exposure to substance abuse, mental illness, domestic violence, and criminal behaviour in the household. The participants were then assessed on their current health behaviour and health status. Information about health behaviour was elicited to determine the prevalence of risky health behaviour and to find those who were at risk for future health problems due to this unhealthy behaviour. Information about existing health conditions was also obtained.

The results of the study found that almost two-thirds of the study participants had experienced at least one childhood adversity or ACE, and slightly over 20% of the participants reported three or more ACEs. The researchers concluded that adverse childhood exposures had both short-term and long-term outcomes and this consisted of a multitude of health and social problems. The ACE Study used the ACE Score, a count of the total number of Adverse Childhood Experiences were reported by the respondents. It was found that as the number of adverse experiences increased so did the risk for a number of health problems. The list of health problems as found by the ACE study is as follows and it lists the health problems in the order of the risk which increases in a strong and graded fashion : alcoholism and alcohol abuse; Chronic Obstructive Pulmonary Disease (COPD); depression; fetal death; health-related quality of life; illicit drug use; Ischemic Heart Disease (IHD); liver disease; risk for intimate partner violence; multiple sexual partners; Sexually Transmitted Diseases (STDs); smoking; suicide attempts; unintended pregnancies; early initiation of smoking; early initiation of sexual activity and adolescent pregnancy.

Based on the self reports of the participants, it was also seen that those who had reported at least one adverse childhood experience had increased probability of reporting more adverse experiences (Bonomi, Cannon, Anderson, Rivara, & Thompson, 2007). In this regard the researchers suggest that in order to get a comprehensive picture about the effect of childhood adversity, information should be collected about the wide range of adversities experienced by an individual as they tend to co-exist. Further, it was seen that adversities had a cumulative effect with people reporting more adverse childhood experiences showing higher prevalence of health problems when compared to those who reported experiencing only one. With increasing number of exposures to adversities the prevalence and risk for smoking, severe obesity, physical inactivity, depressed mood, and suicide attempts also increased. This increased prevalence and risk was also seen for alcoholism, use of illicit drugs, injection of illicit drugs, and history of a sexually transmitted disease. Moreover they also showed increased risk for health problems such as chronic obstructive pulmonary disease (COPD), health related quality of life, Ischemic heart disease (IHD) and liver disease.

Other studies linking childhood adversity and health have found similar results. Wegman and Stetler (2009), in a meta-analytic review, found that childhood abuse was associated the most strongly with neurological and musculoskeletal problems. This was followed by its association with respiratory, cardiovascular and gastrointestinal disorders.

People who have come from a risk laden background are often found to encounter similar environment even as they grow older and have the opportunity and capability to move away from the risky setting they were originally from. This is indicated by the risk matrix which shows various adversities are highly correlated and tend to co-occur. This

co-occurrence does not end with a child reaching adulthood but continues in his / her later life as well exposing him to more adversities in life. The findings from these studies indicate the need to take proactive measures to improve the well being of those who have faced advertises when they were young. Quality of life is poor among those who have experienced childhood adversities. The long term effect of childhood adversities is a public health concern. The economic loss (Lanier, Jonson-Reid, Stahlschmidt, Drake, & Constantino, 2010) in the form of loss of productivity due to illness and loss of potential human resources is also acknowledged by policymakers and researchers. Direct and indirect costs of childhood adversity have been calculated in monetary value though the loss to human value is incalculable. This brings home the point that childhood adversity needs to be averted. However, as this is not possible in the immediate time, nor can it be completely accomplished, efforts need to be taken to attenuate and diminish the negative effect of adversity on health.

It can be seen that childhood adversity has long term consequences on health of an individual. But studies have not been extensively conducted on consequences of adversity on childhood and adolescence. Though there will be an immediate effect post the adversity and traumatic event, does this effect persist into adolescence is not well established. Many studies have taken a retrospective approach wherein people with poor health are assessed about their childhood experiences and if they had experienced adversities. But there are fewer studies that have followed children who have experienced adversities and traced their pathways to good or poor health. Childhood adversity though is a predictor of health problems; it is not inevitable that all those who encountered adversities will end with same outcomes. Individuals vary in their outcomes and hence if

the early predictors in childhood and adolescence can be determined then this will help in developing interventions that can help prevent future health problems among those who would have had poor health outcomes.

The link between childhood adversity and poor health in adulthood is based on the theory that exposure to traumatic events in childhood affects the normal development and causes social, cognitive and emotional impairment. This further has an impact on the behaviour of the individual particularly health related behaviour. Adoption of health risk behaviour by these individuals ultimately results in diseases and mental health problems.

One of the explanations for this increased health risk has been the concept of allostasis and allostatic load. Allostasis is a physiological mechanism that is initiated when a body undergoes stress. The process of adapting to the changes wrought by the stressor which could be biological or psychosocial in nature is allostasis. Three bodily systems – nervous, endocrine and immune systems are activated and help the body adapt to stress induced change. However, this process by itself can be harmful when it is overused and overloaded for example from constant exposure to stressors. This overload can result in pathophysiology. So initially it may appear that there is no harmful effect of constant stress as the body has adapted to it but there is a delayed effect if the constant exposure to stress is not halted. Hence, allostatic overload is due to cumulative wear and tear resulting from exposure to constant stress or numerous stressors over a period of time. In the case of childhood adversities, what happens is that children who are exposed to childhood adversity may or may not show adaptation in the initial years after the adversity but the overload may be evident through disease and health problems in later years during adolescence and adulthood.

Another possible explanation is that people who have experienced childhood adversities display poor health behaviour. Research indicates that early markers of these later adulthood problems can be seen in childhood as well, with studies showing children who have experienced adversity to also have poor health outcomes. Researchers have looked into the factors that mediate the relationship between early childhood adversities and poor health later in life. These mediators can be broadly classified as emotional, cognitive and behavioural. The links between the childhood experiences and adult health are mediated through negative emotions, irrational thoughts and maladaptive behaviour. However, there are not mutually exclusive as they are interrelated and interdependent.

In a large cohort study in Netherlands by van Harmelen, de Jong, Glashouwer, Spinhoven, Penninx and Elzinga (2010), the researchers found child abuse to be associated with negative automatic self associations. This association was the strongest for childhood emotional maltreatment when compared to childhood physical or sexual abuse. Further, the researchers also reported that these automatic and explicit negative self associations partially mediated the relationship between childhood emotional maltreatment and depression and anxiety in adulthood.

In another study by Wright, Crawford and Castillo (2009) participants reporting emotional abuse and neglect as children were found to display symptoms of anxiety and depression. And these psychological problems were mediated by the individual's negative schemas. These schemas include being vulnerable to harm, self sacrifice and shame. These results indicate that early experiences shape the individual's perception of the self and the world. These perceptions formed as a child lay the groundwork for future experiences as they affect how the individual views stimuli and responds to it. A

perception of the world as harmful and dangerous would make the individual hypersensitive to any stimuli resulting in behaviour that is maladaptive. According to the authors, internalized representations of the self and the world play a very important part in future development of psychopathology and hence early interventions should target these aspects in order to change them from being negative to a more positive and realistic representation.

Besides cognitive symptoms, emotional symptoms have also been analysed to determine whether it mediates the relationship between early life stress and later life dysfunction. McLaughlin and Hatzenbuehler (2009) conducted a short term longitudinal study wherein they assessed symptoms of depression and anxiety at two time points – T1 and T3, and assessed mediators such as emotional dysregulation, emotional expression, rumination and emotional understanding at a time point between T1 and T3. The sample consisted of disadvantaged youth from diverse backgrounds. The findings of the study indicate that the ability to self regulate emotions and maintain emotional balance is important as emotional dysregulation was found to mediate the relationship between stress and both anxiety as well as depression. These results were the same across gender and race. However, an interesting finding was that the mediation effect results were stronger among older adolescents. This could possibly be due to the cognitive maturity of the children. As the children are growing older they have the capability to understand and realize the magnitude of what they have gone undergone. The downside of this could be resultant emotional distress. Similar to other studies the researchers suggest that early interventions are required to prevent future psychological problems. Further based on the

results, interventions that target developing emotional regulation skills may act as a preventive measure.

From the above it can be seen that the pathway to good health from childhood adversity is mediated by cognitive, emotions and behavioural factors in an individual and all these have to be taken care of to ensure good health. People who are able to have good health outcomes despite encountering adversities are termed as resilient. Resilience is defined as "a pattern of positive adaptation in the context of past or present adversity" (Wright & Masten, 2006). Resilient children and adolescents have the cognitive, emotional, behavioural abilities that mediate their path from adversity to good health. So, if the relationship between resilience and health related aspects that lead to good outcomes are established, then these can be promoted among the non resilient individuals. The following paragraphs look into the resilience health association.

1.8 Resilience and health

"We may not be able to prepare the future for our children, but we can at least prepare our children for the future."

— Franklin D. Roosevelt

Resilience and health have been found to be associated with each other by many researchers. Firstly it has been found that on comparing people who are resilient with those who are not resilient there are differences in the health outcomes. People who are resilient have been found to have better health (Makikangas, Kinnunen, & Feldt, 2004). Studies on people with chronic illness who differ in their level of resilience show differences in their ability to cope with their illness; with resilient people better able to

handle the illness related problems and activities. Even looking at resilient and non resilient people in the general population, those who are resilient report better health than others who are not resilient. However, most often studies are limited to psychological or social domains neglecting the biological or physiological aspects of health. This is more evident in studies on children where outcomes attained by resilient children are educational outcomes or social or psychological adaption, but physical health aspects have not been looked into.

Second many factors that are considered to promote resilience have also been found to be related to good health. The aspects of resilience include positive thinking or optimism, positive reappraisal, hope, self regulation skills, self efficacy, sense of meaning, sense of coherence, self-reliance, internal locus of control, sense of humour, self identity, social support, etc. Most of these have been found to be related to health and play a role in promoting good health either by inculcating health promoting behaviour or by inducing positive affect and reducing negative affect.

When factors that promote good health are looked at it can be seen that they include a positive and optimistic outlook in life. Optimism has been known to have positive impact on health (Zanni, 2008; Steptoe, Wright, Kunz-Ebrecht, & Iliffe, 2006; Peterson & Bossio, 2001).Self efficacy and self regulation are also strong determinants of good health as they dictate behaviour that promotes healthy behaviour (Phillips & McAuley, 2014) and avoids risky health behaviour (O'Leary, 1985). The ability to handle stress and regulate the emotional upheaval brought about by the stressors is also important. Besides absence or low negative affect, having positive affect or mood also helps. Having a sense of humour and being able to find something to laugh about in life

induces positive emotions and positive affect. This in turn leads to good physical and psychological health (Pressman & Cohen, 2005). Behaviour that is not harmful and risky but would help in achieving goals would add to the probability of attaining good health.

Sense of coherence has been found to be related to perceived health particularly mental health (Eriksson & Lindstrom, 2006) and thus develops a positive state of subjective health among people. It has been found to be a considerable contributor to good health regardless of age, gender, nationality, ethnicity, etc. In a study on geriatric population positive reappraisal was found to be associated with greater survival, health and subjective well being (Hall, Chipperfield, Hechhausen, & Perry, 2010). Similarly, in another study on older people, sense of coherence was found to have association with physical health (Nygren, Aléx, Jonsén, Gustafson, Norberg, & Lundman, 2005). This study also found correlation between resilience and physical health with higher resilience leading to better health.

But the specific links between how exactly resilience aids in promoting health and how can this pathway be tapped in order to develop interventions that can be used to increase good health outcomes needs to be explored further. Besides ameliorating the negative effect of adversity, resilience also focuses on promoting optimal human functioning. It is not enough that poor health is avoided but efforts have to be put to ensure that humans enjoy good health, well being and have a good quality of life. Resilience with its focus on both should be the basis for future health promoting interventions.

Resilience based interventions that are currently employed world over generally include either a risk reduction approach or a resiliency promotion approach. Thus it can be seen that resilience is a strong determinant in health and a resilience based intervention can promote good health outcomes.

1.9 Rationale of the present study

The extensive research that has been done till date in the area of resilience has focused on various outcomes of being resilient and particularly on academic outcomes but not many health outcomes have been looked into. Though the studies have dealt with numerous other factors, there has been a gap in the research with respect to children's health and health needs. Further, the health needs of the children in institutions in India need to be addressed as these children constitute vulnerable groups and are at high risk for childhood health problems as well as health problems in adulthood.

Though the relationship between health in adulthood and childhood adversity is well established, there is dearth of research about effect of childhood adversity on the health of children. The relationship between health and resilience has also not been looked into in many studies. The proposed study would add to the knowledge base about health, resilience and their association. If early indicators of poor health and good health in those who have encountered early childhood adversities can be ascertained, it would further help in determining measures that can be taken to prevent future health burden.

CHAPTER II
REVIEW OF LITERATURE

REVIEW OF LITERATURE

Outline of the chapter

This chapter gives an overview of the research that has been carried out in resilience, adversity and health of institutionalized children. First, the research on resilience studies in children would be dealt with followed by research on the association between resilience and health including research on hardiness and health. As the present research study is intended towards the vulnerable group of children under institutional care, studies on the effect of institutional care on the health of children will be reviewed. This review will include the biological effect as well as the psychosocial effect of institutionalization on the health of children. The poor health of children in the institutions could be attributed to the deprived environment of the institution. However, another factor that may contribute to the poor health of institutionalized children is adverse experiences that they have encountered before coming under institutional care. Research clearly indicates that early childhood adversity has long term consequences on health and this research would be elucidated in this chapter. The links between childhood adversity and health would be further analysed by looking it not the factors that mediate the relationship. This would also serve the purpose of highlighting the role of resilience in mediating the relationship between adversity and health. Resilience is seen in those who have encountered adversity and still have good health, which indicates that resilience is a mediating factor in the adversity health relationship. So the need and role of resilience in promoting health among those who have encountered adversity would be highlighted.

2.1a Resilience

Research in resilience is dynamic and still exploratory in nature in certain domains as it is felt that not everything about it is well established. Though the concept of resilience has come into being for about 60 years, most of this time has been dedicated to understanding the concept of resilience – its factors and process underlying it. It has been only in recent years that its impact on health related areas has been explored. But again this has been limited to psychological health. As today, the concept of health is considered to be not just the absence of illness but well being in many spheres of life such as physical, emotional, social and spiritual, the focus on only one area of health seems restricted. Resilience studies at present have started to explore physical health but research is still sparse.

Resilience research was born out of risk research, where in children who, having encountered adversities, were at high risk for developing psychopathology, but still managed to display good psychological health. Initial studies on resilience tried to identify these resilient children from among those who were at risk and determine the factors that helped them to become resilient. The initial resilience studies on children tried to delineate the factors that made children resilient. The process underlying resilience in them and the outcomes of these resilient processes were also analysed. Though some light was thrown upon these underlying processes, the focus of resilient outcomes were mainly academic or school success, good social relations and absence of psychopathology. Health related outcomes, particularly in terms of well being, have not been studied in children in relation to resilience. Further most of the current literature on

resilience in children is theoretical and conceptual in nature with dearth of empirical studies.

During the earlier years of resilience research, focus was to determine the factors that made certain individuals resilient. Researchers compared resilient and non resilient children who had encountered similar risk factors and thus were expected to have similar outcomes. The differences among the resilient and non resilient children on certain personality traits, attitudes helped in pinpointing the features in a resilient individual. Researchers have also looked into the contextual effects on developing resilience. They have studied the environmental factors that have elicited or enhanced these 'resilient factors'. These factors are generally referred to as protective factors as they act as buffer against adverse effects and reduce the probability of negative outcomes in individuals considered to be at risk, thus protecting them. Most of the earlier research work was limited to children in high risk environment and hence the factors identified as being relevant to resilience are specific to children. But it has been found that a lot of these also hold true for adults. But again there are some that remain specific to children and some that remain specific to adults.

Emmy Werner (1989) had determined that three characteristics played a role in developing resilient children. First, the child's sociable personality, as this helps him/her in his/her interactions with adults, and thus receive much needed attention and affection from them. A supportive adult is another factor whose presence elicits resilient outcomes in children. Finally, there should be opportunities for achievement available to the child. The areas of achievement could be in school or sports or any other activity. These give the child a sense of pride in self and also provide an opportunity to remove self from the

risk laden environment. Werner (1995) later added more characteristics of resilient children such as problem solving ability, positive reappraisal, autonomy, altruism and sense of meaning

Most of the earlier research work was limited to children in high risk environment and hence the factors identified as being relevant to resilience are specific to children. The factors delineated by various researchers overlap and differ with some factors being reported by many and some reported by few. Many researchers (Werner, 1996; Grotberg, 2003) have determined a number of factors that are related to resilience. These can be segregated into categories of personal/ individual factors; interpersonal or family factors and community factors. The following paragraphs contain some factors that fall within each category.

Personal / Individual factors - Problem solving ability, intelligence, self regulation skills, hope, self efficacy, self belief, altruism, sense of meaning , sense of coherence, self-reliance, internal locus of control, sense of humour, social competence, initiative, self identity, etc.

Interpersonal or Familial factors - Strong connections with an adult (including a parent), Role models, expectation from the child, social support, etc.

Community factors - Schools that provide opportunity for participation and involvement, safety and protection, acceptance, health services, etc.

Resilience has been defined by many and there has not been a clear consensus among the researchers about the exact factors that characterize resilience (Herrman, Stewart, Diaz-Granados, Berger, Jackson, & Yuen, 2011; Luthar, Cicchetti, &Becker,

2000). However, many overlapping factors among the researchers help in classifying resilience and its dominant factors. In the present study, the major factors that have been taken to be involved in resilience are self reliance, self efficacy, resourcefulness, perseverance, social support, optimism, aspirations, self regulation, self esteem, flexibility and sense of humour. These factors have also been found to have independent buffering effects and also improve health.

The occurrence of resilience as reported by various research studies varies with the population surveyed and the method of measurement. So some studies cite the prevalence of resilience as 15% and others as 45 %. In a household survey (N=3581), the prevalence of resilience was 14.5%. This assessment was done a year after the participants had experienced adversities such as functional limitation; bereavement or marital separation; or poverty. In another study to assess resilience in nurses the results showed that there were levels resilience among nurses- 10% of the nurses exhibited low resilience, 47% nurses showed moderate resilience and 43% nurses had high resilience (Koen, Eeden, & Wissing, 2011). This study used Wagnild and Young's Resilience scale to measure the construct of resilience. In a study by Schure, Odden and Goins (2013) on elderly American Indians, among the participants (N=185) 25% reported low resilience, 41% participants had medium resilience, and 34% of the participants showed high resilience. This study used the brief form of the Connor Davidson resilience scale or CD-RISC. The CD-RISC was also used by Connell, Omole, Subramaney and Olorunju (2013) in their study of 54 South African National Servicemen who had been exposed to combat situations. This study found that 94% of the respondents showed normal to above-normal level of resilience.

Studies on resilience in children have also found varying results. Hariharan (1991) found that about 3 % of children from the general population were resilient. This study used sociometric technique to identify resilient children. Werner (1996) tried to identify resilient qualities that enabled young people to be competent despite being in high-risk environments. Through her studies she also found that 72 of the 200 children could be termed as resilient as they were doing very well in their lives and this was despite the risk factors. Thus, it shows that 36% of the children who were at risk were resilient. In the overall sample 10 % of children in the study were resilient irrespective of the risk factors they experienced. British psychiatrist Michael Rutter (1985, 1987, 1993) over a number of years carried out a series of studies that added greatly to research on resilience. These were epidemiological studies conducted in the rural island of Wight and on inner-city London youth. It was found that one fourth or 25 % of the participants or children were resilient. Bernard (1991) stated, "when tracked into adulthood, research worldwide has documented the amazing finding that at least 50% and usually closer to 70% of these 'high-risk' children grow up to be not only successful by societal indicators but confident, competent, and caring" based on an exhaustive review of the literature. In a study by Yates and Grey (2012), the largest group of emancipated youth exhibited a resilient profile despite marked adversity (47%; n = 77). These studies indicate that though the prevalence of resilience in the general population may not be very high, if the target sample is a high risk or vulnerable group then the percentage of resilience does increase with at least a quarter of them being resilient.

Besides prevalence of resilience in different groups of people, researchers have also looked into the benefits of resilience in terms of its influence on various aspects of

an individual's life. This includes achievement, well being, and life satisfaction. Resilience has also been studied in relation to health. However, lack of consensus among researchers with respect to its definition and measurement makes it difficult to compare findings across studies (Davydov, Stewart, Ritchie, & Chaudie, 2010).

2.1b Resilience and health

In a study by Souri and Hasanirad (2011) on 414 students of medicine in Iran, the authors used the Connor-Davidson Resilience (CD- RISC) for measuring resilience. They found that resilience is related to psychological well being. Another study in Iran that used the CD- RISC was by Hosseini and Besharat (2010) who looked into the influence of resilience on sports achievement and mental health in 139 athletes. Significant relations were found between resilience, sports achievement and the two aspects of mental health measured- psychological well being and psychological distress. Resilience explained 41% variance in sports achievement, 32 % variance in psychological well being and 13% variance in psychological distress.

Cohn, Fredrickson, Brown, Mikels and Conway (2009) intended to determine if positive emotions increased life satisfaction by developing resilience. The researchers assessed trait resilience and life satisfaction at the beginning (T_1) and end of a month (T_2) on a sample of university students and the participants' emotions were also assessed on a daily basis in the same month. Positive emotions predicted ego resilience and life satisfaction, and also predicted increases in the same over the course of the month. A change in resilience levels also predicted change in life satisfaction. It was also found that positive emotions partially mediated the relationship between ego resilience at the two

time points T_1 and T_2. Relationship of positive emotions with change in life satisfaction over time is fully mediated by the change in ego resilience scores over time. Based on the results the authors suggest that "ego-resilience generates positive emotions, suggesting an upward spiral in which ego-resilience and positive emotions maintain and build on one another".

Hjemdal, Vogel, Solem, Hagen and Stiles (2011) explored the relationship between frequent psychiatric symptoms and resilience factors in 307 older adolescents. The study found that higher scores on the resilience measure, that is the Resilience scale for Adolescents (READ), predicted lower scores on levels of stress, anxiety, depression and obsessive compulsive symptoms. These results were after controlling for the effect of age and gender.

Liu, Wang and Li (2012) assessed 282 undergraduate students on neuroticism, resilience (Block and Kremen's Ego-Resiliency Scale), life satisfaction, positive and negative affect. They found that resilience influence life satisfaction indirectly through positive affect. Positive affect was a mediator in the resilience – life satisfaction relationship which means that higher levels of resilience led to increased positive affect resulting in greater life satisfaction.

In a study by Karoly and Ruehlman (2006) a resilient sample of chronic pain sufferers was identified through a multistep procedure. Adults suffering from chronic pain were taken as the base from which those who suffered from severe pain but reported less dysfunction and burden were categorized as the resilient sample. A matched group who were non resilient were also identified. These two groups on comparison were found

to differ in their coping styles, pain attitudes and beliefs, catastrophizing tendencies, positive and negative social responses to pain, and health care and medication utilization patterns. Another study (Caltabiano & Caltabiano, 2006) which had 155 older adults with an average age of 74 years was assessed on resilience using the Resilience scale. Other factors that were measured included self efficacy, coping, health, adversity.

Many studies have looked into those who have encountered traumatic events and hence are at risk for developing post traumatic stress symptoms or Post traumatic stress disorder commonly called as PTSD. These studies have compared resilient and non resilient people and found that resilient people did not show post traumatic stress symptoms. This indicated that resilience acted as a buffer against the stressor, that is, the traumatic event. This has been particularly seen in military personnel who have been involved in combat situations (Hammermeister, Pickering, McGraw, & Ohlson, 2012; Hourani, et al., 2012). Soldiers high on resilience and its affiliated factors had better health outcomes such as lower levels of depression, less of alcohol abuse (Bartone, Hystad, Eid and Brevik, 2012); lower PTSD, better adjustment, etc.

Researchers who have carried out studies in military personnel once they have returned from the deployed station have also found support for the benefits of resilience (Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009). Pietrzak, Johnson, Goldstein, Malley and Southwick (2009) assessed 272 American war veterans, who had returned from Afghanistan and Iraq, on levels of resilience, social support, post traumatic stress symptoms and depressive symptoms. Resilience, in particular augmented personal control and positive acceptance of change as well as social support after deployment were found to be negatively related to traumatic stress and depressive symptoms. These results

persisted despite adjustments for demographic characteristics and combat exposure among the sample. The authors suggest that based on the results, interventions can be developed that bolster psychological resilience and post deployment social support among war veterans so that severity of traumatic stress and depressive symptoms may be reduced.

Resilience based intervention to improve adjustment and health of soldiers have also been effective. One such intervention was carried out by Foran, Adler, Mcgurk and Bliese (2012) on 782 soldiers through a randomized controlled trial. There was a significant positive change in mental health outcomes seen during follow up as a result of the resilience training. Also, the perception of the participants regarding the training also had an impact on the outcomes measured six months later at follow up.

Similar results have been found among civilians who have been exposed to combat zones, or people in war affected areas with resilience acting as a buffer against possible mental health problems (Kimhi, Hantman, Goroshit, Eshel, & Zysberg, 2012; Scali, Gandubert, Ritchie, Soulier, Ancelin, & Chaudieu, 2012). Not only combat or battle experiences but other traumatic events that may result in PTSD have also been studied by various researchers in order to see the buffering effect of resilience on the individuals affected (Anderson & Bang, 2012; Bonanno, Kennedy, Galatzer-Levy, Lude, & Elfström, 2012; Mealer, Jones, Newman, McFann, Rothbaum, & Moss, 2012). Resilience and its constituent factors protects people from distress, puts them on the path to recovery and sometimes even growth.

Exploring the association between trauma and resilience further has shown that resilience acts as a mediator between trauma and post trauma recovery with resilience helping in improved recovery. Daniels et al., (2012) conducted a study on 70 acutely traumatized children who were included in the study when they were in the hospital emergency room after trauma. The authors assessed the subjects on the trauma severity and trait resilience at first meeting and subsequently two additional assessments of trauma severity were conducted 5 to 6 weeks post trauma and 3 months post trauma. Resilience score was a significant predictor of posttraumatic recovery in the individual at both time points with higher resilience predicting lower post traumatic severity in the subjects. This study indicated that resilience was mediating the relationship between childhood trauma and post traumatic symptoms with higher resilience resulting in better adjustment. These results are strongly supported by the prospective design employed by the authors in their study. Resilience also has positive impact on post traumatic recovery with better treatment response seen in resilient individuals and resilience scores being able to accurately predict positive treatment response in traumatized subjects (Davidson, Stein, Rothbaum, Pedersen, Szumski, & Baldwin, 2012).

In addition to having a protective effect resilience has also been found to favor positive outcomes with personal growth and improvement seen after having experienced trauma. Bensimon (2012) in his study on the positive and negative outcomes of trauma explored the association of trait resilience with PTSD and post traumatic growth. 500 participants who had been exposed to varying levels of trauma were assessed on their traumatic experiences, resilience, PTSD and post traumatic growth. And it was seen that there was a positive association between resilience and growth and negative association

between resilience and PTSD in line with theoretical expectations. Further, the nature of association of resilience with PTSD, which is pathogenic, and resilience with post traumatic growth, which is salutogenic, also show differences. This further highlights that there is variance in the nature of association of resilience with negative health outcomes and resilience with positive health outcomes. This aspect has to be taken into consideration when carrying out resilience based studies.

Besides acute traumatic events such as war, resilience has also been found to buffer people against the harmful effects of other adversities and even daily life stressors. People encounter many adversities in their lifetimes. The deleterious effects of these adversities result in poor outcomes across many areas of life such as physical health, mental health, social life, academic and occupational areas, spiritual well being. However, resilience has been seen to mediate this relationship between trauma and well being, with people high on resilience having better outcomes.

The association between resilient factors and health has been seen through the review of studies above. However, resilience is not limited to any single factor and comprises of many facets. So the association of resilience with health may be slightly different but in a similar vein as the above associations. But studies that have looked into resilience health association are limited in terms of the sample that they study, the health factors looked into, the measures of resilience. So the sample of the existing studies includes more of older adults than children, adolescents or young or middle aged adults. Empirical research on role of resilience in children's health is not as extensive as studies on adults.

The health aspects studied are psychological health or health aspects limited to certain groups such as chronic pain sufferers, cancer patients, military personnel, etc. Further the measures of resilience vary across studies and this lack of consistency makes it difficult to ascertain the true resilience health association. Some studies use a tool that measures resilience traits and others categorize the sample as resilient based on successful outcomes such as good health, academic or occupational success. But it is apparent that there may be resilience health association with higher resilience leading to better health.

Resilience just cannot be the absence of PTSD or psychiatric problems just as good health is not just the absence of illness (Almedom & Glandon, 2007). Even everyday life stressors that accompany certain professions or work have been looked into to determine the beneficial effects of resilience on a day to day basis. And the results indicate that resilience is not limited to chronic life stressors or acute traumatic events but also has an impact on quality of life during times of relative normalcy.

There are other constructs that are considered to be related to resilience such as competence, hardiness, vulnerability, invincibility, etc. Hardiness is one of them whose relation to health has been extensively studied by many. These studies have been reviewed in the following pages.

2.1c Health and hardiness

Hardiness is a concept put forward by Kobassa (1979) and worked on extensively by Salvatore Maddi (Kobasa, Maddi, & Kahn, 1982). Hardiness is construed as a personality characteristic that comprises of three aspects- challenge, commitment and

control. Challenge refers to a person's view of new events in life not as threatening or disrupting and a source of stress but rather as opportunities that could bring about growth and advancement. People high on commitment are involved and participative in events, work as they find it to be meaningful and having a purpose, this is in contrast to individuals low on commitment, who are withdrawn from the activities due to fear or anxiety, and hence alienated. Lastly, control indicates the belief or feeling of control over his life that an individual has. This leads to feeling of self efficacy and mastery wherein the individual believes he can bring about change or growth through his/her own agency. Hardiness is believed to buffer an individual against stressful events. As stress has been found to cause poor health, in turn, hardiness also buffers an individual from poor health.

Based on the premise that hardiness buffers against stress induced ill health and distress, many researchers have studied the relationship between hardiness and health and the impact of hardiness on health. Hardiness has been found to be negatively associated with perceived stress. Hardy people or people high on hardiness reported lower levels of stress in comparison to those low on hardiness. This has been seen across various samples such as university students (Hystad, Eid, Laberg, Johnsen, & Bartone, 2009; Cress & Lampman, 2007; Dolbier, Soderstrom, & Steinhardt, 2001), university employees (Klag & Bradley, 2004), corporate employees (Lambert, Lambert, & Yamase, 2003; Dolbier, Soderstrom, & Steinhardt, 2001), nurses, adolescents (Shepperd & Kashani, 1991), etc. Hasel, Abdolhoseini and Ganji (2011) carried out an intervention where they gave hardiness training to college students. The experimental group had 27 students and the control group had 29 students. In this study, the students were pretested and the post test evaluation was done at the completion of the six week hardiness

intervention. The researchers found that there was a significant increase in hardiness levels at the end of the training. At the same time there was also a significant decrease in the levels of perceived stress. This clearly establishes that hardiness effects stress levels and by increasing hardiness in people, stress can also be reduced.

Studies that have investigated the hardiness – health relation have established that hardy people have better health than less hardy people. It is able to predict physical and psychological health among people (Lambert, Lambert, Petrini, Li, & Zhang, 2007). Skomorovsky and Sudom (2011) studied hardiness and well being in 200 Canadian military officers undergoing training. This study looked at general hardiness as well as military specific hardiness and its effect on psychological well being. Hardiness predicted life satisfaction with 12.4% of the variance accounted by hardiness. It also predicted health symptoms with 22.1% of the variance in health explained by hardiness. Further greater belief of control and commitment were positively associated with better health. Another study by Fusilier and Manning (2005) explored hardiness levels in 260 corporate employees. In this study the authors determined the levels of stress at one time point and one year later assessed the use of health care services in the past year. This was based on the belief that present stress levels would show effect on health sometime later which would be apparent from the use of health care services, an objective measurement and also immune to memory lapse of the subject. Though stress levels were associated with health care claims, hardiness was not found to be associated with either in this study.

Further studies exploring this link between hardiness and stress have found that hardiness mediates the relationship between stress and health. Hardiness results in low levels of perceived stress which in turn results in lower levels of self reported health

problems (Kenney & Bhattacharjee, 2000; Soderstrom, Dolbier, Leiferman, & Steinhardt, 2000). Also health is perceived to be good by hardy individuals (Nicholas, 1993) leading to higher well being and good health (Smith, Young & Lee, 2004). Hardiness has also been associated with immune function with high hardy individuals showing better immune response under non stressful conditions (Dolbier et al., 2001). Even among people with chronic illness, hardiness results in better adaption in physiological, psychological and psychosocial domains (Brooks, 2003; Webster & Austin, 1999). Thus it can be seen that hardiness, a personality measure closely associated with resilience, has an impact on health of an individual – both physical and psychological. And this occurs by reducing the impact of stressors experienced in life.

Resilience is defined as the ability of an individual to overcome adversities and display good outcomes. Luthar, Cicchetti and Becker (2000) state that, "resilience is predicated on exposure to significant threat or adversity, and on the attainment of good outcomes despite this exposure." Adversities and disadvantages in life may increase the risk for mental and physical health problems but resilient people display even good health despite the increased risk factors. One group of people who are at increased risk for health problems are those who have been under institutional care.

Resilience studies focus on vulnerable groups of people. Among children these include those who have been victims of abuse, orphans, children whose parents have chronic illness, children with HIV infected parents, etc. Resilience studies in children have looked into various outcomes such as high educational / academic achievement, absence of psychopathology, etc. the successful outcomes that are included in resilience studies depend on the specific kind of adversity experienced. Contextual factors

determine resilient outcomes. Also outcomes are also dependent of the sample of study. So in children of parents with schizophrenia absence of psychopathology would be an important outcome, in children from acute poverty academic and occupational achievement holds greater significance. The outcomes in question would largely be determined by the expected outcome of the vulnerable or at risk population if there was no resilience. Thus in institutionalized children the probability of poor health outcomes is high, an improved or good health status which is associated with high levels of resilience becomes important. Subsequent interventions can also be customized keeping in mind these factors.

2.2a Institutional care

Institutional care is where children due to circumstances (such as poverty, abuse, truancy, abandonment, etc.) reside in a facility or institution that is responsible for their day to day care. These institutions are aimed at providing comprehensive child care facilities to children for ensuring their all-round development. In this regard, they work towards enhancing the capabilities and skills of children and also work with their families with the view of facilitating the children's rehabilitation and reintegration into mainstream society (UNICEF, 2012). These institutions could be under the purview of the government, or a non- governmental organization (NGO). The children may be placed for a temporary period or till they attain adulthood, that is, turn eighteen.

Institutionalization of children has been found to be major deterrent in the healthy development of children. Here, the care environment plays a major role. It could help in either ameliorating existing problems or exacerbating the same problems or creating new

ones. Some of the characteristics of institutions that impact the children are elaborated upon in the following paragraphs.

Characteristics of institutional care

Lack of stimulation/ personal space – In a qualitative study by Mullan, McAlister, Rollock and Fitzsimons (2007) in Ireland, children reported their dissatisfaction with the care environment. They informed the researchers about the lack of personal space, lack of stimulation in the institution. Conflict with staff was also reported which could be due to the lack of strong bonds and attachment with the care givers. The children also experienced instability in their lives. All these factors had a negative impact on the children's psychological health.

Recreational activities – Care environment is an important factor in children's emotional and cognitive development. As found in the studies by Mullan, McAlister, Rollock and Fitzsimons (2007) and Attar-Schwartz (2007), providing recreational facilities to the children could result in improved psychosocial functioning and better emotional health.

Increased length of stay - Attar-Schwartz's study (2007) established that there is a decrease in the aggressive behaviour and social problems displayed by children in care as time passed and the duration of their stay in residential care lengthened. A reason for this rest may be stability and constancy of care from the same people and environment. In the Jones, Landsverk and Roberts' study (2007), girls who had stable care and lack of discontinuities were reported to have fewer behavioural problems.

Quality of care giving – Care quality is an important factor in children's development in care (Zeanah et al., 2005; Vorria et al., 200). Quality of caregiving would affect the attachment formed with the caregivers. The quality of relationship with carers further affected emotional and psychological functioning as well as satisfaction with care.

Institutional care is aimed at providing complete care to children. However, research, assessing various components of development, has shown that children in institutional care lag behind their counterparts living with their biological family or those who have been adopted or placed in foster care. These developmental delays are not limited to any one dimension – physical, cognitive, psychological, social, emotional, behavioural, etc. Most children in institutions display deficiencies in one or more of these areas.

2.2b Effects of institutional care on the health of children

The effects of institutionalization are multitude. Researchers and workers in child care agree that institutional care, by its very nature, may not be the optimal care option for children. The characteristics of institutional care as discussed earlier may affect children during their developmental years leading to various deficits. The specific effects of this type of care situation will be elaborated upon in the next pages.

2.2c Biological effects of institutional care on children

Looking into the biological sphere of growth, the aspects or dimensions that are affected include physical growth, attention, language, memory, learning, intelligence, executive functioning, activity, etc. Research on these aspects is summarised in the following paragraphs.

Physical growth - Nutritional intake of children living in institutions is quite often below requirement levels. This results in poor physical growth and development. Nutritional deficits at a crucial stage of growth can have long lasting impact. Measures of growth include weight, height, and ratio of the two. It has been found that children from institutions display lower scores on these measures when compared to their counterparts living with their families or under foster care.

Nelson, Zeanah, Fox, Marshall, Smyke and Guthrie (2007) carried out a randomized control and longitudinal study on 131 institutionalized children and 72 children who had never been institutionalized. The children were under three years, that is, 31 months old at the time of inclusion into the study. They were assessed at 42 and 54 months as well. It was found that children's development was hampered in institutional care. Their development quotient was significantly lower than children who had never been institutionalized. The authors also reported that longer institutional stay hindered growth furthermore. However, intervention in the form of foster care could improve children's development especially when the placement is at a young age.

In 2010, Johnson et al. also found that growth that had been compromised as a result of institutional care could be mitigated through foster care intervention. Effect of foster care was significant when placement is earlier and the quality of care received is high. Not only foster care, adoption also helps children from institutions 'catch-up' to the normal development scores. Vorria et al. (2006) carried out a comparative study of 61 children who had been under institutional care and 39 children who had grown up with two parent families in Greece to see if the effects of institutionalization could be

mitigated. They reported that children in their study who had been adopted after two years of institutional living had recovered physically within two years of their adoption.

Thus, it is apparent that the corrective measures to counteract the negative effects of poor institutional care can be undertaken. However, these steps have to be taken at the earliest to have the greatest impact.

Intelligence - A meta-analysis on the effect of institutionalisation on intelligence in children (van IJzendoorn, Luijk, & Juffer, 2008) showed that there was a 20 points lag in institutionalised children. This finding was consistent when the comparison was with those children living with their parents or children in foster care or even tests norms. Chugani et al. (2001) in their study conducted neuropsychological assessment of children and found that the intellectual functioning of institutionalised children to be lower. They also found that there was no differences in the verbal and non verbal dimensions with both equally developed. This study was a comparative study and included three diverse groups - 10 children adopted from Romania, 17 normal adults and 7 children with medically refractory focal epilepsy

Researchers also looked into the factors associated with low intelligence. In Romania numerous children's institutions had inadequate conditions for growth and development of its residents. This deprivation in institutions has been associated with poor intelligence development. Three factors play an important role in stunted development, one the age at which the child is placed in an institutional setup, duration of deprivation, that is, the time period for which he continues to remain in the institution and lastly if intervention is administered then the age at which this is done.

Van IJzendoorn, Luijk and Juffer (2008) in their meta-analytic study found that age of placement had a significant effect. Earlier placement particularly, before the child turned a year old, resulted in inadequate development of intelligence. This could be because these are the formative years of a child and an environment that does not provide adequate stimulation would hinder the natural intellectual progress.

There are contradictory finding with regard to duration of deprivation or the length of stay of a child in an institution. Van IJzendoorn, Luijk and Juffer (2008) in their meta-analysis found no association between intelligence and duration of stay in institutions. On the other hand, Sonuga-Barke et al. (2008) found that extended stay in institutions led to lowered IQ in children. This finding is supported by Nelson, Zeanah, Fox, Marshall, Smyke and Guthrie (2007). They also calculated that the cost of deprivation was 0.59 IQ points per month. However, in this study the sample included children who were very young. It could be that as the children grow older the developmental lag stabilizes over time. Van IJzendoorn, Luijk and Juffer (2008) in their study also found no influence of the caregiver to child ratio on intelligence scores.

Intervention often is in the form of foster care placement or adoption for children in residential care. As Sonuga-Barke et al. (2008) found in their study that though below par nutritional intake has an effect on growth, psychosocial deprivation also contributes to inadequate neurodevelopment. Bringing a change in the environment and quality of care provided to the child is expected to improvement the child's cognitive functioning. Foster care intervention was found effective in improved intelligence outcomes in a study by Nelson, Zeanah, Fox, Marshall, Smyke and Guthrie (2007). This result corresponds with the results of Johnson et al. (2010), Beckett et al. (2006). Though in the latter's

study it was found that children with marked intellectual impairment continued to display impairment at the time of follow up, 6 years from previous assessment.

In sum, it can be seen that the poor environmental conditions and quality of care influences the intellectual growth of children. This effect is more profound when children are placed at a younger age and this deprivation continues during the early formative years. This effect can, however, be mitigated by placing the child in enriched environment and the earlier the better.

Attention - Attention difficulties have been reported in many studies on institutionalized children that have conducted neuropsychological assessments of children. Deficits in sustaining attention has been stated in many studies (Mclaughlin, Fox, Zeanah, Sheridan, Marshall, & Nelson, 2010; Pollak et al., 2010; Bauer, Hanson, Pierson, Davidson, & Pollak, 2009; Chugani et al., 2001; Kreppner et al., 2001). These attentional deficits arise from physiological, psychological and social deprivation in institutions. Kreppner et al. (2001) also found a positive correlation between length of stay in institutional care and inattention.

Severe forms of deprivation are a stressor that has an impact on the cerebellar neurodevelopment (Bauer et al., 2009; Chugani et al., 2001), particularly in the early years of childhood. Though this change may occur when the child is young it may not be apparent till he grows older. This could be the reason why adolescent children in institutional care display many cognitive behavioural difficulties.

Lack of attention is a symptom of ADHD that is the last to recede if treatment for it is administered in the child. This inattention persists for at least 6 months after adoption

and a year after adoption as found by Kreppner et al. (2001) and Chugani et al. (2001) respectively, in their research work.

The other characteristics of ADHD such as over activity or hyperactivity, impulsivity, above clinical levels, were also seen in institutionalized children (Mclaughlin Fox, Zeanah, Sheridan, Marshall, & Nelson, 2010; Chugani et al., 2001; Krepner et al., 2001). A study by Vanderwert, Marshall, Nelson, Zeanah and Fox (2010) found that it was possible to ameliorate the effects of institutional deprivation on attention. EEG signal are associated with attention in children. In this study, the authors found that intervention in the form of placement in foster care had a greater impact on these EEG signals when the intervention had taken place earlier in the child's life that is before 24 months. The study included comparison of children in Foster Care Group (FCG -53) and those Never been in Instituionalised care Group (NIG - 42) and Care As Usual Group (CAUG -48). Children in institutional setup should be assessed at a young age for signs of attention problems so that appropriate measures can be taken to counteract the effect of deprivation.

Memory - Institutionalization was found to be a predictor of memory deficits. Children from institutions when compared to community based children were found to make more mistakes on memory tasks (Pollak et al., 2010) which included verbal (Chugani et al., 2001), visual (Bos, Fox, Zeanah & Nelson, 2009), spatial working memory (Bauer et al., 2009) assessments. These children were also found to have attention difficulties which could have affected their performance on memory tasks.

As stated earlier that deprivation in early years could have a lasting effect on neural development and cause structural changes in the brain. Tottenham et al. (2010) found changes in the amygdala volume in children who had stayed for long periods in institutions than those who had been never been institutionalized.

Hippocampus is a part of the brain particularly vulnerable to stress. It has been associated with spatial memory. This is in accordance with the study by Bauer et al. (2009). The authors compared 15 male & 16 female postinstitutionalised Romanian children with control group of 16 male and female children matched with the institutionalized group. In the study children from institutions performed poorly on spatial memory tasks when compared to their matched controls. Poor institutional environment may a stress causing factor that would affect the hippocampus. In a study by Mehta et al. (2009) that used a matched control group comparative design with 14 children in the UK adopted from Romania, healthy comparison group consisting of 11 UK-born, non-adopted age- and sex-matched adolescents recruited from local schools, the findings showed that hippocampal volumes were found to be smaller in Romanian children who had been living in institutions and later been adopted to UK, in comparison to local non institutionalized matched group of children.

Amygdala and hippocampus both play a role in memory consolidation. Poor performance on memory tasks by institutionalized children could be because early institutionalization may have had an adverse effect on their brain anatomy as found from the above studies (Tottenham et al., 2010; Mehta et al., 2009).

Learning - Pollak et al. (2010) studied 132 children with in the ages 8 years 0 months to 9 years 11 months in USA and grouped as post insitutionalised, control group adopted early and normal control group in order to examine learning in children from institutions. They found that the children from institutions made more mistakes on the learning tasks than their counterparts who had never been institutionalized. This deficit in learning could be due to poverty of stimulation in the environment as well as the changes in neurological structure of the brain as a result of it.

Executive functioning - Executive functions are higher-level cognitive abilities. They help in carrying out independent goal-directed behavior successfully. Executive function comprises a broad class of mental processes involved in information processing and coordinated actions. It includes a wide array of functions such as planning, flexibility, inhibition, critical evaluation, working memory, divided attention, decision-making, emotional regulation, etc. that are needed for smooth functioning of an individual in the environment and in interpersonal situations.

Bauer et al. (2009) in their study measured the volume of neocortex and found that children from institutions had decreased right superior-posterior cerebellar lobe volume. This area is associated with executive functions. In line with this, the children performed below par on the tasks assessing executive functions. Executive functions performance of institutionalized children was found to be poor in comparison to children who had been in foster care by Bos, Fox, Zeanah and Nelson (2009). This study included participants from the Bucharest Early Intervention Project (BEIP) which consisted of 93 institutionalized and 48 never institutionalized children assessed at age 8.

Impoverished environment and restricted living can have harmful impact on the children in institutional care. As research shows that anatomical changes in the brain is resultant of stress experienced in childhood which can be seen in the deficits in cognitive functioning.

Similarly, in a Greek study by Vorria et al. (2006) four year old children who had spent first two years of their lives in institutional care had lower emotional understanding than their peers who had not been institutionalized. This is in concurrence with findings from studies (Mehta et al., 2009; Tottenham et al., 2010) which showed that amygdala, which is involved in emotional learning, has structural differences in children from institutionalized settings.

Obradovic, Bush, Stamperdahl, Adler and Boyce (2010) in their longitudinal study, research, looked into social status, biological responses to adversity, and child mental and physical health and assessed 338 children (163 females, 175 males) from San Francisco, USA. They found that adversity in family led to poor adaptive functioning in children. Hardships at home led to a consequent change in behaviour and also influenced involvement in school activities. In another study Bos Fox, Zeanah and Nelson (2009) found that children from institutions displayed stereotyped movements. These movements, though seen in the foster care group and noninstitutionalized groups of children as well, declined in them over a period of time.

Lack of impulse control, hyperactivity, and other symptoms of ADHD were seen in children after they had undergone institutional living for some time. Researchers also

(Chugani et al., 2001; McLaughlin et al., 2010) found impairment in executive functioning that included attention, impulsivity, cognitive efficiency, flexibility.

In 2007, Rutter et al. established a relationship between the duration of institutional stay with executive functioning and theory of mind. However, in another study Lawrence, Carlson and Egeland (2006) found that the length of time in care, age of placement and multiple placements were unrelated to behaviour problems that developed in children from institutions. This study assessed 189 children and families, which was made up of three groups: children who experienced foster care, those who were maltreated but remained in the home, and children who had not experienced foster care or maltreatment despite their similarly at-risk demographic characteristics. The differences seen between the two studies could be specific to the sample as other studies have indicated that age of placement is crucial to the development of children. And inadequate development can result in future problems. The effect of quality of care giving was studied by Jaffee (2007) and she found that there was an improvement in cognitive functions as well behavioural outcomes in those children who had experienced an improved and stimulating care giving.

Language - Early biological risks are predictors of poor language development. Children who stay in institutions receive poor quality of care which could affect their neurological development. However, improvement in care giving and receiving sensitive and stimulating care brings about more positive cognitive outcomes (Jaffee, 2007). In the study by Chugani et al. (2001), performances of the sample on both receptive and expressive dimensions of language processing were below expected levels. The children who were assessed at the time of adoption were found to have delayed development of

language after being under institutional care. And though a year after adoption there was improvement, lag in language development persisted in most of the children. Mild language deficits were found even after a few years from adoption. Stereotypies in institutionalized children had an impact on language ability. In those children who after adoption showed no significant change in stereotypies, they had significant impairment in language as well (Bos, Fox, Zeanah, & Nelson, 2009).

From the above research review it is evident that there are many biological effects of institutionalization. At the same time there are many psychological and social effects of institutionalization. These include emotional difficulties, internalizing problems, externalizing problems, difficulties in attachment, behavioural problems, etc. These effects do not remain independent of other problems seen in the children. Psychosocial problems seen in the children may also be exacerbated by the presence of the above mentioned biological problems and vice versa. The psychosocial problems are elucidated below to help understand the manifestations of institutional care on the children.

2.2d Psychosocial effects of institutional care on children

2.2d.1 Attachment

One of the major psychological difficulties seen in children brought up under institutional care is in attachment formation. Researchers have looked into the forms of attachment of children in institutional care and have found that children in institutional care have difficulty forming attachment. Morrison (2008) interviewed six caregivers from an institution in Johannesburg, South Africa. The caregivers shared that lack of exposure

to close, secure relationships in early childhood in the children's lives has an impact on their current and future relationships.

Institutionalization leads to formation of insecure and disinhibited attachment in children (Rutter et al, 2007; Zeanah, Smyke, Koga, Carlson, & the BEIP core group, 2005; Chisholm, 1998). Chisholm (1998) compared 46 children who had spent at least 8 months in a Romanian Orphanage (RO) with a Canadian Born (CB) group of 46 children matched in age and sex to a group of 30 Early Adopted Romanian children (EA) and found the RO group to have more insecure attachment. They also displayed indiscriminately friendly behaviour, a characteristic typical of institutionalized children.

Anxious or withdrawn behaviour is also seen in these children (Morrison, 2008). This behaviour stems from the lack of strong, stable and secure relationships. Children are unsure about their relationship with others around them and this may lead to them being anxious about losing the few relationships that they have. Insecure attachment style was found to be correlated to aggressive behaviour when the child was removed from his home at a younger age by Shechory and Sommerfeld (2007). They looked into the interaction effect of attachment style, age of leaving home in sixty eight Israeli children in the age range of 8 to14 years and found the aforementioned results.

Children from foster care formed secure attachment and had greater coherence in their attachment description, that is, the ability to describe their relationships with people in comparison to institutional care children (Nowacki & Schoelmerich, 2010). This difference in the quality of attachment could be because of the care giving available to them. In foster care there are fewer children and hence the caregiver can devote

individual attention and care to each child. However, at the same time there is lack of strong attachment with foster families for some children as found by Mullan, McAlister, Rollock and Fitzsimons (2007) in a qualitative study. The researchers interviewed 36 children in the age group of 12 to 17 years who were still in foster care and 15 young adults in the age range of 18 to 25 years who had passed out of foster care. Early experiences that did not help form strong attachment and its effect persisted over time with later difficulties as well despite changed environmental conditions.

One major determinant in the attachment formation process is the caregiver and care available to the children. Quality of care giving is a factor in the development of disorganized attachment (Zeanah, Smyke, Koga, Carlson, & the BEIP core group, 2005; Vorria et al., 2006). Vorria et al. (2006) found that sixty six percent of the children in institutions had disorganized attachment when compared to twenty five percent of the control reared by their parents. Also, only twenty four percent of the institutionalized group had secure attachment compared to forty one percent of the control group. The researchers also report that their observations showed that the sensitivity of the care giver with regard to the children was less when compared to natural parents. There was a qualitative difference in the care giving that resulted in the type of attachment formed. Caregiver's experiences in attachment formation affects the attachment with children under their care (Morrison, 2008). Having good attachment with caregivers, particularly in foster care, leads to greater satisfaction with care situation as found by Dunn, Culhane and Taussig (2010). They undertook a mixed methods approach to understand the experiences of 180 children in out of home care who were between 9 to 11 years old.

They found that attachment and satisfaction with caregiver/home interacted with each other to determine the satisfaction of a child with a care situation.

2.2d.2 Emotional problems

Emotional difficulties - Children in institutional care were found to have greater emotional problems (Ford, Vostanis, Meltzer, & Goodman, 2007). Erol, Simsek, and Mu¨nir (2010) found in their study on three hundred and fifty 11 to 18 year old children in institutional care from Turkey that youth had twice the number of emotional problems when in institutional care than community based sample of youth.

Children in institutions tend to be emotionally withdrawn (Zeanah, Smyke, Koga, Carlson, & the BEIP core group, 2005), experience emotional loneliness (Ptacek, Kuzelova, & Celedova, 2011; Han & Choi, 2006) and are resistant to seeking emotional support (Samuels & Pryce, 2008). A risk factor in these children is lack of emotional control or self regulation (Aguilar-Vafaie, Roshani, Hassanabadi, Masoudian, & Afruz, 2011).

Children from poor communities where their caregivers may not be able to provide them with appropriate care are better off when in institutional care. A study by Whetten et al. (2009) found that children in institutions had fewer emotional difficulties as they could focus on their needs rather than their families'.

Expressed positive affect – A study by Ghera et al. (2009) looked into expression of emotions and the effect of intervention on it. They randomly assigned 136 children in institutions to either the foster care group or the institution group and also compared these groups to 72 community based children. This study, part of the Bucharest

Early Intervention Project [BEIP], has found that placement that removes a child from a deprived environment (often seen in institutional care) and puts him/her in a family environment led to an increase in the expression of positive affect in these children. These changes in the emotional expression, were observed in social situations that were designed to be enjoyable for the children so that positive affect is experienced.

In a related study by Fries and Pollak (2004) eighteen Post Institutionalised (PI) adopted children having resided in their adoptive homes for an average of 34.6 months and 21 comparison children residing with their biological parents were compared with each other. It was found that institutionalized children had difficulty in matching expressions to situations involving happiness, sadness and fear. However their performance was up to par with their non institutionalised peers in situations involving anger. This study indicates that there has been insufficient learning on the part of the child with respect to emotional understanding.

Externalizing and internalizing problems - In the study by Erol, Simsek, and Mu¨nir (2010), the researchers found that institutional sample had high internalizing and externalizing symptoms. Children, who had been raised in institutional or foster care and then adopted, were reported to have high levels of externalizing symptoms by their adoptive parents (Wiik et al., 2011). In this study sixty eight 8- to 11 year-old post institutionalized children and two comparison groups, seventy four children internationally adopted from foster care and seventy six non-adopted children, and their parents were included. Also, in the study though parents reported that their children had high internalizing symptoms, this was not corroborated by the children's self report.

Aguilar-Vafaie, Roshani, Hassanabadi, Masoudian and Afruz (2011) studied one hundred and forty adolescent orphan boys and girls who were between the age of eleven and eighteen years. They determined the risk factors and protective factors for internalizing and externalizing problems in their study and found that the risk factors include neighbourhood poverty, which predicted internalizing symptoms; presence of peers who display deviant behaviour also predicted internalizing symptoms and finally gender which was another risk factor in externalizing problems. On the other hand the protective factors included perceived feelings of intimacy and connectedness in female adolescents which was allied with lower internalizing psychopathology and adolescent females' positive attitudes toward school which was related with lower internalizing psychopathology.

It was also found that those children, who had been reported by the caregivers as having high levels of psychosomatic problems, worry, sadness, low self confidence, and fearfulness, reported less internalizing symptoms in their self report measures. This indicates that there may be a discrepancy in the reports of children and their caregiver with regard to the children's internalized emotional difficulties. So while examining internal states such as emotional problems in institutionalized children it is appropriate to consider the child's perception and self report.

2.2d.3 Cognition/ Thought

Attention and thought problems - Institutional care represents greater risk for attention problems and thought problems. Fatalistic thinking, the belief that responsibility for one's life belongs to an external power was found to be risk factor for children in

institutions (Erol, Şimşek, & Mu¨nir, 2010). This could be because there is neglect of one's own responsibility when the individual believes control of his life to lie outside him/herself.

Children who were looked after by local authorities had a higher prevalence of educational and neuro-developmental difficulties than the disadvantaged and non-disadvantaged children who were living in private households (Ford, Vostanis, Meltzer, & Goodman, 2007). Inattention is at increased levels in children in institutional care where the child experiences deprivation and this inattention is associated with future conduct problems, deficient executive functioning and disinhibited attachment (Stevens et al., 2008).

Erol, Şimşek and Mu¨nir (2010) also found that children showed clinically significant thought and attention problems in institutional care (Şimşek, Erol, Oztop, & Ozcan, 2008). In this study (Şimşek, Erol, Oztop, & Ozcan, 2008) the researchers also found that fatalistic beliefs are a risk factor in the emotional and behaviour problems displayed by institutionalised children. These attention problems can be ameliorated by intervention in the form of foster care as found by Ghera et al. (2009), especially after considerable time has elapsed since placement in foster care.

A study by Whetten et al. (2009) showed that children in institutions had high levels of attention, memory, intellectual functioning and motivation as they come from poor communities. So the institutions were able to provide them with a more enriched environment. Also coming from disadvantaged backgrounds, the children would have to shoulder certain responsibilities in their households that would take them away from

focusing on their individual needs. The institutional setup in this instance helps the children in concentrating on their education and personal development.

Coping strategies – Mullan, Mcalister, Rollock and Fitzsimons (2007) in a qualitative study looked into the coping strategies used by children in institutional care. In the study the children reported feeling low and depressed. The methods they used to cope with this was listening to music, going for a walk, watching television or going outside to play. The children also used escape mechanisms such as using drugs, self harm in order to cope with their emotional difficulties.

2.2d.4 Self rated health - In an Australian study by Southwell and Fraser (2010), which assessed 169 young children in care, the young people living in the residential care stated that they were satisfied with the care they were receiving and confirmed that their health and disability needs were being met in the institution. The youngsters felt safe, cared for, supported and well treated in the institutional environment and also by their caregivers.

2.2d.5 Quality of life - Davidson-Arad and Kaznelson (2010) used a factorial design and examined quality of life of 52 at risk children in Israel, half of whom had been placed in out of home care and 26 continued to live with their parents. They assessed the quality of life of children in alternative care and children living with their families as reported by the parents and social workers. There was a discrepancy in the assessments made by the parents and the social workers with the parents' rating being higher than the social workers' in both the groups. Socioeconomic status was a factor in physical and cultural quality of life as assessed by the parents as higher socioeconomic status resulted in better reporting of quality of life by the parents. Another factor of note was the degree of

cooperation between the parents and social worker. Negative association was found between assessment of quality of life and acceptance by the parents of intervention from the social worker. But a shortcoming of the study was lack of children's self report of their quality of life. Children's own rating would have given better understanding of their well being, especially as there was no accord in the parents and social workers rating.

2.2d.6 Mental health problems

Studies on the prevalence of psychological/ psychiatric problems in institutionalized children have been conducted to determine the adverse effects of institutionalization on the mental health of children. Also, children who have been placed in institutional setup have encountered adversities in their personal lives, which could be the reason for their placement in residential homes. Both these factors could contribute to poor mental health in children.

In the study by Erol, Şimşek and Muˈnir (2010), the sample of institutional children was found to have higher rates of problems on scales that were oriented to the DSM. Ford, Vostanis, Metzer and Goodman (2007) carried out a large scale cross sectional in Britain which included children looked after by local authorities (1453), deprived and non deprived children living in private households (10,428). They found high rates of emotional and conduct problems among children in residential placement in Britain. In the same study there were fewer children under the guardianship of local authorities who did not have a psychiatric problem when compared to children who were living in private households. Number of educational and neurodevelopmental problems were also higher in children placed in residential care. Finally, only 6 percent of children

in care had scores in the normal range indicating no problems when compared to 41 percent among the disadvantaged group living with their families and 53 percent of non disadvantaged group living with their families.

The types of disorders across children of various ages differed, with younger children more prone to hyperkinetic, oppositional defiant disorder and separation anxiety disorder and the older children likely to have generalized and other anxiety disorders, post traumatic stress disorder, depression and conduct disorder. Prevalence of psychiatric disorders further had an effect on the prevalence of learning disorders in children. Children, irrespective of whether they are in residential care or living with their families, were at increased risk of having learning problems if they also had a concomitant psychiatric problem. Gender differences were also seen in the prevalence of disorders among children with girls having more anxiety and depression and boys having more aggressive behaviour (Attar-Schwartz, 2007). Psychiatric disorders are functions of age and gender in institutional care.

Prevalence of hyperactivity and conduct problems in out of home care children was also found to be higher than in home care children by Egelund and Lausten (2009) in their study on children in Denmark. They also found that most of the children in out of home care had scores that fell in the pathological range. This study included children in foster or residential care (433), children at risk but living with parents (95) and ordinary children (5242). In Mullan, McAlister, Rollock, and Fitzsimons' study (2007) children in institutional care reported feeling low and depressed. Rutter et al. (2007) in their extensive study on Romanian children determined that severe deprivation in early childhood could be a predictive factor for autism. Vegt, Tieman, van der Ende,

Ferdinand, Verhulst and Tiemeier (2009) also found that children who had been adopted from various institutions and who had faced severe maltreatment had high levels of psychiatric problems. They carried out a time series design with a sample of 1,984 international adoptees that were followed (955 males and 1029 females) in Netherlands.

Children in residential care have difficulty in coping with the myriad problems in their lives. They may use maladaptive coping strategies to deal with the stressors in their lives. One such strategy is use of illicit substances as coping mechanism. As some of these may have had early exposure to these in their households using alcohol and drugs to deal with anxiety, depression, emotional problems, etc. may be an available option for them. Self harm is also be used as a coping strategy by some institutionalized children.

2.2d.7 Behavioural problems

Children in institutional care had increased behavioural problems as found in many studies (Erol, Şimşek, & Mu¨nir, 2008; Şimşek, Erol, Oztop, & Ozcan, 2010; Jones, Landsverk, & Roberts, 2007). A commonly seen behaviour is overly friendly behaviour towards strangers or new people who visit the institutions. This could be because disinhibited attachment manifests as indiscriminate friendly behaviour in children in institutions (Zeanah, Smyke, Koga, Carlson, & the BEIP core group, 2005). However institutional care does not predispose a child to behavioural problems, rather it is the conditions of the institutions that determine the child's behaviour. Attar-Schwartz (2007) carried out a multilevel analysis of children in institutional care. He looked into psychosocial functioning of the child, but as it cannot occur in isolation also looked at the conditions in the institutions, background information of the child and his family, life

before entering institution and current interaction with family. 4420 children aged 6 to 18 years across 57 residential care institutions in Israel were studied. There were differences found in behavioural problems with different institutions. And those institutions that provided better food and those that encouraged recreational activities reported lower levels of behavioural problems.

Continuity of care and behavioural problems may be correlated as seen in the study by Jones, Landsverk and Roberts (2007). 157 children in a residential care facility which included boys and girls were considered in this study. Though it is not evident as to whether more behavioural problems in girls led to disrupted placements and lack of stability or continuity in care, or discontinuous care led to increase in behavior problems.

Children neglected responsibility to their lives in institutional setup. One factor is fatalistic thinking (Erol, Şimşek, & Muˆnir, 2008). Another factor could be that as most often they were not involved in the decision making process, they felt a lack of control on their lives. Living in an institution results in the children surrendering their individuality and having to adhere to the rules and regulations laid down by the institution (Morrison, 2008).

2.2d.8 Social problems

Şimşek, Erol, Oztop and Ozcan, (2010) found that the high level of social problems in institutional children is higher than community based children living with their parents. Quite often children are under institutional care because of family adversities, abuse and neglect. Children who have a history of neglect, abuse are at risk

for behaviour problems. However, this risk can be ameliorated through adoption as long as placement is stable and there are effective parent child interactions.

Early childhood adversity – Early childhood adversity predicted future psychiatric problems in children who had experienced maltreatment before being adopted. This impact of adversity on future mental health remained relatively stable (Vegt, van der Ende, Ferdinand, Verhulst, & Tiemeier, 2009). Early adversities also make children more susceptible to future trauma. So these children can be at increased risk if the institution does not provide care and support (Johansson & Andersson, 2006). Johansson and Andersson (2006) interviewed three boys and three girls in a qualitative case study with an idiographic approach two to three years after leaving a residential care institution. Individual factors play a significant role in how an individual experiences and remembers the stay in an institution. Experiences in the institution are shaped by the children's circumstances earlier, life experiences in general and by the person's way of relating to other people. Youth who have earlier had traumatic experiences are especially vulnerable to new traumas even when they live in residential care.

High levels of loneliness – Han and Choi (2006) compared 97 institutionalized adolescents and 105 counterparts in South Korea and saw that adolescents living in institutions experienced higher levels of loneliness in comparison to their counterparts living with their families. This is influenced by the adolescents' attribution style. Those who attributed their failures in a non self protective way felt lonelier than others.

Surrendering individuality / Task of forming identity – children in institutions have to fall in line with the rules and regulations of the authorities. They also have no say

in their future as decisions related to their lives are made by others. This may result in their giving up their individuality. However, these children have to move out of the care setup. The transition to adulthood then involves forming a self identity which could be a difficult process for the children (Morrison, 2008). Ungar in his work with at risk children and youth has found that difficulty in forming an identity leads to deviant, disordered behaviour.

High parenting stress – Children adopted from Romania displayed poor attachment patterns and indiscriminate friendly behaviour. They showed high problem behaviour resulting in increased parenting stress for their adoptive parents (Chisholm, 1998).

Multiple homes – Simmel (2007) followed 293 adopted foster children in a time series design where the children were followed at two, four and eight years after adoption. Lack of stability that results from residing in multiple homes can be a risk factor for future behavioral problems. And this was a risk factor even after adoption when the child is in a stable home environment. However, this can be ameliorated through adoption where there is stability and effective parent –child interactions.

Placement of children from institutional care to foster care or adoption may be a useful intervention strategy for children with behavioural problems. However, parent's preparedness in dealing with 'difficult' children and the subsequent parent child interaction determines the final outcomes. Parents who are not prepared for the child's behaviour leading to ineffective parent child interaction may have a poor end result (Simmel, 2007).

Samuels and Pryce (2008) in their study, a qualitative interpretive study, interviewed youth in foster care and looked into the transition from care to the outside world. This transition is also marked by transition to adulthood. Lack of parental presence may make youth in care feel responsible for their own lives, making them more independent and hesitant to seek support from others and avoiding dependency. There may be feelings of psychological and emotional disconnect from others stemming from an understanding that their experiences in care make them stand out or different from others. Also disconnection with peers who are family based youth may add to the youth's need for self reliance. The ability to successfully navigate the pathways between dependence and independence is taken as a marker of success.

The deficiencies that are seen in institutionalised children could stem from factors within the child or from the circumstances before placement in the institution or the institutional characteristics themselves. Irrespective of where they stem from, these poor outcomes for the children remain, unless some form of intervention is undertaken to mitigate these developmental lags.

A lot of the problems in children in institutional care emerge from not only their current life in the institution but from their past experiences as well. Besides the institution's environment, early experiences of the children before coming under institutional care also play a role in the poor health displayed by the children. Children are under institutional care because of a multitude of reasons. Most of these reasons are some form of adversity that the child has experienced and that has led to his being placed under institutional care. These include death of either one or both parents, running away from a disturbing home environment, abusive parent, being forced into child labour,

negligent parenting, abandonment by the parents, chronic illness of parents, etc. Experiencing these adverse situations hampers their development and impairs their well being.

Studies have shown that negative early life experiences particularly in early childhood hamper the growth and development of children and prevent them from reaching their optimum potential. The specific health problems seen as a result of childhood adversity are expounded below.

2.3 Childhood adversity and psychological health

For a long lasting, happy and healthy life, the foundations are laid early on in childhood itself. Traumatic events experienced in life can disrupt the progress to well being, though it is possible to recover from them. However, if they occur during childhood then they have a longer lasting effect. This is because this is a period of change and development. Childhood is the time when the building blocks to future health are laid and traumatic events can cause cracks in these foundation stones making the future structure weaker. Adverse experiences of childhood have effect during childhood as well as during adulthood. Adverse experiences could be abuse of any kind, neglect, maltreatment, poor environmental conditions, etc. Though each of these has their own individual effect, there is also a cumulative effect of childhood adversities. The risk factor for developing various health problems increases with an increase in the number of adversities experienced (Stein et al., 2009; Vegt, Tieman, Ende, Ferdinand, Verhulst, & Tiemeier, 2009; Scott et al., 2008). Further there are inter-correlations among different adversities.

Associations between different types of abuse, neglect and maltreatment indicate that there is a possibility for those experiencing one adversity to experience another adversity as well. People who have experienced one kind of abuse are at increased risk for experiencing another kind of adversity. The high percentages of subjects who have experienced two, three or more adversities as seen in umpteen studies indicate this strong co-occurrence of adversities. This co-segregation of adversities puts a heavy burden on the individual for the risks of developing health problems increases with each increase in adversity encountered.

The strong association between early childhood adversities and future health problems has been established by many researchers. This association is not limited to the psychological health but also transverses to physiological health as well. The following paragraphs looks at these associations in detail.

Adverse childhood experiences such as abuse, neglect, maltreatment have been associated with onset of psychosis in later years. Varesee et al. (2012) carried out a meta analytic study of case control, prospective-cohort and cross sectional studies that looked into the association between childhood trauma and psychosis in adulthood. Forty one studies from 1980 up to November 2011 were included on which statistical analysis was carried out. Results showed that experiencing trauma such as physical abuse, emotional abuse, sexual abuse, physical neglect, psychological neglect, parental death and bullying increased the odds of developing psychosis in future with the odds being 2.78 ($p < 0.05$). These odds were high irrespective of the type of design of the study included in the analysis. So for case control studies the odds ratio was 2.72, for population based cross sectional designs it was 2.99 and for prospective studies the odds ratio was 2.75.

Significantly high odds were found even for each individual adversity and psychosis with 2.95 odds ratio for physical abuse, 2.38 for sexual abuse, 3.40 for emotional abuse, 2.90 for physical and psychological neglect and 2.39 for bullying. The odds ratio for bullying became significant with odds ratio of 2.3 ($p < 0.001$) after excluding one study whose outlier effect had rendered the association to be non significant. These results indicate that regardless of the nature of adversity the association remains indicating that trauma in general puts an individual at risk for psychosis. One pertinent finding was that though the studies varied on self report or objective report of assessing adversity the association remained indicating that self reports are as reliable in determining exposure to adversity.

Looking at other psychiatric disorders, childhood adversity has also been found to have strong associations with mood disorders and anxiety disorders. Bipolar disorder is a mood disorder that is not often discussed when looking at possible repercussions of childhood adversity. There are more studies on depression or unipolar disorder than bipolar disorder. Leverich et al. (2002), on comparing people diagnosed with bipolar disorder with and without any history of childhood physical and sexual abuse, found that the former group had an earlier onset, more comorbid conditions, greater cycling frequency of episodes and severe course of illness.

Nanni, Uher and Danese (2012) conducted a meta analysis on the effect of childhood maltreatment such as physical abuse, sexual abuse, emotional abuse, neglect and domestic violence or disturbance on mood disorder, specifically depression and found that the odds of a major depressive episode among those who had encountered childhood maltreatment was greatly increased. The meta analysis included clinical as well as population based sample. From the population based, that is, epidemiological

studies the results showed that the odds of depression doubled (2.27, p< 0.05) in those who had experienced maltreatment as children in comparison to those who had not experienced maltreatment. The clinical studies also found similar results with almost double odds for the occurrence of depression among those who had experienced childhood maltreatment.

The effect of childhood maltreatment is not only seen in late adulthood but can be found earlier in adolescence (Phillips, Hammen, Brennan, Najman, & Bor, 2005) and young adulthood (Jewkes, Dunkle, Nduna, Jama, & Puren, 2010) as well. Jewkes, Dunkle, Nduna, Jama and Puren (2010) assessed 1367 males and 1415 females in the age group of 15 to 26 years from 70 rural villages in South Africa through a cluster randomized control trial. The researchers found that depression was more commonly seen among those women who had experienced emotional neglect and sexual abuse and among those men who had experienced emotional neglect as children. The authors point to the importance of their study in light of the dearth of research in South Africa on effect of adversities on health.

Phillips, Hammen, Brennan, Najman and Bor, (2005) assessed 816 Australian adolescents who had experienced adversities, to determine the early predictors of poor health, that is, comorbid anxiety and depression and each of them specifically. The adversities measured included those that revolved around maternal stressful life events, such as maternal stress, mothers' romantic relationships, etc. as these affect the environment that the child is exposed to. The authors felt that as these two- anxiety and depression co-occur quite often, most studies looking at the association between adversity and health have not been able to demarcate clearly the specific association between

anxiety, depression and various adversities. Results showed that there was only one adversity that was able to predict depression when comparing the group of people with depression and control group. On the other hand more adversities were predictive of anxiety disorder in adolescence. Also experiencing greater number of adversities increased the likelihood of anxiety disorder among the adolescents. The lack of association between depression and adversity could be due to the choice of adversities studied by the authors as they have focused on stressors that are entirely linked to the mother.

Analyzing the specific relation between childhood adversities- such as physical abuse, sexual abuse and parental strain with anxiety, depression and comorbid condition was one of the objectives of Levitan, Rector, Sheldon, and Goering (2003). They found that sexual abuse was associated with comorbid anxiety and depression, parental strain was associated with depression alone. No other relationships were seen among the variables assessed. The authors have suggested, based on the pattern of results that there may be unique relationships between different adversities and different health problems. So certain kind of adversities may result in some specific problems and other adversities may lead to other different problems. The co-occurring nature of adversities and disorders has distorted ability to see the unique individual relationships between adversities and disorders.

Afifi (2012) conducted a review of studies between 2006 and 2010, looking at the association between various Axis I mental disorders and childhood maltreatment. The author states that several types of maltreatment were associated with depression but in particular regular and frequent occurrence of emotional neglect resulted in a 4.5 times

increase in the likelihood of depression (Hovens et al., 2010 cited by Afifi). She also points that co-occurring childhood adversities increase the depressive symptoms reported. Gender differences examined by the author showed that females showed greater effect of childhood maltreatment on depressive symptoms. Further the author iterates that age of experience of maltreatment is important as an early age of experience results in increased likelihood of and increased symptoms of depression.

Many researchers have found gender differences in the association between adversity and depression, with females being found to be at greater risk than males (Wainwright & Surtees, 2002; Hammen, Henry, & Daley, 2000). Research also indicates that experiencing childhood adversity puts the individuals of having an early onset of depression (Wainwright & Surtees, 2002). The pathways linking the two may be many, but one explanation is that childhood adversity decreases the threshold level of individuals to future stressors making them vulnerable to depression (Hammen, Henry, & Daley, 2000). Alciati (2012) suggests that the stress response is altered with adversity resulting in an oversensitive stress response. So, hassles of daily life and any major traumatic event in future could be more perilous to those who have experienced childhood adversity than those who have not. Further, having a previous depressive episode puts them at risk for relapse or recurrence of depressive episodes (Kessler & Magee, 1993). Hence, there are long term direct and indirect effects of childhood adversity on future occurrence of depression.

As studies linking childhood adversity and mental health have mostly focused on mental disorders such as anxiety, mood and behavioural disorders, fewer studies have looked into the effect of childhood adversity on personality disorders. Afifi et al. (2011)

in a nationally representative sample of USA looked into the association between adverse childhood experiences and development of personality disorders. This study had 34,653 adults above 20 years who were asked about experiencing abuse – physical, emotional and sexual, neglect – physical and emotional, household dysfunction- domestic violence, parental mental illness, parental substance use, parental incarceration, parental suicidal attempt or suicide; in their childhood. The current mental health of the respondents was assessed as well. It was found that the odds of having a cluster A, B or C personality disorder increased if the individual had experienced childhood adversity. However, when these associations were looked into in detail the associations varied. Among cluster A personality disorder Schizotypal had the strongest association with almost all the adversities measured in this study except parental suicide and parental mental illness. Paranoid personality disorder was found to be associated with physical and emotional abuse. Schizoid personality disorder was found to have increased odds if the individual had experienced emotional neglect. Among cluster B personality disorder any childhood adversity increased the odds of three of the cluster B personality disorders – narcissistic, antisocial and borderline barring a few exceptions such as narcissitc and emotional neglect, antisocial and parental mental illness and those with parental suicide. Histrionic personality disorder was associated with abuse and adversity in general but not with any of the adversities specifically. Even with regard to cluster C personality disorder, there were only a few associations. Physical neglect increased the odds for obsessive compulsive personality disorder, emotional neglect for avoidant personality disorder.

Similar results have also been found in a China based study (Zhang, Chow, Wang, Dai, & Xiao, 2012). This study was based on 986 patients with a Personality Disorder

who were selected from among those who had come to a counseling centre. The prevalence of childhood adversities among people with personality disorders was assessed and associations among the two were also determined.

Childhood adversities have also been linked to psychosocial or behavioural disorders such as conduct disorder, antisocial behaviour, etc. Afifi (2012) reviewed conduct disorder among those who had experienced abuse and maltreatment and found that the odds of conduct disorders increased by atleast 2.5 times. The author also found that antisocial behaviour was also at increased odds as a result of abuse. Childhood physical abuse is also associated with anger problems (Springer, Sheridan, Kuo, & Carnes, 2007) and aggressive and violent behaviour.

Suicidal ideation and attempts is also a negative consequence of abuse. Childhood maltreatment has been found to be associated with suicidal ideation and attempts. Further physical abuse and sexual abuse had the greatest impact when compared to other adversities such as domestic violence, neglect, parental death, parental divorce, etc. Also the odds of this suicidal ideation and attempts may manifest early in life, that is, childhood and adolescence than later in life.

Risky health behaviour is often seen in those who have experienced childhood adversities and studies show that it is the experiencing of adversities such as abuse, neglect that results in such behaviour. Risky health behaviour include smoking, alcohol use, substance or drug use, poor eating habits that may result in obesity, risky sexual behaviour. Jewkes, Dunkle, Nduna, Jama and Puren (2010) found that incident HIV infections were more common among those women who had experienced emotional

abuse, sexual abuse and physical abuse as children. Emotional neglect among was found to be associated with suicidality and alcohol abuse whereas in men emotional neglect was associated with drug use. Sexual abuse was found to be associated with alcohol abuse in both men and women. Jasinski, Williams and Siegel (2000) considered 113 African American women who had been victims of sexual abuse as children and looked into their drinking behaviour. The researchers found that more than the severity or force of the incidents it is frequency and chronicity of abuse that has greater impact on drinking behaviour. There is greater heavy alcohol use and binge drinking among them even after controlling for parental drinking behaviour.

Simpson and Miller (2002) reviewed the relationship between childhood physical and sexual abuse and substance use problems. They found that the rates of childhood abuse were elevated among those seen to have substance use problems. Similarly, substance use problems were significantly higher among those who had experienced physical or sexual abuse as children when compared to those who had no such experiences. Further, this relationship could be mediated by the presence of psychological problems such as depressive and anxiety disorders.

Data from a household survey in South Africa that included 11,904 youth in the age range of 15 to 24 years was analysed to see the differences in alcohol and substance use between orphans and non-orphans. The authors (Meghdadpour, Curtis, Pettifor, & MacPhail, 2012) felt that increasing drug use could be leading to increasing HIV infection among this age group. When compared to the non orphans, youth who were orphans or had lost their father were more likely to have consumed alcohol. Specifically females who had lost their father were more likely to use drugs as found by the results of

the study. Fergusson and Lynskey (1996) carried out a 16 year longitudinal study birth cohort on 953 children and found that alcohol use was associated with risky sexual behaviour as well with early onset of sexual activity, multiple sexual partners and unprotected sex.

Thomas, Hyponnen and Power (2008) conducted a prospective longitudinal study of 9310 participants who were members of the 1958 British birth cohort study and assessed the participants at age 45. They found that the risk of obesity increased by 20 to 50 percent among those who had experienced any of the adversities which included physical abuse, verbal abuse, witnessing abuse, humiliation, neglect, physical punishment, etc.

Johnson, Cohen, Kasen and Brook (2002) conducted a community based prospective study in order to see the association between childhood adversities and problems with eating and weight during adolescence and early adulthood. The sample of 782 mothers and their children were assessed at the time of the offspring's childhood, adolescence and early adulthood. The risk for eating disorders, and problems with weight increased with experience of childhood adversities. This was found after controlling for age, child temperament, other co occurring adversities, etc.

Overstreet, Salloum, Burch and West (2011) reviewed the health outcomes related to natural disasters. They highlight the widespread destruction, economic loss, and death, caused by natural disasters and how the people, particularly children, exposed to it have to cope with the devastation in its aftermath. Psychological distress is seen among victims of disasters (Freedy, Saladin, Kilpatrick, Resnick, & Saunders, 1994). There is increased

risk for negative mental health outcomes such as post traumatic stress and depression (Overstreet, Salloum, Burch, & West, 2011; Catani, Jacob, Schauer, Kohila, & Neuner, 2008).

It is evident from the studies presented that childhood adversities effects health. The specific relationship between different adversities and different health conditions may vary. As the above research clearly establishes, there is an impact of childhood adversities on the health of those who experience it. However, the process behind this association is not as clearly established. Though there are some studies that have looked into the factors that mediate the relationship between adversity and health, they are fewer in number. These will be elaborated upon next.

2.4 Mediators between adversity and health

When compared to the large body of research work that has established the early childhood adversity and health association, there is a significant dearth of research on the mechanism underlying this association and the possible mediators between them (Reed, Fazel, Jones, Panter-Brick, & Stein, 2012; Leserman, 2005). There may be multiple pathways that could work individually or interact with one another to result in the different health problems manifested in those who have encountered adversities. In the following paragraphs, the cognitive, emotional, social and behavioural mediators in this relation will be examined.

Springer (2009) tested a multipathway model to determine how childhood physical abuse can have an impact on health years later. In this study, Springer assessed four life course pathways that may explain the association between abuse and health

better. These four pathways include health behaviours, cognition, mental health and social relations. A sample of 2892 people who had been part of the Wisconsin Longitudinal study (WLS) from USA was included based on availability of complete data and hence data had been collected at multiple time points. Health outcomes measured included 17 medical conditions such as allergies, anemia, arthritis/rheumatism, asthma, serious back trouble, bronchitis/emphysema, cancer, circulation problems, colitis, diabetes, heart trouble, high blood pressure, high cholesterol, kidney/bladder problems, chronic liver trouble, multiple sclerosis, and ulcer. The mediators measured were BMI and smoking habits for health behaviour; midlife cognitive ability and educational attainment for cognition; depressive, anxiety and anger symptoms for mental health; marital closeness, social support, emotional support and social activities for social relations. It was seen that early childhood trauma and midlife physical health are linked to each other by way of health behaviors and mental health. Looking at specific health behaviours acting as mediators between childhood trauma and the array of health outcomes, smoking was an important pathway connecting childhood abuse with bronchitis. Mental health was an important mediator in ulcer diagnosis. Further, there was an important role of BMI, smoking and mental health for overall physical health. On the other hand cognition and positive midlife social relationships were not found to be significant mediators for any of the health outcome measured. According to the authors, health behaviors and mental health status are indicative of the coping mechanisms in the participants and these findings suggest that use of adaptive or maladaptive coping methods by the abuse survivors dictate midlife health problems.

But in another study that assessed different cognitive abilities from those in the above study, it was seen that they may play a mediating role in those who have experienced difficulties to have better health. Chen, Strunk, Trethewey, Schreier, Maharaj and Miller (2011) assessed 121 children between the ages of 9 to 18 years who had been diagnosed with asthma and they found that children from low socioeconomic status who engaged in shift and persist strategies, that is, "dealing with stressors by reframing them more positively while at the same time persisting in optimistic thoughts about the future", had better health in terms of better asthma profiles. However, the same results were not seen in the asthmatic children who were form a higher socioeconomic status.

Childhood adversity has been linked to personality disorders in adulthood as well and Chiesa and Fonagy (2014) examined how Reflective Function (RF) was a mediator between them. 234 individuals divided into two groups, 112 with clinical personality disorder and 122 demographically matched non psychiatric group, were included in the study. It was seen that low levels of reflective function was predicted by childhood adversity, and in turn predicted personality disorder later in life. Mediation analyses also confirmed the mediating role of reflective function between childhood adversity and personality disorder and childhood adversity and psychiatric distress.

Cognitive abilities that help in dealing with the stressors play a more dominant role and act as mediators. Further age appropriate cognitive abilities are needed to deal with stressors and this is vital during the growing years when compared to adulthood when all the cognitive development has taken place. Different cognitive abilities are required at different ages and hence reflective function is more suitable in older adults

than young children. At the same time some cognitive abilities such as flexibility and positive thinking may fit all age groups.

In another intervention based study on 638 children aged 9 to 12 years, with 302 in control group and the remaining in the intervention group, it was seen that perfectionism and avoidant coping acted as mediator in the changed pre-intervention and post-intervention scores on the levels of anxiety in the children (Essau, Conradt, Sasagawa, & Ollendick, 2012). Fishbein, Novak, Krebs, Warner and Hammond, 2011 found that the effect of trauma on children in the form depression is established early in childhood itself and this effect persists over a period of time. So when the children are older and exposed to stressors and also have access to drugs, the risk of initiation into drug use increases. Use of alcohol to cope with psychological distress was also seen by Copeland, Magnusson, Goransson and Heilig (2011). They found that psychiatric disorders – anxiety, anorexia nervosa and bulimia mediated the relationship between childhood sexual abuse and alcohol dependence through a case-control design.

Goldstein, Flett and Wekerle (2010) wanted to examine the mechanism underlying the relationship between childhood maltreatment and alcohol use and drinking problems. 218 college students participated in the study whose experiences of childhood maltreatment, drinking habits and drinking motives were measured. Drinking motives included assessment of social, coping with anxiety, coping with depression, enhancement, and conformity motives. It could be seen from the findings that among men the internal motives - coping-depression, coping-anxiety and enhancement motives mediated the effect of childhood abuse on alcohol problems whereas for women coping-depression and coping-anxiety significantly mediated the effect of childhood abuse on

alcohol consequences. Drinking to cope with depression was the primary mediator. To elaborate further on this, someone who had more experiences of childhood abuse used drinking as means of coping with depression, hence higher childhood abuse experiences was related to increased drinking, and this in turn led to greater number of alcohol-related consequences. The authors suggest based on the results that emotional regulation is important among those who have experienced abuse. Among men the desire to feel good – enhancement motive had a greater role than coping with anxiety and depression. Also maladaptive coping strategies were used to deal with emotional problems resulting in poor health outcomes, that is, drinking problems.

Increased ability to regulate emotions - positive and negative, would be beneficial and lead to decreased alcohol use as emotions appear to be an important reason for drinking among the participants in the above study. Difficulties and hardships evoke many emotions in an individual and an ability to manage them is of great use to all. The ability to manage emotions, that is, emotional intelligence plays a moderating role in the adversity health association, but this role is specific to the type of adversities (Davis & Humphrey, 2012). High levels of trait Emotional Intelligence in the adolescents was found to attenuate the stressor–mental health relations, while high levels of ability Emotional Intelligence amplified the associations between them. Besides emotional regulation, managing thoughts and behaviour also helps in dealing with hardships. Self regulation was seen to be an important mediator with poor self-regulation being found to be associated with decreased academic competence in a group of girls under foster care (Pears, Kim, & Leve, 2012).

Another study (Terranova, Boxer, & Morris, 2009) has found that early life stressors put people at risk for future stressors as well. In a study on children who had been affected by hurricane Katrina in the USA, those children who had been victim of bullying were more vulnerable to the effect of the disaster and showed higher levels of PTSD symptoms. An interrupted time series design was used in the study and the final sample of children included 152 children, with a mean of 11.5 years and a little more than half females. As expected being exposed to the hurricane did predict PTSD symptoms in the children but the course of the problems and recovery was determined by other factors such as emotional factors and children's coping styles which predicted severity of the symptoms reported, negative coping strengthened the link between exposure and PTSD symptoms and regulatory abilities weakened the link between hurricane exposure and the course of PTSD symptoms. So it can be seen that how an individual copes with a stressor and his ability to regulate emotions brought about by a stressor determine health and well being.

The role of allostasis in this context also seems relevant as it has been found that continued exposure to stress in those who have experienced childhood adversities results in mental health problems such as depression (Hazel, Hammen, Brennan, & Najman, 2008). Though an adversity and traumatic event causes distress to an individual, it is his / her own reactions to the adversity that results in significant mental health problems. Graham-Bermann, Gruber, Howell and Girz (2009) in their study on children who had been exposed to domestic violence found through cluster analysis four profiles of children and it was seen that among the depressed profile though the children had

witnessed less violence they showed greater distress. The children with a depressed profile had greater fears and worries about the safety of their mothers.

Social support has been a known buffer in health and well being. Many studies have shown that social support, attachment and quality care in children's lives acts as protective factor. Bifulco, Kwon, Jacobs, Moran, Bunn and Beer (2006) examined the potentially mediating role of adult attachment style in the association between adverse childhood experience and adult psychiatric disorder. 154 high risk community based women were part of the study. It was seen that strong insecure attachment style predicted depression and anxiety in the women. Fearful attachment style was associated with depression and social phobia and an angry-dismissive attachment style was related to Generalized Anxiety Disorder. Further, it was seen that a fearful and angry-dismissive attachment style partially mediated the association between childhood adversity and depression or anxiety.

Higher caregiver support was associated with increased academic competence and lower caregiver support was associated with higher rates of aggression against peers in a foster care group of girls (Pears, Kim, & Leve, 2012). The importance of youth caregiver relationship was seen in another group of 122 12 to 15 years old in out of home care. The risk for depression and substance use decreased with an increase in the perceived quality of the relationship.

Psychosocial resources do mediate the long term effects of childhood physical abuse on health (Shaw & Krause, 2002). Social support does have a buffering role on health and this appears to be true for adversity related health as well. Hill, Kaplan, French

and Johnson (2010) found that the effect of sexual assault before the age of 18 on mental health was partially mediated by instrumental support and self esteem, but not by emotional support. Further this buffering effect of the psychological resources on the psychological impact of victimization attenuates with an increase in the resources available.

Resilience as a possible mediating factor was studied by Cleverley and Kidd (2011) who assessed 47 homeless and street involved youth on various measures such as resilience, self esteem, psychological distress and suicidality. Youth with high perceived resilience were also low on psychological distress and suicidal ideation. But it was also seen that as the time spent on the streets increased there was a decrease in resilience levels and an increase in psychological distress levels. Childhood maltreatment was also seen to result in interpersonal diffciutlites in adolescence which in turn results in risk for suicide (Johnson, Cohen, Gould, Kasen, Brown, & Brook, 2002).

Internal states of being affect external behaviour. In a large scale study in Canada, Chartier, Walker and Naimark (2007) found that health risk behaviors and especially mental health problems are partial mediators of the relationship between childhood abuse and adult health. 8116 respondents in the age group of 15 to 64 years who were representative sample of the population were included in the study. The authors intended to see the mediating role of health risk behaviours and mental health in the relationship between childhood abuse and adult health. Results analyzed through mediation analyses showed that the relationship between abuse and health was partially mediated by health risk behaviours such smoking, drinking, risky sexual behaviours, poor eating habits, etc. Mental health problems also played a mediating role in the abuse health relationship.

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Poor health behaviour has also been associated with early childhood adversities and this behaviour is associated with many health problems such as obesity. D'Argenio, Mazzi, Pecchioli, Lorenzo, Siracusano and Troisi (2009) wanted to examine the means through which early life trauma results in an increased risk of developing obesity in later life and the role of psychological dysfunction in this process. Three groups of participants in Italy, which consisted of a healthy and normal weight control (n =50), an obese group with no history of psychiatric disorder (n=65) and an obese group with a current diagnosis of psychiatric disorder (n=85), were assessed on traumatic experiences as well as adult attachment style and compared on these dimensions. First, the study found that all kinds of early life stress increases the risk of obesity. And the second that though psychological dysfunction is present in the childhood stress- health link, it is not the only factor that plays a role, and there are other possible mediators in the relationship.

Thus, from the above studies it is apparent that there are multiple mediators in the adversity, resilience, health relationship. But the extent of research on them is limited. So, the clear pathways that lead to poor health in those who have experienced adversities are ambiguous. The pathway to health from childhood adversity could be based on cognitive, emotional or behavioural aspects. The degree to which an individual's health is influenced by one of the above aspects or is there an interactive effect of all three aspects is also not clearly established.

The association between resilience and health has also been found through research. Resilience has been seen to include factors such as flexibility, social support, optimism, positive reappraisal, self regulation, etc. These factors have been seen as mediating factors in the studies reviewed above. Since, resilience includes all these

factors, perhaps the main influencing factor between adversity and health is resilience related and the role of resilience needs to be explored further.

Knowledge about the process that leads to poor health or, in the case of resilient individuals, good health after having encountered adversities would be very useful in developing interventions. Interventions that can promote good health in those who have encountered adversities would greatly benefit not only the individual but also the community. Thus, increased knowledge about the contribution of resilience towards health would be beneficial.

Based on the extensive review of literature it can be seen that there are certain gaps. Most of this research has been based in countries other than India and there are hardly any studies that have been carried out that talk about the Indian scenario. Dearth of studies on resilience-health association and specifically in children is also another gap in the literature. The contribution of advresity and resilience in children's health has also not been explored by many researchers. Keeping in mind the presented review of studies, this study has been designed. The research questions that have been formed are based on this review and are as follows.

2.5 Research questions

1. What are the levels of resilience, adversities and their types, health status experienced by institutionalised children?
2. Does resilience play a role in the health of institutionalised children?
3. Is there a role of adversity in the health of institutionalised children?

4. Will resilience and adversity interact with each other to influence the health of institutionalised children?

5. Do resilience, level of adversity and impact of adversity predict health of institutionalised children?

The answers for the above research questions will be sought through this study and in order to do so the objectives of the study are as follows.

2.6 Objectives

1. To explore the levels of resilience, adversities and their types, and health status experienced by institutionalised children.

2. To analyze the role of resilience and adversity in the health of institutionalised children.

3. To find out if resilience, level of adversity and impact of adversity predict health of institutionalised children.

The hypotheses of the study have been formulated and are stated below.

2.7 Hypotheses

1. There will be a positive impact of resilience on health and its domains among institutionalised children.

2. There will be a negative effect of level of adversities in health and its domains among institutionalised children.

3. Resilience and adversity will interact with each other to influence the health of institutionalised children.

4. Resilience will contribute positively towards health of institutionalised children.

5. Level of adversity, past impact of adversity and present impact of adversity will predict health of institutionalised children.

The variables measured in the present study have been operationalised and defined in order to assist in measurement of the said variables. The definitions are given below.

2.8 Operational definitions

Resilience- Resilience is the ability of an individual to overcome adversity. Resilience is a process which involves the qualities of a person such as self reliance, self efficacy, self regulation, self esteem, problem solving ability, resourcefulness, optimism, perseverance, aspirations, attachment with at least a single individual, a sense of belonging and sense of humour, which enable the person to adapt by being flexible and by utilizing the available resources in the face of adversity to overcome it.

Adversity- Adversity refers to acute traumatic events, chronic traumatic situations and difficult circumstances experienced by an individual that may have a negative impact on him physically or psychologically or economically. The adversities to be assessed include physical abuse, emotional abuse, sexual abuse, neglect, child labour, domestic disturbance, natural disasters, accidents and illness, community violence and other adverse experiences.

- Low adversity - three or less than three adversities
- High adversity - more than three adversities

Child - The United Nations Convention on the Rights of the Child [UNCRC] (UNICEF, 1989) states "a child means every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier". The Juvenile Justice (Care

and Protection of Children) Act (2000) defines juvenile or child as "a person who has not completed eighteenth year of age". Thus, in the present study the criterion for defining a child was 'a person who is below 18 years of age'.

Child Health - Child health refers to a state of physical, mental, intellectual, social and emotional well-being and not merely the absence of disease or infirmity. The research instrument used in the present study measures child health as being composed of various dimensions that include Comfort- physical comfort, emotional comfort and negative stress reactions; Energy- physical activity and vitality; Resilience- peer connectedness, family connectedness, teacher connectedness and active coping; Risk avoidance- aggression/bullying and peer hostility/bullying victim; Subjective Well being- life satisfaction, self-worth and body image; Achievement – academic performance and school engagement.

Institutional Care - Institutional care refers to providing residential facility and fulfilling daily care needs of those children who are not living with their parents because their family is not able to provide adequate care to them, or their family environment is unsafe, or they are orphans and do not have any family to care for them, or they have been separated from their families and no contact could be established with their family since the separation, or they have been rescued from child labour, or prostitution or child abuse.

CHAPTER III

METHOD

METHOD

Plan and Design

A 3X 2 factorial design was employed in the study. The first factor was resilience at three levels - low, medium and high. The second factor was adversity at two levels- low and high. Thus, there were six cells which are low resilience-low adversity, low resilience-high adversity, medium resilience-low adversity, medium resilience-high adversity, high resilience-low adversity and high resilience-high adversity. The criterion variable or the dependent variable was Health.

	Low Resilience ($\leq P_{25}$)	Medium Resilience (P_{26} to P_{74})	High Resilience ($\geq P_{75}$)
Low Adversity (0-3)			
High Adversity (≥ 4)			

The sample consisted of 400 children who were assessed on their levels of resilience. Based on the scores on the Resilience Checklist for Children (RCFC), those children who had scores in the top 25 percentile (P_{75}) were included in the high resilient group and those children whose scores were below 25 percentile (P_{25}) were included in the low resilient group. The remaining children with scores in the 26th percentile to 74th percentile were in the medium resilience group. The three groups were assessed and compared on their health status.

The sample was also assessed on the number of adversities they had experienced. Depending on the number of adversities experienced they were grouped as low adversity and high adversity group. The low adversity group children had experienced three or less

than three adversities (0-3) and high adversity group consisted of those children who had experienced more than three adversities (≥4). These two groups were compared on their health status. Interaction between resilience and adversity and its impact on the health of institutionalised children was also looked into, in the study.

Participants

The sample size for the study was determined using Krejcie and Morgan's (1970) method for sample size calculation. As per this method for an infinite population, at an assumed standard error of 0.05 and confidence level of 95%, the required sample is 384.

A sample of 400 institutionalised children from institutions in and around the twin cities of Hyderabad and Secunderabad were included in the study through purposive sampling. The sample included boys and girls who had been under institutional care for at least one year. Children from government run social welfare homes and juvenile homes were excluded. Only children from civil society organizations such as NGOs that provide institutional care were included.

Inclusion criteria: Children who had been living under institutional care for at least one year, and who were in the age range of 13 to 18 years and were willing to give their assent for participation in the study were included in the study.

Exclusion criteria: Children who were below 13 years, and who were living with their parents, who were from boarding schools and those with any intellectual disabilities, developmental disorders or any major psychiatric disorders were excluded from the study

The sample consisted of 181 boys (45.25 %) and 219 girls (54.75 %). The age group of the children was 13 to 17 years with an average age of 14 years. 181 were from institution 1 (45.25%), 180 were from institution 2 (45%) and the remaining 39 (9.75%) were from institution 3. Children had been under institutional care for varying number of years, ranging from 1 to 12 years. The average number of years that a child had been under institutional care was 7 years.

Description of the tools

The tools that were used in the present study were selected based on their appropriateness to measure the variables of the study- resilience, adversity and health.

Resilience Checklist For Children: The Resilience Checklist For Children (RCFC) is a self report checklist to measure resilience in children. Based on existing literature on the concept of resilience the researchers developed this tool for the present study.

Reliability and validity - Content validity of the RCFC was established by experts and after establishing the content validity, the tool had 44 items. The tool was pilot tested on a sample of 120 children and the internal consistency reliability of the tool was also established using Cronbach's alpha. This was found to be 0.66. Split half reliability of the tool was computed using SPSS 20.0 and was found to 0.66 with the Spearman Brown correction (Appendix I).

Scoring - RCFC is a self report checklist where the respondent states whether a statement is true for him/her or not by ticking yes or no. There are positive and negative items in the checklist. For the positive items, the number of 'yes' ticked are counted and each yes

is given a score of 1. For the negative items, the scoring is reversed, that is, a yes is scored as 0 and a no is scored as 1. The total or composite score is tabulated. The range of scores is 0 to 44. A higher score indicates higher level of resilience.

Healthy Pathways Child Report Scale (HPCRS): Healthy Pathways Child Report Scale (HPCRS) is a self-report child health instrument developed by Bevans, Riley and Forrest (2010). The scale covers a wide gamut of domains assessing different aspects of health. There are 6 domains in the HPCRS which further include 16 sub-domains among themselves. The six domains are Comfort, Energy, Health resilience, Risk avoidance, Subjective well being and Achievement.

Under the domain of Comfort there are three sub domains and their descriptions are as follows:

- *Physical comfort* - Physically experienced distress such as pain, fatigue, and somatic complaints
- *Emotional comfort* - Emotions and mood with emphasis on anxiety, anger, and depression
- *Negative stress reactions* - Distress experienced involuntary when presented with a social problem

Under the domain of Energy there are two sub domains and their descriptions are as follows:

- *Physical activity* - Involvement in activities that promote physical fitness
- *Vitality* - Feelings of vim, vigor, pep, energy, and healthfulness

Under the domain of Health resilience*[1] there are four sub domains and their descriptions are as follows:

- *Peer connectedness* - Making friends, quality of friendships, having friends you can trust

- *Family connectedness* - A feeling of belonging in one's family

- *Teacher connectedness* - Perceptions that teachers care about you as a person and about your learning

- *Active coping* - Social problem-solving such as how you manage conflict with a friend or getting a bad grade

Under the domain of Risk avoidance there are two sub domains and their descriptions are as follows:

- *Aggression/bullying* - Verbally or physically hurting peers

- *Peer hostility/bully victim* - Being bullied by peers

Under the domain of Subjective well-being there are three sub domains and their descriptions are as follows:

- *Life satisfaction* - Evaluation of one's life, having fun, feeling happy

- *Self-worth* - One's satisfaction with their self

- *Body image* - Assessment of body image

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[1] The domain of 'Health resilience' is termed as resilience in the original tool by Bevans, Riley & Forrest. However, to avoid confusion of this health domain with the variable of resilience, the health domain will be referred to as 'Health resilience' in the rest of the thesis.

Under the domain of Achievement there are two sub domains and their descriptions are as follows:

- *Academic performance* - Assessment of how well you do in academic endeavors like school work, reading, math

- *School engagement* - The degree to which children are interested and invested in learning and strive for knowledge and mastery

Reliability and validity - According to the test constructors, the Healthy Pathways Child-Report Scale was designed in order to assess youths' perspectives on their health, illness, and well-being during the transition from childhood to adolescence in a psychometrically sound and theoretically grounded manner. The Healthy Pathways Child Report Scale was derived out of the Child Health Illness Profile with the intention of having one common health assessment tool for the age group of 11 to 18 years. The authors modified the original tool in the response format and also the items. The Healthy Pathways Child-Report scale was developed to be unidimensional to enhance the usability of the measure by ensuring that each of the health, illness, or well-being scales could be used independently of others. Each scale score is intended to measure a single construct. Classical test and item response theory psychometric analyses were conducted using data collected from 2,095 children. Scales were unbiased by age, gender, survey modality, and geographic location. Construct validity was demonstrated by the instrument's capacity to differentiate among children with and without chronic illnesses and to detect expected age and gender differences. Discriminative validity was evaluated by testing for expected

gender- and grade-level differences in children's health and disparities among children with and without Special Health Care Needs (SHCNs), asthma, and Attention Deficit Hyperactivity Disorder (ADHD). Internal consistency reliability and one-factor confirmatory factor analyses was used to establish the unidimensionality of the scales.

In the present study test retest reliability was carried out by the researcher by administering the questionnaire on two occasions within a span of three days on 45 children. Pearson's product moment correlation was 0.83. A group discussion of all the items in the scale was carried out with the employees of an organization which provided institutional care to children. These included the institution head (1), field workers (2) who mobilized resources and children for the institution and caretakers (3) of the three institutions under the organization. Each item was analysed as to whether it would be appropriate for the children, understandable to them and necessary for assessing their health.

Scoring - The scale has 88 items on a 5 point scale with options such as never, almost never, sometimes, almost always and always. There are negative and positive items in the scale, with the negative items having reverse scoring. Scores on the questionnaire range from 88 to 440 with higher scores indicating better health and lower scores indicating poor health. In all the domains and sub domains of HPCRS, higher scores indicate better health. For example, in the domain of comfort high scores indicate greater levels of comfort, in the sub domain of bullying, higher scores indicate better health, that is, lower levels of bullying behavior. This is the case in all the domains and sub domains.

Lifetime Incidence of Traumatic Events (LITE): The research instrument to measure adversity is a checklist titled Lifetime Incidence of Traumatic Events (LITE). LITE was developed by Greenwald and Rubin (1999). The original tool had 16 items with a self rating form and a parent rating form. This tool was adapted to the Indian scenario and its validity and reliability was established.

There are ten categories of adversities and these are classified as the dimensions of Lifetime Incidence of Traumatic Events. These are listed below.

- *Physical abuse* is the inflicting of physical injury upon a child. This may include hitting, shaking, kicking, beating, or otherwise harming a child physically.

- *Emotional abuse* (also known as verbal abuse, mental abuse, and psychological maltreatment) includes acts or the failure to act by parents, caretakers, peers and others that have caused or could cause serious behavioural, cognitive, emotional, or mental distress/trauma.

- *Sexual abuse* is inappropriate sexual behaviour with a child. It includes fondling a child's genitals, making the child fondle an adult's genitals, sexual assault (intercourse, incest, rape and sodomy), exhibitionism and pornography.

- *Child neglect* is the failure to provide for the child's basic needs. Neglect can be physical, educational, or emotional. Physical neglect can include not providing adequate food or clothing, appropriate medical care, supervision, or proper weather protection (heat or cold). It may include abandonment. Psychological neglect includes the lack of any emotional support and love, never attending to the child.

- *Accidents and illness* dimension includes experiences where the child has witnessed an accident where a family member or a close friend was severely injured and that may have culminated in the victim's death. This category also includes incidents of hospitalization or death of a family member or friend due to severe illness. Instances where the child himself was involved in an accident or was hospitalized due to illness are also included in this category.

- *Natural disasters* - this category includes instances where the child was present in a place that had an occurrence of any natural disaster and experienced the natural disaster. These natural disasters include earthquake, tsunami, hurricane, floods, drought, storms, etc.

- *Domestic disturbance* – this category of adverse childhood experiences include instances where the child witnessed violence between family members, separation or divorce of parents.

- *Community violence* – incidents of the child experiencing riots, terrorist attacks, or violence in the neighborhood are included in this category

- *Child labour* – this includes experiences where the child was engaged in labour, which may have in a physically hazardous place, unhygienic conditions and he/she may have had to work for long hours without food and rest.

- *Other adverse experiences* – this includes experiences that cannot be categorized in the above dimensions such as whether the child had been kidnapped, saw someone use drugs, was forced to take drugs, was forced into criminal activities or any other experience that was traumatic and was not included in the checklist.

Reliability and validity - The adapted tool had 49 items. The reliability and validity of the adapted Indian version has been established by the researcher. Content validity of the adapted tool was established by eliciting experts' opinion and calculating Lawshe's content validity ratio (CVR) (Lawshe, 1975). After establishing content validity, the tool had 41 items. The internal consistency reliability arrived at by calculating Cronbach's alpha was found to be 0.85 (n=30). (Appendix II)

Scoring - The final checklist has 41 items and for each item the respondents had to state, first whether they have or have not experienced the given adversity by responding as 'yes' or 'no'. The checklist also obtains retrospective information about the event's impact on the child at the time of incidence and also its impact on his current state of being. If they have experienced the event and their response is 'yes' to any item, then they further have to state the negative effect of the incident on them at the time of incidence and its adverse effect on them at present. Both of these questions are on a 3 point scale of 1-3, with 1 being no impact, 2 indicating a little impact and 3 indicating severe impact. The participant is categorized as having experienced a type of adversity if he/she has responded in the affirmative to any item within that category. Based on the response on the checklist, if a child stated that he had experienced any incident that was within a specific category of adversity, and then he/she was considered to have experienced that adversity and had a score of 1 for that adversity. Similarly if the child stated that he/she had experienced any incident that was within another category of adversity, then he/she had a score of 1 for that adversity. In this manner, the child's score for each specific adversity was calculated. Based on the number of 1s that the child had got, the score for adversity or Adverse Childhood Experiences (ACE) was calculated. So

if he/she had got '0' on all the categories, then he/she had an ACE score of '0'. If a child had got only a single '1' among all the ten categories his/her ACE score was '1'. In this manner the ACE score for each child was determined which could be in the range of 0 to 10. They are ten categories and the participant may be found to have experienced 0 to 10 adversities.

Summary table of tools used in the study

Name of the tool	Variable measured	Original tool (adapted from)	Reliability and validity	Domains measured	No. of items	Type of tool	Type of response	Range of scores	Scoring
1. Resilience Checklist for Children	Resilience	Developed for present study	Split half reliability – 0.66, Content Validity		44	Checklist	Binary - Yes or no	0 - 44	Higher score indicates higher levels of resilience
2. Healthy Pathways Child Report Scale-HPCRS	Health	Healthy Pathways Child Report Scale (Bevans, Riley, & Forrest, 2010)	Test retest reliability – 0.83	6 domains and 16 sub domains	88	Likert scale	5 point scale	88 - 440	Higher score indicates better health
3. Lifetime Incidence of Traumatic Events (LITE)	Adversity	Lifetime Incidence of Traumatic Events (Greenwald & Rubin, 1999)	Internal consistency – 0.86, Content Validity	10 domains	41	Checklist	Binary – yes or no; 3 point scale for impact of adversity	0-10 (adversity score) 0 – 123 (impact of adversity score)	Higher score indicates increased level of adversity

Procedure

After the study variables were finalized a review of appropriate tools was conducted. An initial pilot study to determine the feasibility of the study and the tools of the study was carried out. Since, there are not many scales to measure resilience in children a checklist for measuring resilience was developed and named as Resilience Checklist For Children (RCFC) for the purpose of this study. The reliability and validity of the checklist was established (Appendix I). The health assessment tool- Healthy Pathways Child Report Scale (HPCRS) was pilot tested and test retest reliability was established. The validity of the adversity checklist titled Lifetime Incidence of Traumatic Events was also established through content validity and its reliability was also carried out (Appendix II). These tools were used for the main study. All the tools were translated in the regional languages of Telugu and Hindi through forward and back translations.

Institutional Ethics Committee (IEC) clearance was obtained for the study. The study was carried out by first identifying various NGOs and civil society organizations that provide institutional care in and around the twin cities of Hyderabad and Secunderabad. These organizations were approached and informed about the purpose of the study and their permission to include children from their institution in the research study was obtained. Informed consent of the institutions was obtained. The children were given a brief about the purpose of the study and their oral consent/assent to participate in the study was taken. All the children who fulfilled the inclusion criteria were included in the study. The children in the exclusion criteria and those who did not wish to participate in the study were excluded. Different organizations were approached and children were included till a sample of 400 was attained. The identified tools for measuring resilience,

adversity and health were administered on the sample (tools are appended as IIIa, IIIb, IIIc and IIId).

Initially an orientation programme was carried out for the children and the caretakers to make them aware of the purpose of the study. The research instruments – the Resilience Checklist for Children, Healthy Pathways Child Report Scale and the Lifetime Incidence of Traumatic Events checklist were administered in a one to one session with the children. The instructions for the tools were given and doubts were clarified immediately by the researcher. The tools were administered in different sessions depending on the comfort of the participant. In the first session which lasted for approximately 40 to 50 minutes, the Resilience Checklist for Children was completed. In the second session which lasted for approximately 50 to 65 minutes the Healthy Pathways Child Report Scale was administered on the sample. The Lifetime Incidence of Traumatic Events checklist to measure adversity was completed in the third session which lasted for approximately 45 to 60 minutes when sufficient rapport had been established with the participants and the comfort between the participants and the researcher was good. Personal data schedule for each child included in the study was filled by the researcher by interviewing the participant and the caretaker in the last session. Scores on the tools administered were computed, tabulated and appropriate statistical analyses were performed on the obtained data.

CHAPTER IV

RESULTS

RESULTS

The obtained quantitative data were analysed by means of descriptive statistics, two way Analysis of Variance (ANOVA), and stepwise multiple regression analyses using the Statistical Package for Social Sciences (SPSS) version 20.0. Graphs have been plotted to display results in a visual form for greater clarity and comprehension. The results of the present study are discussed in three sections in the following pages. In the first section, results of descriptive statistics carried out on the variables - resilience, adversity and health are presented. The second section has the results of two way Analysis of Variance (ANOVA) that showcase the role of resilience and adversity in the health of institutionalised children. In the third section, an examination of resilience and adversity as possible predictors of health of institutionalised children based on the stepwise multiple regression analysis is presented.

Levels of resilience, adversities and their types, health status experienced by institutionalised children

Resilience in institutionalised children

The study was intended to explore the levels of resilience in children who are under institutional care. In this regard, a new research tool, Resilience Checklist For Children (RCFC) was administered on the sample. Descriptive statistics were used to explore resilience in institutionalized children. These have been presented in Table 1 which shows Mean (M), Median (M_d), Mode (M_o), Standard Deviation (SD), Variance, Range and Percentiles (25, 50 and 75) of resilience in the sample.

Table 1

Mean, Median, Mode, Standard Deviation, Variance, Range and Percentiles (25, 50, 75)
of resilience in institutionalised children

	Resilience ($N = 400$)
Mean (M)	27.38
Median (M_d)	27
Mode (M_o)	28
Standard Deviation (SD)	4.81
Variance	23.14
Minimum	9
Maximum	38
Range	29
Percentile 25	24
Percentile 50	27
Percentile 75	31

As evident from Table 1, the Mean (27.38) Median (27) and Mode (28) were almost equal with three of them closely placed to each other. The SD was 4.81 and the variance for resilience was 23.14. The minimum score obtained by any child was 9 and the maximum score obtained was 38 giving a range of 29. The 25th percentile or 1st quartile score was 24 meaning that 25% of the sample had a score, that is, below 24. Similarly, the score for the 50th percentile or the median was 27 meaning that 50% of the sample had a score below 27. The 75th percentile score was 31 meaning that 75 % of the sample had a score below 31 or 25% of the sample had a score above 31.

Gender wise, age wise and institution wise means and SDs of resilience are depicted in table 2. It can be seen that there were no gender or age differences in the resilience levels. However, there were some differences in the resilience levels of children from different institutions. Though children from institution 1 and 3 had comparable levels of resilience, children from institution 2 had lower levels of resilience.

Table 2.
Mean, Standard Deviation (SD) of resilience across gender, age and institution in children under institutional care

Groups	Mean	SD
<u>Gender</u>		
Male (n= 181)	27.43	4.76
Female (n=219)	27.34	4.87
Total	27.38	4.81
<u>Age</u>		
13-14 (n=273)	27.36	4.92
15-16 (n=116)	27.35	4.61
17-18 (n=11)	28.09	4.42
Total	27.38	4.81
<u>Institution</u>		
1 (n=181)	29.12	4.45
2 (n=180)	25.34	4.60
3 (n=39)	28.72	3.70
Total	27.38	4.81

Note. (N = 400)

For carrying out further analyses, the sample was divided into three groups on the variable of resilience- low resilience, medium resilience and high resilience. The low resilience group consisted of those who were in the lower quartile on resilience, that is, those who fall below 25th percentile on the resilience checklist. So, the children in this group had a score of 24 and lower on the resilience checklist. The medium resilience group consisted of those who were in the middle two quartiles on resilience, that is, those who fall in the 26th to 74th percentile on the resilience variable. This means that the children in this group had a score of over 24 and below 31 on the resilience checklist. Finally, the third group which is the high resilience group consisted of those who were in the top quartile on resilience, that is, those who were in the 75th percentile and above on the resilience variable. All the children in this group had a score of 31 and above on the resilience checklist. The frequency of each group is displayed in Table 3 which presents the distribution of children into three groups of resilience.

Table 3.
Distribution of children into three groups of resilience

Resilience Group	Grouping criteria	Resilience scores	*n*
Low resilience	$\leq$ Percentile 25	≤ 24	109 (27.25)
Medium resilience	Percentile 26 to percentile 74	$24 < x > 31$	187 (46.75)
High resilience	$\geq$ Percentile 75	≥ 31	104 (26)
Total			400

Note. n = number of children; Figures in parentheses represent the percentages

It can be seen from Table 3 that 109 children (27.25 %) out of 400 children were in low resilience group, 187 (46.75%) of the children were in the medium resilience

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group and 104 (26 %) of the children were in the high resilience group. The low and high resilience groups are almost equal in size, with the medium resilience groups almost twice the size of the low and high resilience groups. As these three groups have been categorized based on the quartile, a comparison of the groups on their resilience scores (mean) was carried out using one way ANOVA in order to determine if the three groups differed significantly on their levels of resilience. The results of the ANOVA are presented in table 4 which shows the respective means and SDs of each of the three groups of resilience- low resilience, medium resilience and high resilience.

Table 4
Summary ANOVA table of the levels of resilience in the three groups of children

Source	**Resilience**						ANOVA		
	Low		Medium		High		Mean square		$F(2,397)$
	M	*SD*	*M*	*SD*	*M*	*SD*	Between	Error	
Resilience	21.50	2.92	27.51	1.61	33.31	1.99	3710.05	4.57	811.9***

*Note. ***p <0.001*

The results of table 4 clearly show that the three groups differed in the levels of resilience, $F(2,397) = 811.9$, $p<.001$. The scores on the resilience checklist in the three groups of resilience, that is, low resilience (M = 21.5, SD = 2.92), medium resilience (M = 27.51, SD =1.61), and high resilience (M = 33.31, SD = 1.99) increased in the order of low to medium to high. However, as ANOVA indicates whether there are differences between the three groups only and not whether each pair of the three groups differs significantly from one another, post hoc analysis was carried out using Tukey's HSD test. The results of the analyses are presented in Table 5.

Table 5

Mean comparisons using Tukey's HSD between three groups of resilience on Resilience scores

Variables	Resilience		
	High – Medium	High – Low	Medium – Low
Resilience	5.8***	11.8***	6.0***

*Note. ***p <0.001*

Table 5 clearly shows that each pair of the three resilience groups differed significantly from one another, *p <0.001*. The difference in the means of the high and medium resilience groups was 5.8, p< .001. The difference in the means of the high and low resilience groups was 11.8, p< .001. The high resilience group differed significantly from the medium resilience and low resilience group. The difference in the means of the medium and low resilience groups was 6, p< .001.The medium resilience group also differed significantly from the low resilience group.

Table 6 shows the distribution of institutionalized children across the three resilience groups based on gender, age and institution. Looking into the gender dimension, it can be observed that boys and girls were almost equally represented in the low resilience, medium resilience and high resilience groups. Among the boys, 26% were in the low resilience group, 49% were in the medium resilience group and 25% were in the high resilience group. When it comes to girls, 28%, 45% and 27% were in the low, medium and high resilience groups respectively. The distribution was similar among the three age groups also. In the 13-14 years age group, 28 % were in the low resilience group, 45% in the medium resilience and 27% in the high resilience group. Likewise in the 15-16 years age range the distribution across low, medium and high resilience was

26%, 49% and 25% respectively. The last age group of 17-18 years had fewer children but the distribution was similar to other age groups with 20% in low resilience, 60% in medium and 20% in high resilience. It was in the institution wise distribution where differences were seen with one institution having more children who are low on resilience and the others having relatively more highly resilient children. Institutions 1 and 3 respectively had 14% and 10% children who were low resilient, 49% and 54% who were medium resilient and 37% and 36% children who were highly resilient. Whereas institution 2 had 44% low resilient, 43% medium resilient and 13% high resilient children. It is clearly evident that institutions 1 and 3 had fewer low resilient and more high resilient children whereas institution 2 had more number of low resilient children when compared to the number of children in high resilient group.

Table 6

Distribution of institutionalised children across the three resilience groups based on gender, age and institution

Groups	Low Resilience n (%)	Medium Resilience n (%)	High Resilience n (%)	Total
Gender				
Boys	48 (26)	88 (49)	45 (25)	181
Girls	61 (28)	99 (45)	59 (27)	219
Total	109 (27)	187 (47)	104 (26)	400
Age				
13-14	77 (28)	123 (45)	73 (27)	273
15-16	30 (26)	57 (49)	29 (25)	116
17-18	2 (20)	7 (60)	2 (20)	11
Total	109 (27)	187 (47)	104 (26)	400
Institution				
1	25 (14)	89 (49)	67 (37)	181
2	80 (44)	77 (43)	23 (13)	180
3	4 (10)	21 (54)	14 (36)	39
Total	109 (27)	187 (47)	104 (26)	400

Note. (N = 400), figures in parentheses represent percentages

Adversities experienced by institutionalised children

In order to determine the number and the types of adversities experienced by institutionalised children, the Lifetime Incidence of Traumatic Events (LITE) Checklist was administered on the children. The checklist had ten categories each representing a specific type of adversity. Descriptive statistics such Mean (M), Median (M_d), Mode (M_d),

Standard Deviation (SD), Variance, Range and Percentiles of the levels of adversity were

computed and the results are presented in Table 7.

Table 7

Mean, Median, Mode, Standard Deviation, Variance, Range and Percentiles (25, 50, 75)
of adversity in institutionalised children

	Adversity ($N = 400$)
Mean (M)	4.08
Median (M_d)	4
Mode (M_o)	5
Standard Deviation (SD)	1.96
Variance	3.85
Minimum	0
Maximum	9
Range	9
Percentile 25	3
Percentile 50	4
Percentile 75	5

It can be seen in Table 7 that the Mean (4.08), Median (4) and Mode (5) of the

adversity score were close together. The Standard Deviation (SD) of the adversity score

was 1.96 and the respective variance was 3.85. The minimum score obtained was also the

minimum possible score 0. The maximum score obtained on adversity was 9, showing a

wide range of scores. The 25th percentile was 3 meaning that 25 % of the sample fall

below this value. The median, which is also the 50th percentile, was 4 and divides the

sample into two groups equally. This means that half of the sample had experienced more

than four adversities. The cut off value for the last quartile, that is, 75th percentile was 5 meaning that 25% of the sample had experienced more than 5 adversities.

Based on the level of adversity the children were categorized into two groups- low adversity group and high adversity group. The low adversity group had a score between 0 to 3. The high adversity group had a score of 4 and above. The distribution of the children in the two groups of adversity- low and high, are presented in table 8 which shows the frequency of children in each group.

Table 8
Distribution of children into two groups of adversity

Adversity Group	Adversity scores	n
Low adversity	≤ 3	152 (38)
High adversity	≥ 4	248 (62)
Total		400

Note. n = number of children; Figures in parentheses represent the percentages

From Table 8 it is evident that most institutionalised children have experienced many adversities as there were 248 (62%) children in the high adversity group when compared to the low adversity group which had 152 (38%) children.

Table 9

Distribution of institutionalised children across the two adversity groups based on gender, age and institution

Groups	Low Adversity n (%)	High Adversity n (%)	Total
Gender			
Boys	54 (30)	127 (70)	181
Girls	98 (45)	121 (55)	219
Total	152 (38)	248 (62)	400
Age			
13-14	100 (37)	173 (63)	273
15-16	50 (43)	66 (57)	116
17-18	2 (20)	9 (80)	11
Total	152 (38)	248 (62)	400
Institution			
1	87 (48)	94 (52)	181
2	43 (24)	137 (76)	180
3	22 (56)	17 (44)	39
Total	152 (38)	248 (62)	400

Note. (N = 400), figures in parentheses are in percentages

Table 9 shows the distribution of level of adversities across gender, age and institution. The distribution of adversities shows that more boys had experienced higher adversities than girls. While 30% of the boys reported low adversities, 70% reported experiencing high adversities. 45% girls reported low adversity and 55% reported high adversity. Age wise distribution of adversities also shows similarities. 37% children in the 13-14 years age group had low adversities and 63% children had high adversities. In

the 15-16 years age group, 43% had low adversities and 57% had high adversities. In the 17-18 years group, 20% had low adversities and 80% had high adversities. Children in institution 3 experienced fewer adversities with 56% reporting low adversities and 44% reporting high adversities. Almost equal number of children in institution 1 reported low (48%) and high adversities (52%). In institution 2, more children reported high adversities (76%) and fewer reported low adversities (24%). Looking into the specific types of adversities experienced by children, frequency of children across the ten categories of adversities with the gender distribution is delineated in Table 10.

Table 10.
Frequency of children (gender wise) across the ten categories of adversities.

Category of Adversity	Gender distribution		Total ($N = 400$)
	Boys ($n = 180$)	Girls ($n = 219$)	
Physical Abuse	119 (65.7)	128 (58.4)	247 (61.8)
Emotional Abuse	110 (60.8)	101 (46.1)	211 (52.8)
Sexual Abuse	4 (2.2)	1 (0.5)	5 (1.2)
Neglect	65 (35.9)	39 (17.8)	104 (26)
Accidents, Illnesses & Death	169 (93.4)	196 (89.5)	365 (91.2)
Community Violence	122 (67.4)	138 (63)	260 (65)
Child Labour	35 (19.3)	29 (13.2)	64 (16)
Domestic Disturbance	137 (75.7)	123 (56.2)	260 (65)
Natural Disasters	22 (12.2)	13 (5.9)	35 (8.8)
Other Adversities	52 (28.7)	28 (12.8)	80 (20)

Note. - n = number of children; Figures in parentheses represent the percentages, multiple responses were given by each child for the categories of adversity

Some types of adversities have been experienced by most of the institutionalized children, whereas some have been experienced by fewer children. However, every type of adversity has been experienced by at least one child. The adversity reported by most of the children was accidents, illness and death (91 %). The next most commonly reported adversity was domestic disturbance (65%) followed by community violence (65%). Among the children around 62% reported having experienced physical abuse. At least half of the children (53%) reported emotional abuse. Around a quarter of the children reported that they had experienced neglect with 26% children reporting it. 20% children reported adversities in the last category of other adversities. Natural disaster as an adverse experience was reported by around a tenth, that is, 9 % of the children. Some of the children (16%) did report that they had experienced child labour. Sexual abuse was reported by 1% of the children in the entire sample.
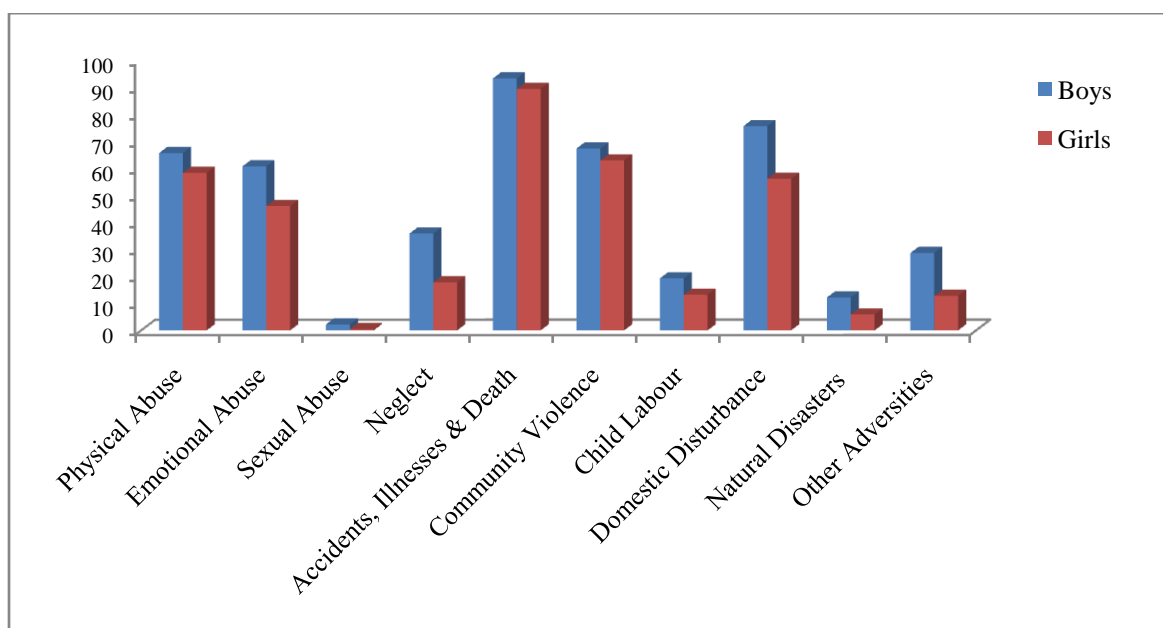
Note. Multiple responses from each child

Figure 1. Bar graph showing the percentages of boys and girls who have reported different adversities.

The results of the Table 10 are presented in pictorial form through a bar graph in Figure 1. The graph shows the gender differences in the prevalence of the assessed adversities. 119 (66 %) of the 180 boys reported having experienced physical abuse whereas 128 (58 %) of the 219 girls reported experiencing physical abuse. Out of the 180 boys, 110 (61 %) reported emotional abuse and out of the 219 girls, 101 (46 %) reported the same. Among the boys 4 (2 %) stated that they had experienced sexual abuse whereas only one girl (0.5%) reported that she had experienced sexual abuse. When it came to neglect 65 (36 %) of the boys and 39 (18 %) of the girls stated that they had experienced it. Accidents, illness and death had been experienced by the highest number of children among boys and girls. 169 (93 %) of the 180 boys and 196 (90 %) of the 219 girls reported it. Community violence was also experienced by a large number of children with 122 (67 %) boys and 138 (63 %) girls stating that they had experienced this specific adversity. 35 (19 %) boys and 29 (13 %) girls out of the 180 boys and 219 girls respectively reported having engaged in child labour. 137 (76 %) boys and 123 (56 %) girls have reported that their family environment was disruptive and they had experienced domestic disturbances. Natural disaster was another adversity that had been reported by some children. 22 (12 %) boys and 13 (6 %) girls reported that they had been in a natural disaster during their lifetime. There were other adversities which did not fall under any of the nine mentioned categories and was termed as Other adversities. 52 (29 %) boys and 28 (13 %) girls reported incidents from this category of adversity. There were some gender differences, with all the types of adversities being reported more by boys than by girls.

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Health of institutionalised children

Health of institutionalised children was measured using the Healthy Pathways Child Report Scale (HPCRS). This tool has 6 domains and 16 subdomains of health and all of these are unidimensional in nature. The 16 subdomains across the 6 domains are as follows: Comfort - Physical Comfort, Emotional Comfort and Negative Stress Reactions; Energy - Physical Activity and Vitality; Health Resilience - Peer Connectedness, Family Connectedness, Teacher Connectedness and Active Coping; Risk Avoidance - Aggression/Bullying and Peer Hostility/Bully Victim; Subjective Well-Being - Life Satisfaction, Self-Worth and Body Image; Achievement - Academic Performance and School Engagement. Gender wise and overall descriptive statistics such Mean, Standard Deviation of health, its domains and sub domains are presented in Table 11.

As can be seen from table 11, there were not many gender differences in the various domains and subdomains of health with both boys and girls showing similar levels of health. The subdomains where some differences can be observed include physical Activity, Bullying and Academic Performance. Girls had lower levels of Physical Activity than boys. On the other hand they also tended to bully less than boys as indicated by their higher scores. Girls also rated their Academic Performance to be better. The domains where gender differences were evident include Energy, Risk Avoidance and Achievement. Though boys showed better scores on Energy domain, girls showed better levels of Risk Avoidance and Achievement. Health did not display wide variations across gender with boys and girls attaining similar scores. However, it can be observed that there is scope for vast increase in the health of children as the means among the domains,

sub domains and overall health are in the middle of the possible range of scores (see appendix IIIb). This highlights the poor health of children under institutional care.

Table 11
Mean, Standard Deviation (gender wise) of health in institutionalised children

Variable	Boys (n= 181)		Girls (n= 219)		All	
	Mean	SD	Mean	SD	Mean	SD
Health	303.98	33.85	306.60	36.49	305.42	35.30
Comfort	69.90	9.77	68.50	9.83	69.13	9.82
Physical comfort	29.66	5.23	29.02	4.78	29.30	4.99
Emotional comfort	23.53	4.04	23.21	4.33	23.36	4.20
Negative stress reactions	16.70	3.28	16.27	3.51	16.47	3.41
Energy	30.55	6.57	27.51	6.00	28.89	6.44
Physical activity	12.46	3.97	9.92	3.58	11.07	3.97
Vitality	18.09	3.90	17.59	3.99	17.82	3.95
Health resilience	99.33	14.44	100.13	17.72	99.77	16.30
Peer connectedness	29.70	4.80	29.34	4.57	29.50	4.67
Caretaker connectedness	22.23	7.52	21.64	8.89	21.91	8.29
Teacher connectedness	21.43	5.47	22.42	5.13	21.97	5.30
Active coping	25.97	4.12	26.73	4.56	26.39	4.38
Risk avoidance	24.59	5.46	28.16	4.55	26.55	5.29
Aggression/bullying	12.82	3.90	15.95	3.40	14.54	3.95
Peer hostility/bully victim	11.77	2.71	12.21	2.39	12.01	2.55
Subjective well being	43.78	6.48	44.21	5.93	44.02	6.18
Life satisfaction	17.96	3.85	18.44	3.69	18.22	3.77
Self-worth	10.39	2.56	10.78	2.58	10.60	2.58
Body image	15.44	3.10	14.99	2.79	15.19	2.94
Achievement	35.83	6.37	38.09	6.32	37.07	6.43
Academic performance	21.25	4.96	22.78	4.59	22.09	4.81
School engagement	14.59	2.82	15.31	2.63	14.98	2.74

Note. (N = 400), M- Mean, SD - Standard Deviation

Table 12 shows the age wise distribution of health. It can be observed in the results that there was not much variation between the three age groups on most of the domains and sub domains of health. The levels of physical activity increased with an increase in age. Caretaker connectedness was found to be decreasing with age. Scores on aggression or bullying decreased with age indicating that bullying behaviour was rising with increasing age. Lastly, academic performance was found to be high in the 13- 14 year olds and then it decreased in the 15- 16 year old but, later it increased again in the 17-18 year olds.

Table 12
Mean, Standard Deviation (age wise) of health in institutionalised children

Variable	13-14 years (n=273)		15 – 16 years (n= 116)		17-18 years (n = 11)	
	Mean	SD	Mean	SD	Mean	SD
Health	306.70	36.56	303.11	31.59	297.91	41.56
Comfort	68.75	9.72	70.05	10.24	68.73	7.59
Physical comfort	29.01	4.86	29.89	5.36	30.64	3.56
Emotional comfort	23.12	4.21	23.91	4.15	23.18	4.17
Negative stress reactions	16.62	3.40	16.25	3.46	14.91	2.63
Energy	28.56	6.03	29.60	7.19	29.36	7.98
Physical activity	10.74	3.56	11.72	4.71	12.36	4.32
Vitality	17.82	3.86	17.89	4.14	17.00	4.34
Health resilience	100.17	16.56	99.17	15.58	96.09	18.12
Peer connectedness	29.28	4.44	29.91	4.91	30.64	7.32
Caretaker connectedness	22.60	8.02	20.66	8.82	17.73	7.09
Teacher connectedness	21.91	5.07	22.05	5.81	22.64	5.87
Active coping	26.37	4.64	26.54	3.73	25.09	4.13
Risk avoidance	26.91	5.51	25.84	4.63	25.00	5.59
Aggression/bullying	14.97	3.97	13.65	3.75	13.00	3.69
Peer hostility/bully victim	11.94	2.55	12.19	2.48	12.00	3.41
Subjective well being	44.52	6.09	42.90	6.14	43.18	7.74
Life satisfaction	18.48	3.59	17.62	4.00	18.00	4.88
Self-worth	10.93	2.50	9.82	2.59	10.73	2.83
Body image	15.11	2.97	15.46	2.88	14.45	2.66
Achievement	37.77	6.37	35.55	6.34	35.55	6.50
Academic performance	22.70	4.61	20.73	5.04	21.09	4.55
School engagement	15.07	2.73	14.82	2.72	14.45	3.17

Note. (N = 400), M- Mean, SD - Standard Deviation

Table 13 shows the institution wise distribution of health, its domains and sub domains. A consistent trend can be seen across almost all the domains and sub domains of health. Children from institution 1 and 3 had comparable health as their scores were almost equivalent on the various health domains and sub domains. The children from

institution 2 had lower health scores than the other two institutions indicating poorer health among them.

Table 13
Mean, Standard Deviation (Institution wise) of health in institutionalised children

Variable	Institution 1 (n= 181)		Institution 2 (n= 180)		Institution 3 (n= 39)	
	Mean	SD	Mean	SD	Mean	SD
Health	318.91	38.53	286.73	23.00	329.05	21.58
Comfort	71.48	10.58	65.63	8.03	74.38	8.08
Physical comfort	29.47	5.52	28.67	4.47	31.54	4.03
Emotional comfort	24.20	4.23	22.00	3.82	25.67	3.74
Negative stress reactions	17.80	3.63	14.97	2.57	17.18	2.97
Energy	29.57	7.33	28.13	5.75	29.21	4.57
Physical activity	11.10	4.29	11.18	3.79	10.38	3.16
Vitality	18.47	4.60	16.95	3.23	18.82	2.83
Health resilience	108.04	16.31	89.57	10.43	108.44	11.02
Peer connectedness	28.65	5.36	30.08	3.93	30.82	3.68
Caretaker connectedness	26.88	6.50	15.88	6.25	26.64	5.03
Teacher connectedness	24.75	5.15	18.89	3.75	23.28	4.47
Active coping	27.77	5.10	24.71	2.95	27.69	3.59
Risk avoidance	27.31	4.94	24.99	5.21	30.18	4.73
Aggression/bullying	15.03	3.74	13.63	4.02	16.41	3.60
Peer hostility/bully victim	12.28	2.44	11.36	2.57	13.77	1.78
Subjective well being	44.75	7.35	42.64	4.48	46.92	5.50
Life satisfaction	18.66	4.20	17.42	3.28	19.87	2.85
Self-worth	10.88	2.95	9.96	2.05	12.26	1.96
Body image	15.21	3.28	15.26	2.48	14.79	3.24
Achievement	37.76	7.06	35.76	5.54	39.92	5.90
Academic performance	22.41	5.42	21.13	4.07	25.00	3.58
School engagement	15.35	2.94	14.62	2.32	14.92	3.35

Note. (N = 400), M- Mean, SD - Standard Deviation

The analysis of health among the institutionalised children shows that there is scope for increasing the scores indicating that the health of the children can to be

improved further. This need for improvement can be seen across all the domains and subdomains of Health.

Association between resilience and adversity among institutionalised children

To determine the association between the children's level of resilience and the level of adversity, a 3x2 contingency table was prepared and the chi-square was computed. Table 14 presents the results of the chi-square, along with the distribution of the children across the three groups of resilience levels.

Table 14
Distribution of children with varying levels of resilience along two levels of Adversity

		Adversity		
		Low	High	Total
Resilience		($n = 152$)	($n = 248$)	
High	Observed count	49	55	104
($n =104$)	Expected count	39.5	64.5	104
Medium	Observed Count	73	114	187
($n = 187$)	Expected Count	71.1	115.9	187
Low	Observed Count	30	79	109
($n = 109$)	Expected Count	41.4	67.6	109
Total	Observed Count	152	248	400
	Expected Count	152	248	400

$$\chi^2 = 8.83 \,*$$

*Note. *p<.05*

The results revealed a significant association between the resilience and adversity among institutionalised children, $\chi^2 = 8.83$, *p*<.05, *N* = 400. Regarding the distribution of the children with varying levels of Adversity across the three groups of resilience,

following observations were made. Among the children ($n = 152$) who had experienced low adversity, 41 were expected to have low resilience but in actuality only 30 had low levels of resilience. The expected and observed number of children in the medium resilience group was almost the same. It was expected that 39.5 children would have high resilience but there were 49 children who reported high levels of resilience. On the other hand, among those children who had experienced high levels of adversity, contrasting results were seen. It was expected that 67.6 children would have low resilience but the actual number was higher at 79. The observed number of children in the medium resilience high adversity group was in line with the expectations with observed count being 114 and the expected count being 115.9. 64.5 of the children who had experienced high adversity were expected to have high resilience but only 55 children were found to have high resilience. It can be seen that levels of adversity was associated with the levels of resilience. Most of the children who had experienced low adversity were found to have high levels of resilience and fewer children had high levels of resilience when they had experienced high adversity.

Role of resilience and adversity in the health of institutionalised children

The second objective of the study was to analyze the role of resilience and adversity in the health of institutionalized children. Institutionalised children were categorised into three groups as low resilience, medium resilience and high resilience based on their levels of resilience. They were also grouped based on the levels of adversities as low adversity and high adversity. Two way Analysis of Variance (ANOVA) was carried out in order to determine if the level of resilience and the level of adversities will have a role in the health of institutionalised children. These results are presented in table 15. In order to determine which of the three groups of resilience differ among themselves, post hoc analyses, that is Tukey's HSD, were carried out, the results of which are presented in table 16. Post hoc analyses for the role of adversity are presented in table 17. Significant interaction effects found are discussed later and presented as graphs.

Table 15

Main Effect of resilience and adversity and their interaction effect on health, its domains and sub domains

	Resilience					Adversity				Interaction Resilience X Adversity	
	Low (n =109) M (SD)	Medium (n =187) M (SD)	High (n =104) M (SD)	*F ratio*	*p*	Low (n =152) M (SD)	High (n =248) M (SD)	*F ratio*	*p*	*F ratio*	*p*
Health	**284.92** **(28.92)**	**304.83** **(31.34)**	**327.94** **(34.92)**	**39.91**	**.000**	**310.34** **(37.49)**	**302.40** **(33.61)**	**2.92**	**.088**	**3.25**	**.040**
Comfort	**64.55 (9.09)**	**68.80 (9.13)**	**74.53 (9.20)**	**26.12**	**.000**	**71.14 (10.34)**	**67.90 (9.30)**	**8.33**	**.004**	**2.76**	**.064**
Physical comfort	27.93 (5.04)	29.05 (4.73)	31.22 (4.88)	10.00	.000	29.97 (4.88)	28.90 (5.03)	3.68	.056	1.60	.203
Emotional comfort	21.75 (3.77)	23.21 (3.98)	25.29 (4.27)	18.43	.000	24.17 (4.45)	22.85 (3.96)	7.28	.007	3.13	.045
Negative stress reactions	14.87 (3.05)	16.53 (3.31)	18.02 (3.21)	19.94	.000	17.00 (3.68)	16.14 (3.19)	3.66	.056	1.03	.360
Energy	**27.05 (6.02)**	**29.00 (6.07)**	**30.62 (7.04)**	**7.14**	**.001**	**28.49 (6.44)**	**29.13 (6.44)**	**2.15**	**.144**	**.840**	**.433**
Physical activity	10.72 (3.76)	11.02 (3.91)	11.52 (4.27)	1.03	.360	10.49 (4.11)	11.42 (3.84)	6.76	.010	2.50	.084
Vitality	16.33 (3.52)	17.98 (3.67)	19.10 (4.37)	11.46	.000	18.00 (4.13)	17.71 (3.84)	.06	.806	.52	.597
Health resilience	**90.93** **(13.91)**	**100.03** **(14.33)**	**108.57** **(17.17)**	**29.45**	**.000**	**101.82** **(16.65)**	**98.51** **(15.99)**	**1.70**	**.194**	**1.19**	**.305**
Peer connectedness	29.20 (4.25)	29.27 (4.77)	30.23 (4.88)	2.33	.099	29.05 (5.54)	29.78 (4.04)	.64	.425	4.80	.009

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				F	p			F	p	F	p
Caretaker connectedness	18.13 (7.64)	21.84 (7.76)	25.98 (8.03)	22.91	.000	22.93 (8.24)	21.28 (8.28)	.92	.337	.01	.992
Teacher connectedness	19.21 (4.52)	22.50 (5.17)	23.91 (5.18)	18.89	.000	22.95 (5.5)	21.38 (5.10)	5.29	.022	.82	.440
Active coping	24.39 (3.72)	26.41 (4.26)	28.44 (4.28)	20.25	.000	26.89 (4.58)	26.07 (4.23)	1.05	.306	.47	.624
Risk avoidance	**24.91 (5.55)**	**26.37 (5.17)**	**28.59 (4.53)**	**10.14**	**.000**	**27.70 (5.43)**	**25.84 (5.08)**	**9.12**	**.003**	**.61**	**.542**
Aggression/bullying	14.10 (4.09)	14.24 (3.91)	15.53 (3.73)	3.58	.029	15.28 (3.96)	14.08 (3.88)	7.65	.006	.26	.771
Peer hostility/bully victim	10.81 (2.74)	12.13 (2.43)	13.06 (1.99)	17.22	.000	12.42 (2.41)	11.76 (2.61)	3.63	.057	.70	.497
Subjective well being	**42.51 (5.95)**	**43.89 (6.01)**	**45.82 (6.31)**	**6.67**	**.001**	**44.09 (6.66)**	**43.97 (5.88)**	**.06**	**.803**	**2.34**	**.098**
Life satisfaction	17.21 (3.93)	18.22 (3.49)	19.28 (3.81)	6.21	.002	18.32 (3.91)	18.16 (3.68)	.29	.593	2.76	.064
Self-worth	9.94 (2.33)	10.40 (2.53)	11.67 (2.62)	13.97	.000	10.72 (2.80)	10.53 (2.43)	.03	.851	.81	.447
Body image	15.37 (2.78)	15.27 (3.07)	14.87 (2.87)	.96	.385	15.04 (3.05)	15.29 (2.87)	.10	.754	.57	.567
Achievement	**34.97 (6.64)**	**36.75 (5.89)**	**39.83 (6.24)**	**15.21**	**.000**	**37.09 (6.92)**	**37.05 (6.13)**	**.01**	**.925**	**4.25**	**.015**
Academic performance	20.69 (5.09)	21.96 (4.50)	23.79 (4.59)	10.18	.000	22.26 (5.32)	21.98 (4.49)	.25	.621	2.48	.085
School engagement	14.28 (2.58)	14.80 (2.74)	16.04 (2.62)	11.98	.000	14.84 (3.03)	15.07 (2.54)	.43	.511	4.09	.017

Note. *$p \leq 0.05$, **$p \leq 0.01$, *** $p \leq 0.001$, results underlined are statistically significant

Higher scores indicate better functioning and improvement in all the domains and sub domains of health.

Role of resilience on health, its domains and sub domains

ANOVA results, as seen in table 15 show that there was a significant main effect of resilience on health of institutionalised children, $F(2,394) = 39.91$, $p<.001$. Health of children in low resilience group ($M = 284.92$, $SD = 28.92$) appeared lower than health of children in medium resilience group ($M = 304.83$, $SD = 31.34$), which was lower than the health of children in high resilience group ($M = 327.94$, $SD = 34.92$). The six main domains together constitute Health. Analyzing the role of resilience on health in depth by looking at the effect of resilience on the domains of health showed that there was an effect of resilience on each of the health domains. This analysis is presented in the following paragraphs where the role of resilience on each domain of health and their respective sub domains will be probed.

The first domain examined for the role of resilience was Comfort. Results clearly show that there was a main effect of resilience on comfort as the results were significant, $F(2,394) = 26.12$, $p<.001$. The levels of Comfort steadily increased from low to medium to high resilience groups. The Means (M) and Standard Deviations (SD) also show this clearly with scores being lowest in low resilience group ($M = 64.55$, $SD = 9.09$), slightly more in medium resilience group ($M = 68.80$, $SD = 9.13$) and the high resilience group having the highest score ($M = 74.53$, $SD = 9.20$). Three sub domains - Physical Comfort, Emotional Comfort and Negative Stress Reaction together make up the first domain comfort and each one is discussed individually below with reference to the role of resilience on it.

It is clearly seen from table 15 that there was a main effect of resilience on Physical Comfort of institutionalised children. There was a difference among the three

groups of children as the ANOVA results were significant, $F(2,394) = 10.00$, $p<.001$. Looking at the means and SD of the three groups it is evident that high resilience groups have the highest level of Physical Comfort (M = 31.22, SD = 4.88) followed by medium resilience group (M = 29.05, SD = 4.73). The low resilience group has the lowest level of physical comfort (M = 27.93, SD = 5.04). Analysis of the results showed that there was a main effect of resilience on the Emotional Comfort of institutionalised children, $F(2,394)$ = 18.43, $p<.001$. It can be seen that there was an increase in Emotional Comfort from low resilience (M = 21.75, SD = 3.77) to medium resilience (M = 23.21, SD = 3.98) to high resilience groups (M = 25.29, SD = 4.27). With regard to the third sub domain of Comfort, that is negative stress reaction, there was a main effect of resilience on it also, F $(2,394) = 19.94$, $p<.001$. The scores on this subdomain increased with increase in resilience levels indicating that there was an improved reaction to stress as resilience increased. Scores in low resilience group (M = 14.87, SD = 3.05) were lower than medium resilience group (M = 16.53, SD = 3.31), with high resilience group having the highest scores (M = 18.02, SD = 3.21) among the three groups.

The next domain of health is Energy, which has two subdomains – Physical Activity and Vitality. A main effect of resilience was seen on the domain of Energy. The ANOVA results were significant, $F(2,394) = 7.14$, $p = .001$. There was a difference in the levels of energy between low resilience group (M = 27.05, SD = 6.02), medium resilience group (M = 29.00, SD = 6.07) and high resilience group (M = 30.62, SD = 7.04).

The sub domain of Energy - Physical Activity and Vitality are analysed in detail in the following paragraphs. A main effect of resilience was not found in the sub domain

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of Physical Activity as the ANOVA results were not significant, F (2,394) = 1.03, p>.05. Physical Activity levels in the groups of low resilience (M = 10.72, SD = 3.76), medium resilience (M = 11.02, SD = 3.91) and high resilience (M = 11.52, SD = 4.27) were almost equal.

Vitality is the next sub domain of Energy. In this a significant effect of resilience was found as the results were statistically significant, F (2,394) = 11.46, p<.001. Vitality levels were the highest in the high resilience group (M = 19.10, SD = 4.376), with medium resilience group having the next highest level (M = 17.98, SD = 3.67) and the low resilience group having the lowest vitality scores (M = 16.33, SD = 3.52).

The third domain is the Health Resilience domain and it has four subdomains - Peer Connectedness, Caretaker Connectedness, Teacher Connectedness, Active Coping. Main effect of resilience was seen in this domain also, F (2,394) = 29.45, p<.001. There were significant differences between the three groups of low resilience (M = 90.93, SD = 13.91), medium resilience (M = 100.03, SD = 14.33) and high resilience (M = 108.57, SD = 17.17).

In the sub domain of Peer Connectedness, no main effect of resilience was found, F (2,394) = 2.33, p>.05. Scores of the children in the low resilience group (M = 29.20, SD = 4.25) was along the same lines as the scores of the children in the medium resilience group (M = 29.27, SD = 4.77) and the high resilience group (M = 30.23, SD = 4.88).

Caretaker connectedness was the next sub domain that was analysed. It was seen that there was a main effect of resilience on caretaker connectedness, F (2,394) = 22.91, p<.001. Children in the high resilience group (M = 25.98, SD = 8.03) showed the highest

scores of caretaker connectedness, followed by the children in medium resilience group (M = 21.84, SD = 7.76). The children in the low resilience group had the lowest scores (M = 18.13, SD = 7.64).

The next sub domain is Teacher Connectedness. ANOVA carried out showed that there was a significant main effect of resilience on this sub domain of health as the results were significant statistically, $F (2,394) = 18.89$, $p<.001$. The levels of connectedness with teacher was lower in the low resilience group (M = 19.21, SD = 4.52), slightly higher in the medium resilience group (M = 22.50, SD = 5.17) and further increased in the high resilience group (M = 23.91, SD = 5.18).

The last sub domain in this category is Active Coping. Main effect of resilience was clearly evident as the results were significant, $F (2,394) = 20.25$, $p<.001$. Active coping increased from the low resilience group (M = 24.39, SD = 3.72) to medium resilience (M = 26.41, SD = 4.26) and high resilience group (M = 28.44, SD = 4.28).

The fourth domain under discussion is Risk avoidance and it has two sub domains – Aggression/Bullying and Peer Hostility/ Bullying Victim. Results seen in table 14 show that there was a main effect of resilience on Risk Avoidance, $F (2,394) = 10.14$, $p <.001$. The three children's groups differed from each other in their levels of aggression. Looking at the means and SD of the three groups, it is evident that high resilience groups had the highest level of score on risk avoidance (M = 24.91, SD = 5.55) followed by medium resilience group (M = 26.37, SD = 5.17). The low resilience group had the lowest level of risk avoidance (M = 28.59, SD = 4.53).

The first sub domain under Risk Avoidance is aggression and a high score on this sub domain indicates low levels of aggression. A significant main effect of resilience was

found on aggression, F (2,394) = 3.58, *p* <.05. The results showed that aggression levels of children in low resilience group (M = 14.10, SD = 4.09) was different from those in the medium resilience group (M = 14.24, SD = 3.91) and the high resilience group (M = 15.53, SD = 3.73).

The second sub domain is Peer Hostility and a significant main effect of resilience was found in this sub domain, F (2,394) = 17.22, *p* <.001. The scores were found to be increasing from the low resilience group (M = 10.81, SD = 2.74) to medium resilience group (M = 12.13, SD = 2.43) and high resilience group (M = 13.06, SD = 1.99).

The next domain of health under discussion is Subjective Well Being which has three sub domains. It could be seen from the results that there was a main effect of resilience on the domain of Subjective Well Being, F (2,394) = 6.67, *p*=.001. The three groups of children differed on this domain. The mean on subjective well being of low resilience group (M = 42.51, SD = 5.95) was lesser than mean on subjective well being of medium resilience group (M = 43.89, SD = 6.01). The mean on subjective well being of high resilience group (M = 45.82, SD = 6.31) was the highest.

The next sub domain of analysis is Life Satisfaction. Resilience was seen to have a main effect on life satisfaction also, F (2,394) = 6.21, *p*<.01. The means showed that life satisfaction of children in low resilience group (M = 17.21, SD = 3.93) was different from those in the medium resilience group (M = 18.22, SD = 3.49) and the high resilience group (M = 19.28, SD = 3.81).

The table clearly shows that there was a main effect of resilience on Self Worth of children under institutional care, F (2,394) = 13.97, *p*<.001. Differences were evident in the means of the three groups of resilience. An increase in self worth was seen from low

resilience group (M = 9.94, SD = 2.33) to medium resilience group (M = 10.40, SD = 2.53) and upto high resilience group (M = 11.67, SD = 2.62).

In the instance of body image of institutionalised children, results show that there was no main effect of resilience, F (2,394) = .96, p>.05. Children in low resilience group (M = 15.37, SD = 2.78) had comparable scores to the children in medium resilience group (M = 15.27, SD = 3.07) and the high resilience group (M = 14.87, SD = 2.87).

Achievement, the last domain, showed that there was a main effect of resilience on it, F (2,394) = 15.21, p<.001. Scores on this domain varied from one group of resilience to another. Means of achievement of low resilience group (M = 34.97, SD = 6.64) and medium resilience group (M = 36.75, SD = 5.89) was different from the mean of high resilience group (M = 39.83, SD= = 6.24).

In Academic Performance, a main effect of resilience was found as the results were significant, F (2,394) = 10.18, p<.01. The means and SDs of the three groups show that academic performance increased from low resilience group (M = 20.69, SD = 5.09) to medium resilience (M = 21.96, SD = 4.50) and high resilience group (M = 23.79, SD = 4.59).

School Engagement is the last sub domain in health. It could be seen from the results that there was a significant main effect of resilience on school engagement, F (2,394) = 11.98, p<.001. The scores on this sub domain were the highest in the high resilience group (M = 16.04, SD= 2.62) followed by the medium resilience group (M = 14.80, SD = 2.74). The low resilience group (M = 14.28, SD = 2.58) had the least score among the three groups on this sub domain.

The above results indicate whether resilience has a role in various domains and sub domains of health. However, in order to examine the difference between each pair of the three resilience groups, post hoc analyses were carried out. The results of Tukey's Honest Significant Difference (HSD) test are presented in table 16 and indicate which two groups of resilience differ from each other on health and its various domains and sub domains.

Table 16

Mean comparisons using Tukey's HSD test between three groups of resilience on health, its domains and sub domain scores

Variables	Resilience levels		
	High – Medium	High – Low	Medium – Low
Health	23.11***	43.02***	19.92***
Comfort	5.73***	9.98***	4.25***
Physical comfort	2.17***	3.29***	NS
Emotional comfort	2.07***	3.54***	1.46**
Negative stress reactions	1.49***	3.15***	1.66***
Energy	NS	3.57***	1.95*
Physical activity	NS	NS	NS
Vitality	1.12*	2.77***	1.65***
Health resilience	8.54***	17.64***	9.10***
Peer connectedness	NS	NS	NS
Caretaker connectedness	4.14***	7.85***	3.72***
Teacher connectedness	NS	4.70***	3.29***
Active coping	2.04***	4.06***	2.02***
Risk avoidance	2.22***	3.68***	1.46*
Aggression/bullying	1.29*	1.43*	NS
Peer hostility/bully victim	.92**	2.25***	1.33***
Subjective well being	1.93*	3.30***	NS
Life satisfaction	1.06*	2.07***	NS
Self-worth	1.28***	1.74***	NS
Body image	NS	NS	NS
Achievement	3.07***	4.85***	1.78*
Academic performance	1.83**	3.10***	NS
School engagement	1.24***	1.75***	NS

Note. *p<.05, **p<.01, ***p<.001, NS – not significant

Firstly looking at the overall composite score of health itself, the difference between the three groups were found to be statistically significant and these results are obvious in the figure 2 also. The low resilience group had the lowest health score and the high resilience group had the highest. Children with medium level of resilience had better health than children with low level of resilience ($p < .001$). They also had poorer health in comparison to the children with high level of resilience ($p < .001$). Children with higher resilience had significantly better health than the less resilient children ($p < .001$). The graph clearly shows the marked differences in the means of health. The improving health with increasing resilience is also obvious. Thus, the role of resilience in health is clearly established. The specific domain and subdomains of Health will be discussed in the following paragraphs.
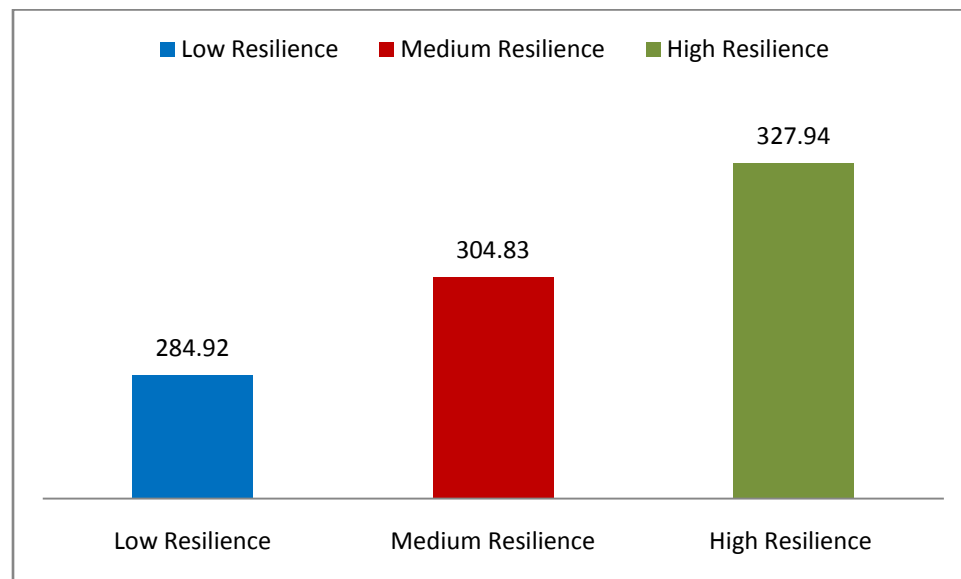
Figure 2. Bar graph showing the means of Health in the three groups of resilience

The first domain of health is comfort which includes three sub domains – physical comfort, emotional comfort and negative stress reactions. The domain of comfort also shows a clear impact of resilience, in line with the sub domains that compose it. Children with medium level of resilience had higher comfort levels than children with lower level of resilience ($p < .001$). Children with high level of resilience had higher levels of comfort than children with low levels of resilience ($p < .001$) and those with medium levels of resilience ($p < .001$). Figure 3 which shows the graphical representation of this clearly depicts the differences between the three groups and the increase in levels of comfort of children with a corresponding increase in levels of resilience.
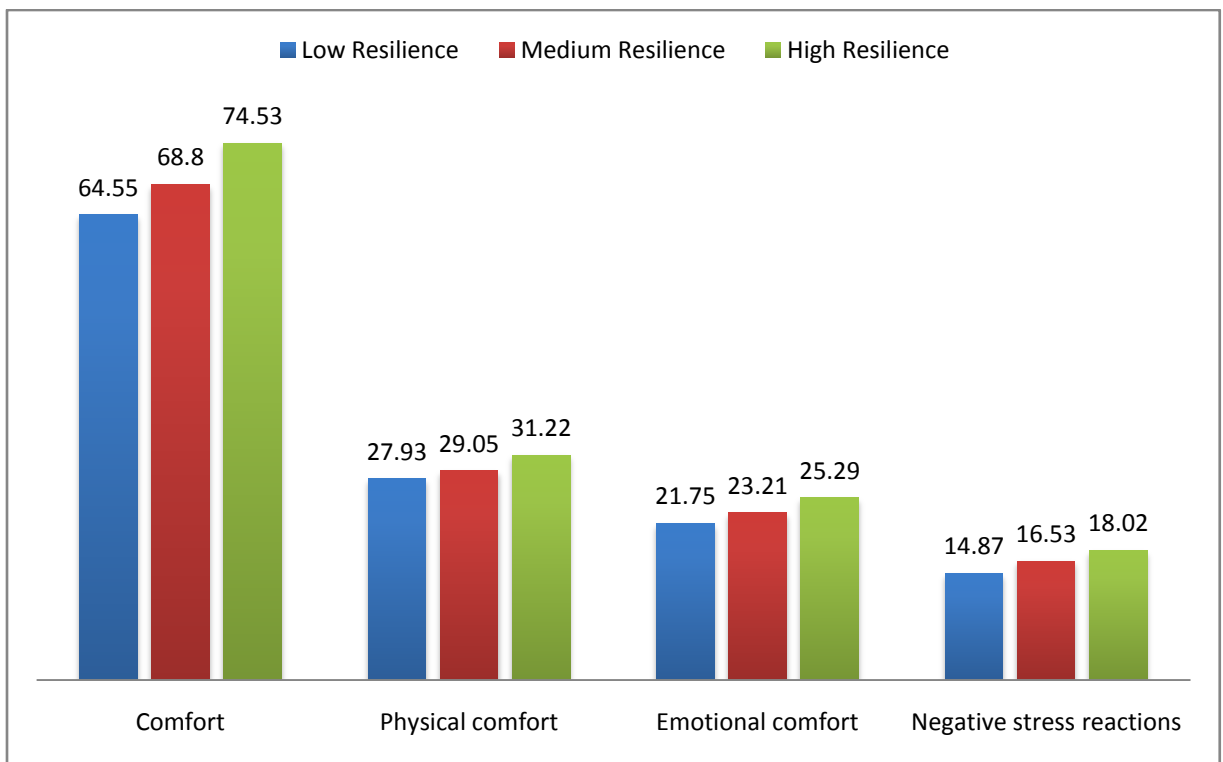
Figure 3. Bar graph showing the means of Comfort and its sub domains in the three groups of resilience

The comfort domain shows a clear impact of resilience and in line with this, the sub domains that compose it also show similar results. In physical comfort, though the high resilience group had significantly higher scores than the medium resilience group ($p < .001$) and the low resilience group ($p < .001$), the medium resilience group did not differ significantly from the low resilience group ($p > .05$) as evident from the post hoc analysis. Figure 3 shows the means of the three resilience groups on physical comfort. It can be clearly seen that there is an increase in the mean score as resilience level increases from low to medium to high. The means of emotional comfort show that low resilience group is significantly lower than the medium resilience group as well as the high resilience group. Further, mean of the medium resilience group is also significantly lower than the high resilience group. This is evident from the graph, where it can be seen that there is a steady increase in the levels of emotional comfort with an increase in levels of resilience from low to medium to high. Even in the sub domain of negative stress reaction a clear effect of resilience can be found. The low resilience group had significantly lower scores than the medium resilience group ($p < .001$) and the high resilience group ($p < .001$). Similarly the medium resilience group had significantly lower score ($p < .001$) on negative stress reaction than the high resilience group. The bar graph in figure 3 clearly displays the gradual increase in means of negative stress reactions indicating that an increase in resilience will result in decrease in negative reactions to stress that lead to poor health. Resilience improves the adaptive reaction to stressors in children.
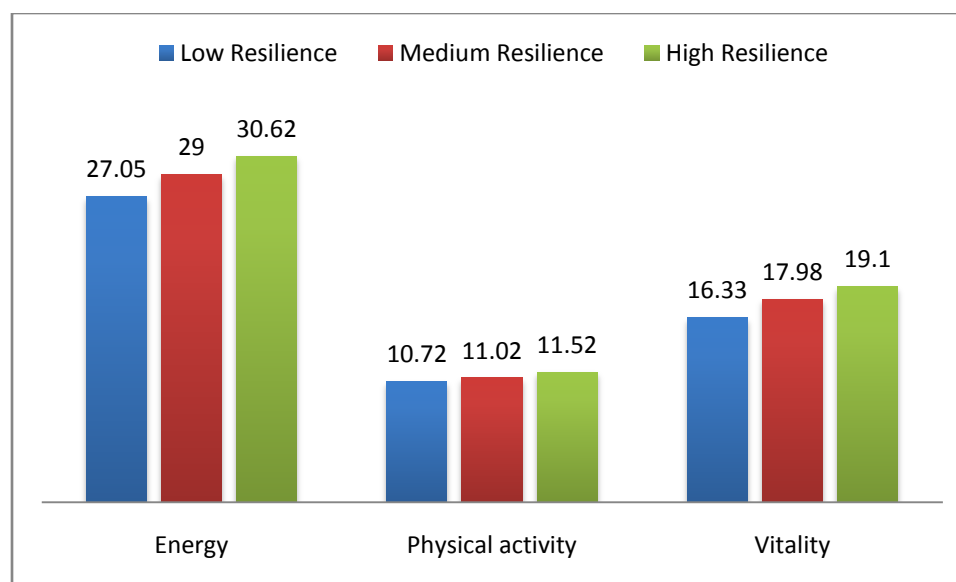
Figure 4. Bar graph showing the means of Energy and its sub domains in the three groups of resilience

When it comes to the domain of Energy, the low resilient group had significantly lower means than the medium resilient group ($p < .05$) and the high resilient group ($p < .001$). But the medium and high resilient groups had comparable levels of energy with no significant differences seen. The domain of energy has two sub domains − Physical activity and Vitality. ANOVA results were not significant for physical activity showing that the three groups of resilience did not differ from each other when it comes to participating in physical activities. This is evident from the graph of the means for the resilience groups where the columns representing the means of each of the three groups are equally tall which can be seen in figure 4. When it comes to vitality among the children, there were significant differences between each of the three groups. The graphical representation illustrates the increasing vitality levels from low to medium to high resilient children. The medium resilient children had more vitality than the low

resilient children ($p < .001$). The high resilient children ($p < .05$) had more vitality than the medium resilient children. The graph clearly shows that high resilient children had more vitality than the low resilient children ($p < .001$).
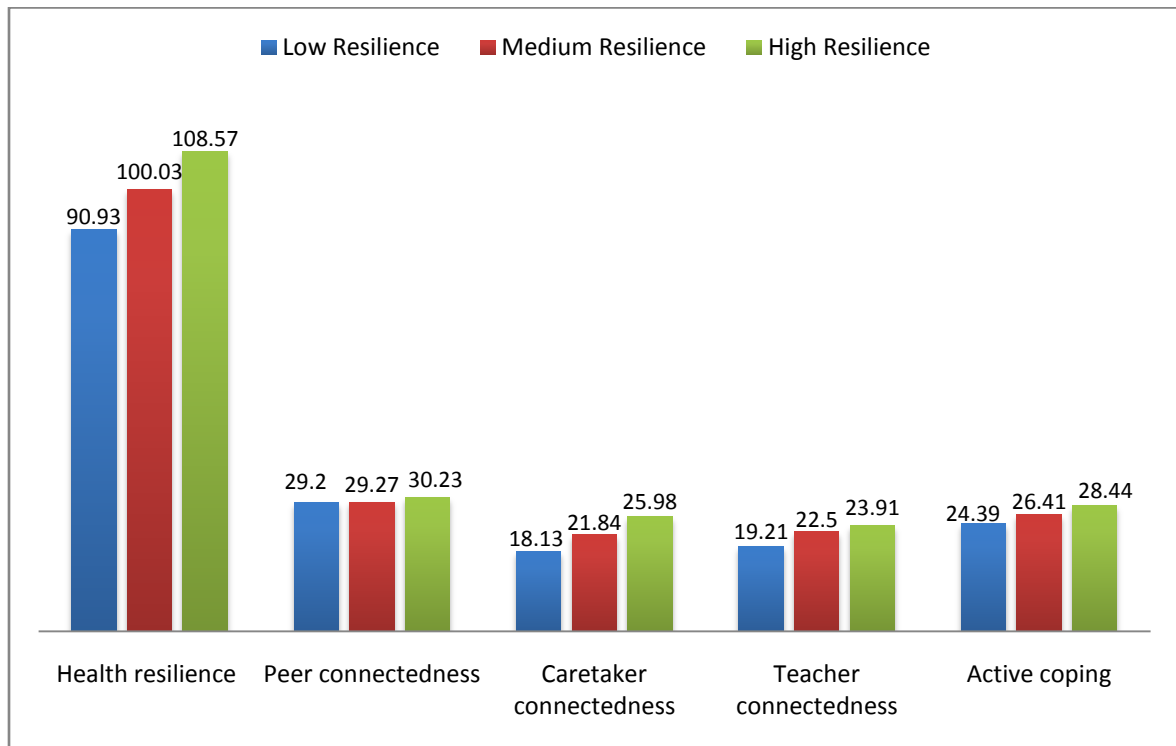
Figure 5. Bar graph showing the means of Health resilience and its subdomains in the three groups of resilience

The next domain of health under consideration is Health resilience and the four sub domains under this are peer connectedness, caretaker connectedness, teacher connectedness and active coping. Firstly, the domain itself showed significant differences between the three groups with the jumps in the scores observable in the bar graph in figure 5. The medium resilient group had far greater mean scores ($p < .001$) than the low resilient group. The mean of the high resilient group was soaring over the means of the medium resilient ($p < .001$) and the low resilient group ($p < .001$). In the first sub domain

of peer connectedness no differences were found between low resilient, medium resilient and high resilient children as the ANOVA results were not significant. This is clearly seen in the bar graph also where the columns look to be of equal height. The bar graph for caretaker connectedness shows that there is a jump in the means from low resilient to medium resilient to high resilient children. The level of caretaker connectedness among high resilient children was significantly more than the level of caretaker connectedness among medium resilient children ($p < .001$). The medium resilient children in turn had significantly more caretaker connectedness ($p < .001$) than less resilient children. As is evident from the graph, the medium and high resilient children have almost similar levels of teacher connectedness, there was no significant difference found between the two. The low resilient children did not have as much connectedness with their teachers as the medium resilient ($p < .001$) and high resilient children ($p < .001$). The last sub domain in this group is active coping. All three groups of children differed significantly from each other in this sub domain. Medium resilient children used more active coping than low resilient children ($p < .001$). High resilient children used more active coping than the low resilient ($p < .001$) as well as the medium resilient children ($p < .001$). The gradual increase in the means of active coping is visible in the graph as well.
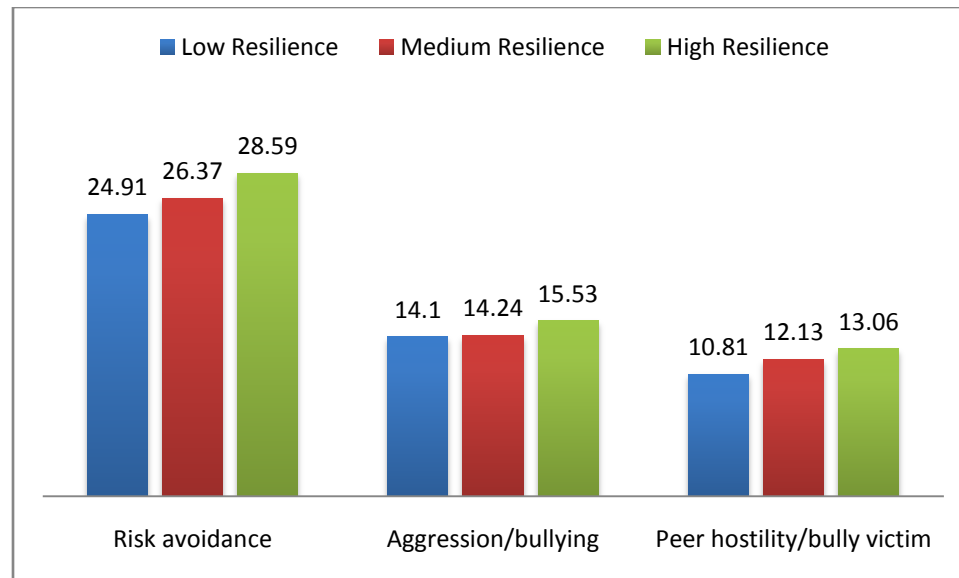
Figure 6. Bar graph showing the means of Risk avoidance and its sub domains in the three groups of resilience

Risk avoidance also showed differences between the groups of resilient children. The high resilience group had higher levels of risk avoidance than the medium resilience group ($p < .001$). In turn the medium resilience group had higher levels of risk avoidance than the low resilience group ($p < .05$). It is apparent from the graph seen in figure 6 where the column for the high resilience group rises above the other two columns. Within this domain when it comes to aggression or bullying, the low and medium resilience groups had no visible or statistical difference. But the high resilience group had higher scores than medium resilience ($p < .05$) and low resilience groups ($p < .05$). This shows that an increase in resilience results in decrease in bullying behaviour. Increase in resilience also led to decrease in being a victim of bullying. There was a steady increase in the mean scores on peer hostility from low to medium to high resilience groups indicating reduction in experience of bullying. The high resilience group had better

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scores than the medium resilience ($p < .01$) and low resilience groups ($p < .001$). Medium resilience in turn had better scores than the low resilience group ($p < .001$).
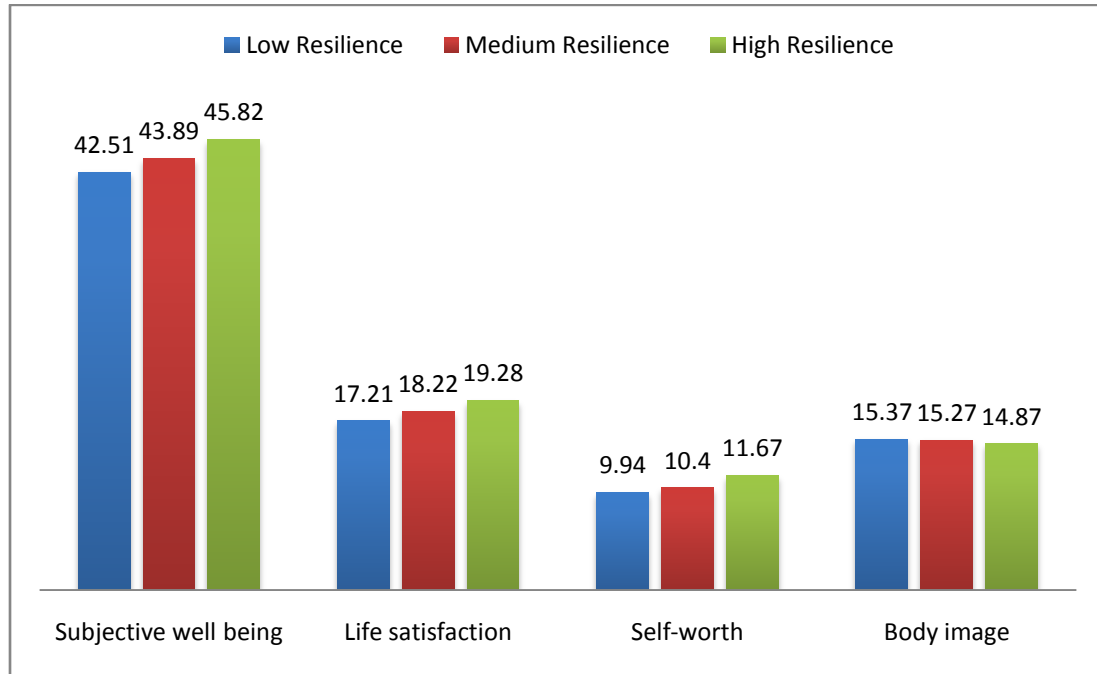
Figure 7. Bar graph showing the means of Subjective well being and its sub domains in the three groups of resilience

The next domain of health is subjective well being with three sub domains which are life satisfaction, self worth and body image. The low and medium resilience groups did not show any differences between each other in the domain of subjective well being itself and the sub domains of life satisfaction and self worth. The high resilience group had higher scores than the medium resilience group on self worth ($p < .001$), life satisfaction ($p < .05$) and subjective well being ($p < .05$). The high resilience group had higher scores than the low resilience group as well on self worth ($p < .001$), life satisfaction ($p < .001$) and subjective well being ($p < .001$). Figure 6 clearly shows the above mentioned results. ANOVA results found were not significant for body image

indicating equivalence among the groups. This is also noticeable from the bar graph in figure 7.
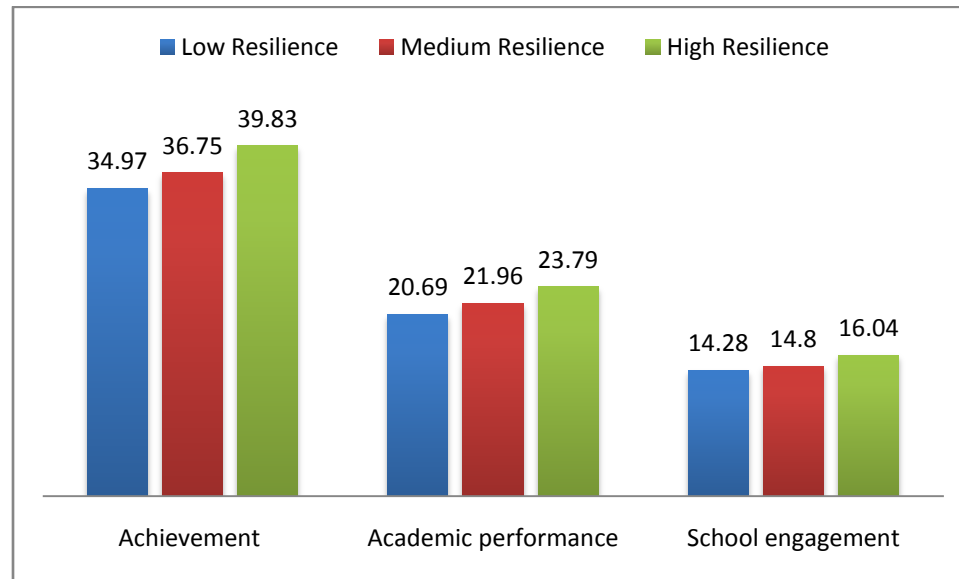
Figure 8. Bar graph showing the means of Achievement and its sub domains in the three groups of resilience

The last domain is that of achievement and it has two sub domains – academic performance and school engagement. While looking at the domain means in figure 8, significant differences were found between each pair of resilience group. In achievement there was an increase in scores with an increase in levels of resilience. Low resilience group had lower mean achievement score than medium resilience ($p < .05$) and high resilience groups ($p < .001$). The mean score of high resilience children was more than the medium resilience children ($p < .001$). Among the two sub domains also, medium and low resilience groups were found to be comparable with each other. The low resilience group had significantly lower scores than the high resilience group on the sub domain of

academic performance ($p < .001$) and school engagement also ($p < .001$). This significant difference between low and high resilience groups is discernible from the graph. The medium resilience also had lower scores than the high resilience group in these two sub domains, that is, academic performance ($p < .01$) and school engagement ($p < .001$).

Role of adversity on health of institutionalised children

The ANOVA results, presented in table 15, show that adversity had an effect on certain sub domains and domains of health. The differences between the two groups of children on adversity, that is high adversity and low adversity groups, on health, the various domains and subdomains under it, are presented in table 17. No main effect of adversity on health of institutionalised children could be found as the results were not significant statistically, F $(1,394) = 2.92$, $p>.05$. Health scores of children in low adversity group (M = 310.34, SD = 37.49) were not statistically different from the health scores of children in high adversity group (M = 302.40, SD = 33.61).

However, adversity had a clear effect on comfort with the main effect seen to be significant, F $(1,394) = 8.33$, $p<.01$. Children in low adversity group had higher scores (M = 71.14, SD = 10.34) than those in the high adversity group (M = 67.90, SD = 9.30). But there was no main effect of adversity on physical comfort as the results were not significant, F $(1,394) = 3.68$, $p>.05$. The levels of physical comfort were comparable in the low adversity group (M = 29.97, SD = 4.88) and the high adversity group (M = 28.90, SD =5.03). A main effect of adversity was also found on emotional comfort, F $(1,394) = 7.28$, $p<.01$. Children who had experienced low adversity (M = 24.17, SD = 4.45) scored high on emotional comfort when compared to the high adversity group children (M =

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22.85, SD = 3.96). Adversity did not have an effect on negative stress reaction as the main effect was not found to be significant, $F(1,394) = 3.66$, $p>.05$. The scores of the low adversity group (M = 17.00, SD = 3.68) and the high adversity group (M = 16.14, SD = 3.19) were almost the same. The three sub domains discussed above, physical comfort, emotional comfort and negative stress reaction together make up the first domain called comfort.

Table 17

Mean comparisons between the two groups of adversity on health, its domains and sub domain scores

	Adversity levels
	High – Low
Health	NS
Comfort	**-3.24****
Physical comfort	NS
Emotional comfort	**-1.32****
Negative stress reactions	NS
Energy	NS
Physical activity	**0.93****
Vitality	NS
Health resilience	NS
Peer connectedness	NS
Caretaker connectedness	NS
Teacher connectedness	**-1.57***
Active coping	NS
Risk avoidance	**-1.86****
Aggression/bullying	**-1.2****
Peer hostility/bully victim	NS
Subjective well being	NS
Life satisfaction	NS
Self-worth	NS
Body image	NS
Achievement	NS
Academic performance	NS
School engagement	NS

Note. *p<.05, **p<.01, ***p<.001, NS – not significant

No main effect of adversity was seen on Energy as the results were not significant, $F(1,394) = 2.15$, $p>.05$. Low adversity group ($M = 28.49$, $SD = 6.44$) and high adversity group ($M = 29.13$, $SD = 6.44$) both showed similar scores on energy. However, adversity did have a significant effect on the levels of Physical Activity of institutionalised children, $F(1,394) = 6.76$, $p<.01$. There was an increase in physical activity from low adversity group ($M = 10.49$, $SD = 4.11$) to high adversity group ($M = 11.42$, $SD = 3.84$). Main effect of adversity on Vitality was not found with results being not significant, $F(1,394) = .06$, $p>.05$. Vitality among the two groups of low adversity ($M = 18.00$, $SD = 4.13$) and high adversity ($M = 17.71$, $SD = 3.84$) were almost the same. Physical activity and Vitality are the two subdomains of Energy.

On the domain of Health Resilience, adversity did not have any main effect as the results were not found to be significant, $F(1,394) = 1.70$, $p>.05$. Low adversity group ($M = 101.82$, SD 16.65) and high adversity group ($M = 98.51$, $SD = 15.99$) had similar levels of score in this domain. There are four subdomains under the domain of Health Resilience which are Peer Connectedness, Teacher Connectedness, Caretaker Connectedness and Active Coping. Adversity also did not show any main effect on the sub domain of peer connectedness with results not being significant, $F(1,394) = .64$, $p>.05$. Scores on peer connectedness were the same in the low adversity ($M = 29.05$, $SD = 5.54$) and the high adversity group ($M = 29.78$, $SD = 4.04$). Adversity did not have any effect on caretaker connectedness as the results found were not significant, $F(1,394) = .92$ $p>.05$. The means of caretaker connectedness were comparable in the low adversity ($M = 22.93$, $SD = 8.24$) and the high adversity group ($M = 21.28$, $SD = 8.28$). On the other hand, adversity had a main effect on teacher connectedness, $F(1,394) = 5.29$,

p<.05. Children in the low adversity group (M = 22.95, SD = 5.50) had greater connectedness with their teachers than those in the high adversity group (M = 21.38, SD = 5.10). Adversity, however, did not have any significant effect on active coping in institutionalised children, F (1,394) = 1.05, *p*>.05. The levels of active coping were equal in low adversity (M = 26.89, SD = 4.58) and high adversity group (M = 26.07, SD = 4.23).

A significant main effect of adversity was also found on Risk Avoidance, F (1,394) = 9.12, *p* <.01. The low adversity group had higher levels of risk avoidance (M = 27.70, SD = 5.43) than the high adversity group (M = 25.84, SD = 5.08). Main effect of adversity was also seen on the first subdomain of Risk Avoidance - Aggression, F (1,394) = 7.65, *p* <.01. Low adversity group had higher scores (M = 15.28, SD = 3.96) than the high adversity group (M = 14.08, SD = 3.88). Main effect of adversity was not found to be significant in the second subdomain of Risk Avoidance – Peer Hostility, F (1,394) = 3.63, *p* =NS. The scores of low adversity group (M = 12.42, SD = 2.41) and high adversity group (M = 11.76, SD = 2.61) are comparable on this subdomain.

It can also be observed that adversity did not have any main effect on subjective well being as the results were not significant, F (1,394) = .06, *p*>.05. Children in low adversity group (M = 44.09, SD = 6.66) and high adversity group (M = 43.97, SD = 5.88) did not differ from one another on their levels of subjective well being. The three sub domains discussed below – life satisfaction, self worth, and body image together make up the domain of subjective well being. No main effect of adversity was found on life satisfaction, F (1,394) = .29, *p*>.05. Low adversity group (M = 18.32, SD = 3.91) and high adversity group (M = 18.16, SD = 3.68) did not differ on their level of life

satisfaction. Adversity had no significant main effect on the self worth of the institutionalised children, $F(1,394) = .03$, $p>.05$. Children in low adversity group (M = 10.72, SD = 2.80) had almost the same scores on self worth as children in the high adversity group (M = 10.53, SD = 2.43). Similarly, adversity also did not have any main effect on body image, $F(1,394) = .10$, $p>.05$. Scores on body image of the children in low adversity (M = 15.04, SD = 3.05) and high adversity group (M = 15.29, SD = 2.87) were on par with one another.

In the domain of Achievement also adversity did not show any main effect, $F(1,394) = .01$, $p>.05$. Children in low adversity group (M = 37.09, SD = 6.92) and high adversity group (M = 37.05, SD = 6.13) had similar scores on achievement. The last domain of achievement consists of two subdomains Academic Performance and School Engagement. Adversity did not have any main effect on academic performance, $F(1,394) = .25$, $p>.05$. The scores of the children in the low adversity group (M = 22.26, SD = 5.32) and the high adversity group (M = 21.98, SD= 4.49) were almost equivalent. The variable adversity did not have any main effect on school engagement, $F(1,394) = .43$, $p>.05$. School engagement among the children in low adversity group (M = 14.84, SD = 3.03) was equal to school engagement in children in high adversity group (M = 15.07, SD= 2.54).

Overall health, a composite of all the domains also did not display any effects of adversity. There was an effect of adversity on the domain of comfort and its sub domain of emotional comfort. An increase in levels of adversity decreased the levels of comfort experienced by children under institutional care. The high adversity group had lower levels of emotional comfort than the low adversity group. There was a difference in the

levels of physical activity of children with those who had experienced higher adversities reporting more physical activeness than the children who had experienced lower adversities. Teacher connectedness also varied as a result of level of adversities, with the high adversity group having decreased connectedness with their teachers than the low adversity group. In both risk avoidance and its sub domain of aggression/ bullying an effect of adversity was found. An increase in the levels of adversities experienced by the children resulted in increase in bullying by the children (high score indicates less bullying). This also indicates that risk avoidance by the children is less in those children who have experienced more adversities. The other domains and subdomains of health did not show any differences between the low adversity and the high adversity group.

Interaction between resilience and adversity and its impact on health of institutionalised children

Interaction effect shows the differences in health of children with varying levels of resilience when they have experienced different levels of adversities. The ANOVA results have found that resilience and adversity did have an interaction effect on health, some of its domains and its sub domains. Firstly, it is the overall component of health itself that shows interaction effect of resilience and adversity. Table 15 shows this effect and it is evident that there was an interaction effect between resilience and adversity on health as the results were statistically significant, $F(2, 394) = 3.25$, $p<.05$. The graphical representation of these results is seen in figure 9 given next.
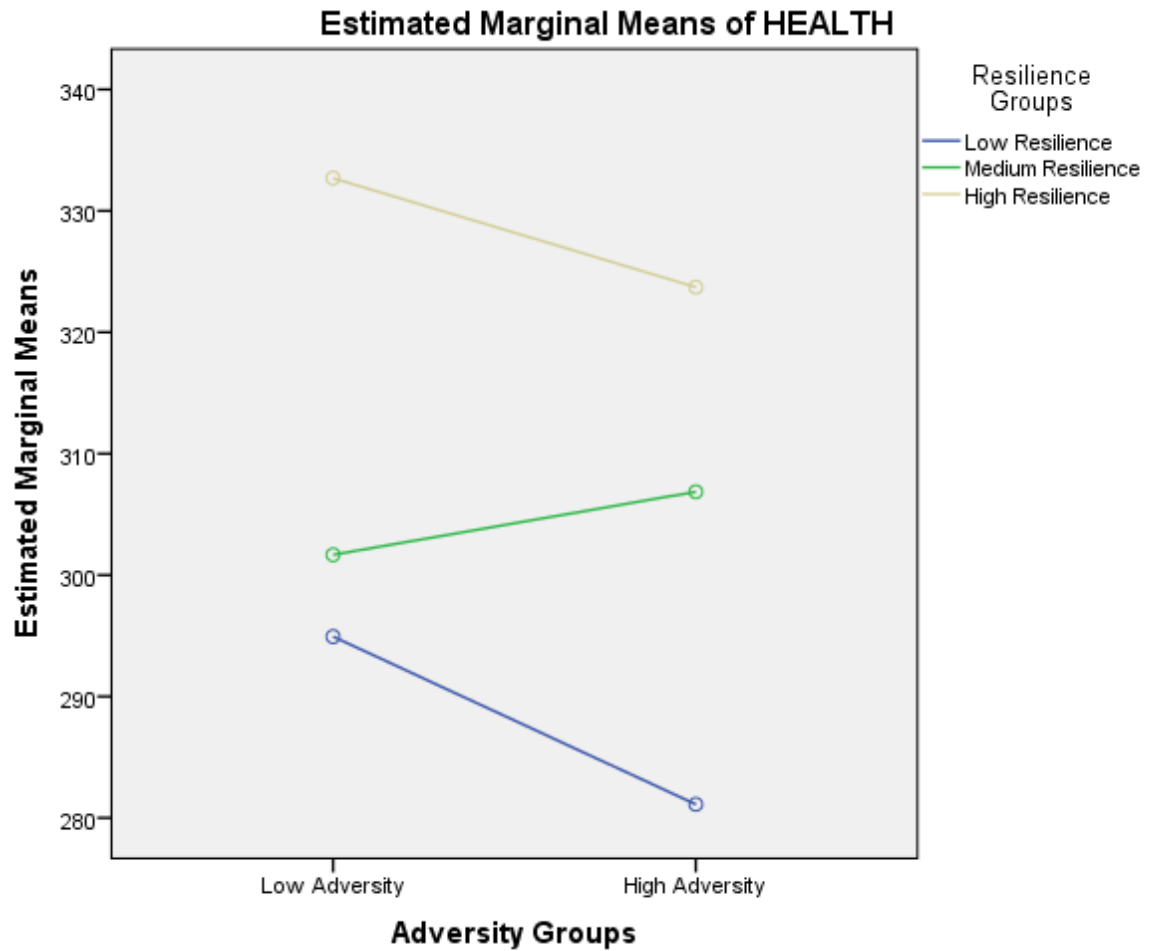
Figure 9. Line graph showing the interaction between levels of resilience and levels of adversity in the health of institutionalised children.

The overall component of health shows interaction effect of resilience and adversity. High resilient children show a marginal decrease in health with an increase in the number of adversities experienced. It is clear from the yellow line which is inching downwards from left to right. Low resilience group also shows a decrease in health with an increase in adversities evident from the blue line sloping downwards. But the green line displays a different trend. This line indicating the medium resilience group shows an

upward incline showing improvement in health with increasing adversities. Thus, the interaction effect of resilience and adversity is evident.

Analysing the interaction effects of resilience and adversity on all the domains and sub domains of health, the ANOVA results have found that resilience and adversity did have an interaction effect on health, some of its domains and its sub domains. Only those variables where a statistically significant interaction effect was seen will be presented in graphical manner in the ensuing paragraphs.

When the domains of health were analyzed to determine the interaction effect of resilience and adversity on them, mixed results were found. Some domains showed interaction effects whereas some did not. Similarly, for the sub domains too some had interaction effects and others did not. The results for each domain and sub domain are presented in table 14. The first domain of health - comfort was considered and interaction effect of resilience and adversity on comfort was not found to be significant, $F(2,394) = 2.76$, $p=NS$. Further, evaluating each of the three sub domains of comfort found that interaction effect of resilience and adversity on physical comfort was absent as the results were not significant, $F(2,394) = 1.60$, $p=NS$. Interaction between resilience and adversity showed an effect on the levels of emotional comfort as the interaction effect results were significant, $F(2,394) = 3.13$, $p<.05$. Resilience and adversity did not interact with one another to have an effect on negative stress reaction, the last sub domain of Comfort, $F(2,394) = 1.03$, $p=NS$.
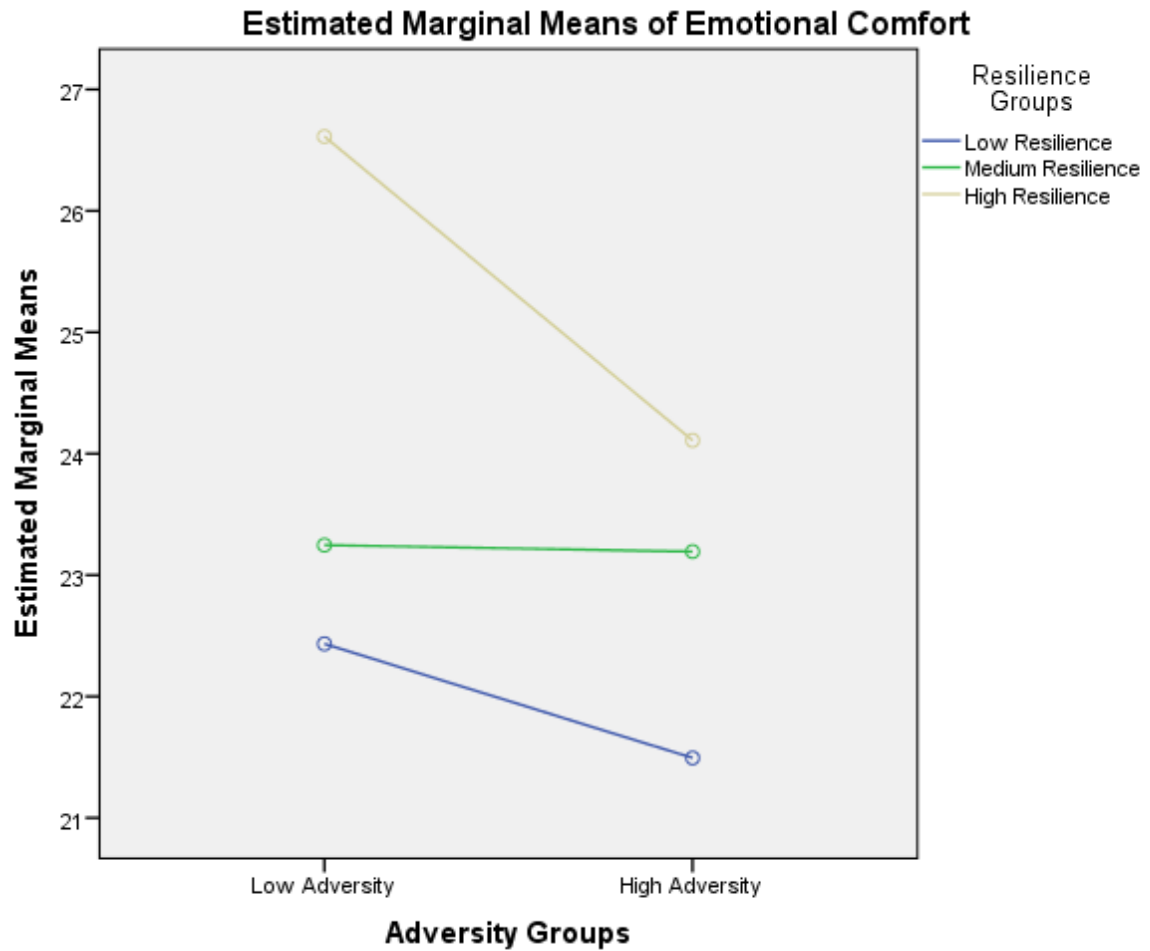
Figure 10. Line graph showing the interaction between levels of resilience and levels of adversity in the domain of emotional comfort.

The first of the sub domains of health where resilience and adversity together had an interaction effect is emotional comfort. Main effects of resilience and adversity were both found on emotional comfort. It is evident in figure 10 that among the low resilience group, there was a slight decrease in emotional comfort with an increase in adversity. The blue line in the graph (figure 10) denotes low resilience group and it slopes downwards slightly from low adversity to high adversity. In the medium resilience group this was not seen, as the scores of emotional comfort remained almost the same. This is evident from the line graph, where medium resilience is represented by a green line which remains

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mostly straight. The third line in the graph which symbolizes high resilience is yellow in colour. This line drops down considerably from low to high adversity. The interaction between resilience and adversity can be seen. As resilience increases emotional comfort improves but with an increase in adversity there is a subsequent decrease in emotional comfort.

The second domain of health analysed for interaction effect of resilience and adversity is Energy. Interaction effect of resilience and adversity on Energy was also not found to be significant, $F(2, 394) = .84$ $p=NS$. Interaction between resilience and adversity on the levels of physical activity in institutionalised children was not significant statistically, $F(2, 394) = 2.50$, $p=NS$. Interaction effect of resilience and adversity on Vitality was also not significant, $F(2, 394) = .52$, $p=NS$. The above results show that there was no interaction effect of resilience and adversity on Energy and its two subdomains – Physical Activity and Vitality.

The third domain is Health Resilience and it has four subdomains – Peer Connectedness, Caretaker Connectedness, Teacher connectedness and Active Coping. Interaction effect of resilience and adversity was also not found in Health resilience with the results not found to be significant, $F(2, 394) = 1.19$, $p=NS$. Resilience and adversity, though, interacted with one another to have an effect on peer connectedness in institutionalised children and the interaction effect was found to be significant, $F(2, 394) = 4.80$, $p<.01$ for Peer Connectedness. Interaction effect was also not significant in the subdomain of Caretaker Connectedness, $F(2, 394) = .01$, $p=NS$. Hence, adversity and resilience did not have any combined effect on caretaker connectedness of a child under institutional care. Also, no interaction effect of resilience and adversity was found on

teacher connectedness with the results being found to be not significant, F (2, 394) = .82,

p=NS. Interaction effect was also not evident as the results were not significant in the last

subdomain Active Coping, F (2, 394) = .47, *p=NS*.

A statistical significant interaction effect of resilience and adversity was found in

the subdomain of Peer Connectedness. This interaction effect is presented as line graph in

figure 11.
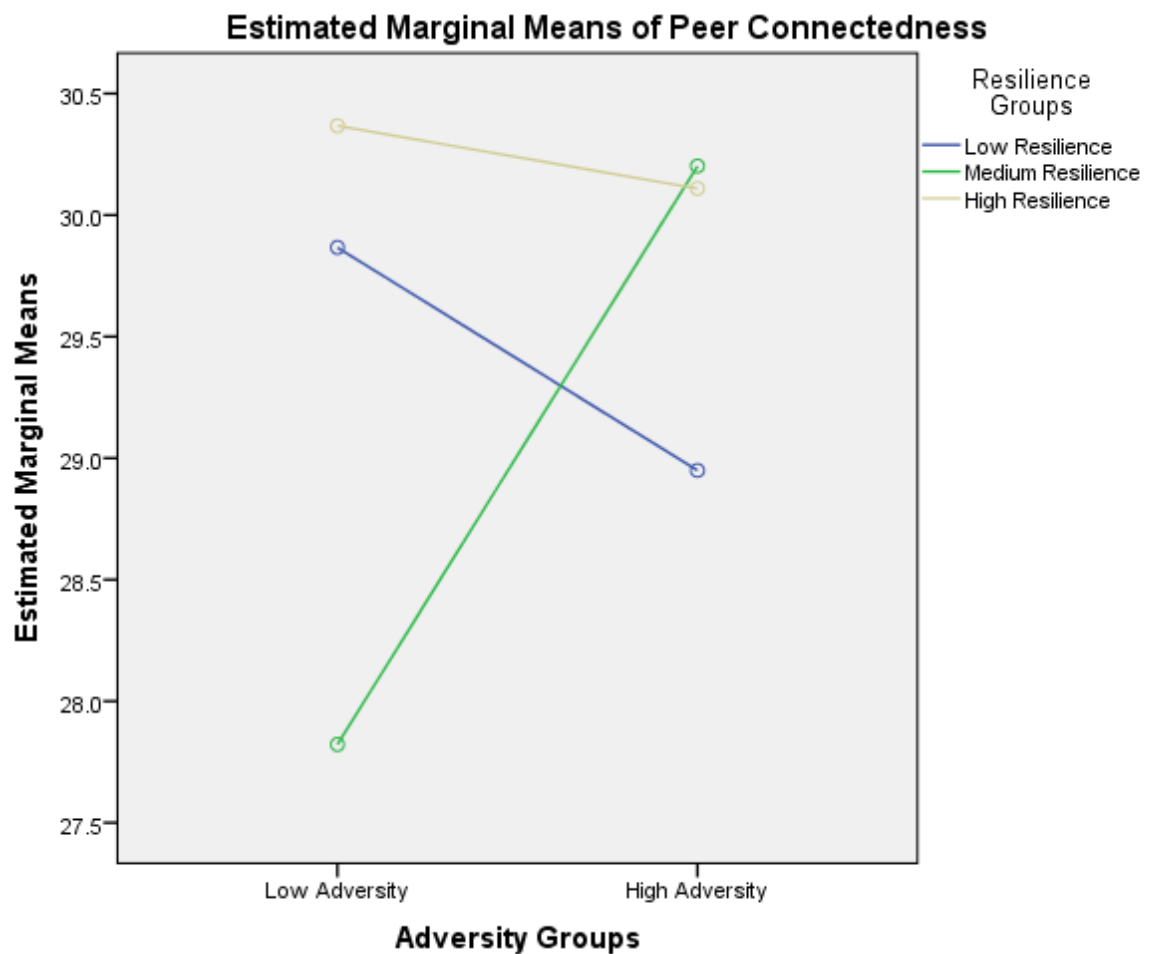
Figure 11. Line graph showing the interaction between levels of resilience and levels of
adversity in the sub domain of peer connectedness.

The next variable to be considered is peer connectedness, which did not show any main effects of resilience or adversity, but an interaction effect was found from two way ANOVA and can be observed in figure 11. There was a decrease in peer connectedness in the low resilience group when there was an increase in adversity as the blue line is moving downwards towards the right. The high resilience group does not show any effect of adversity as the yellow line remains almost horizontal. But the medium resilience group appears the most affected by a change in the level of adversity. The green line becomes almost vertical indicating a sharp increase in peer connectedness. When there is low adversity peer connectedness of medium resilience children is less than the low resilience group but reaches the level of high resilience group when there is an increase in adversity.

An interaction effect of adversity and resilience on Risk Avoidance was not seen in the present study, $F (2, 394) = .61$, $p =NS$. Interaction effect was not found on the sub domain of aggression, $F (2, 394) = .26$, $p =NS$. Interaction effect was not found on the sub domain of peer hostility, $F (2, 394) = .70$, $p =NS$. Thus, there was no interaction effect of resilience and adversity on Risk Avoidance and its two subdomains – Bullying and Peer hostility.

Resilience and adversity did not interact to have any effect on subjective well being, $F (2, 394) = 2.34$, $p=NS$. The three sub domains discussed below – life satisfaction, self worth, and body image together make up the domain of subjective well being. Interaction effect between resilience and adversity was also not seen on life satisfaction, $F (2, 394) = 2.76$, $p=NS$. Interaction effect of resilience and adversity was

also absent in the case of self worth, $F_{(2, 394)} = .81$, *p=NS*. No interaction effect of resilience and adversity on body image was found in the study, $F_{(2, 394)} = .57$, *p=NS*.

An interaction effect of resilience and adversity could be seen on the domain of achievement, $F_{(2, 394)} = 4.25$, *p<.05*. Interaction between resilience and adversity did not have any significant effect on academic performance, $F_{(2, 394)} = 2.48$, *p>.05*. Interaction between resilience and adversity did have an impact on school engagement of children, $F_{(2, 394)} = 4.09$, *p<.05*. The visual representation of the interaction effects of Achievement and School engagement are presented in figure 12 and figure 13 respectively.
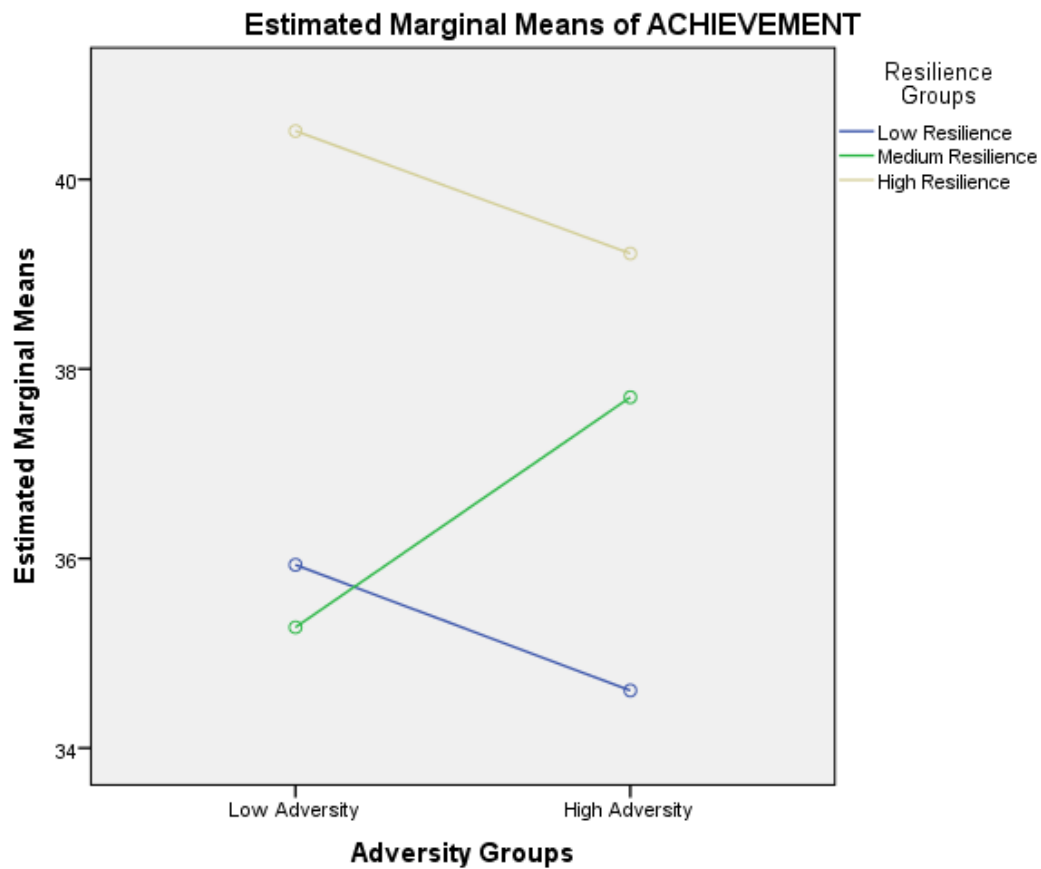
Figure 12. Line graph showing the interaction between levels of resilience and levels of adversity in the domain of achievement.

The only domain which showed any interaction effect is achievement. This domain again did not have any effect of adversity but resilience did have a role in it. As with some sub domains discussed above, in this domain as well, the three lines of low, medium and high resilience show similar trends as apparent in figure 12. Blue line of low resilience and yellow line of high resilience both are sloping downwards revealing that as adversities increase there is a decrease in achievement of children irrespective of whether they have low or high resilience. But again the medium resilient children display a contrary trend with achievement increasing with increasing adversity.
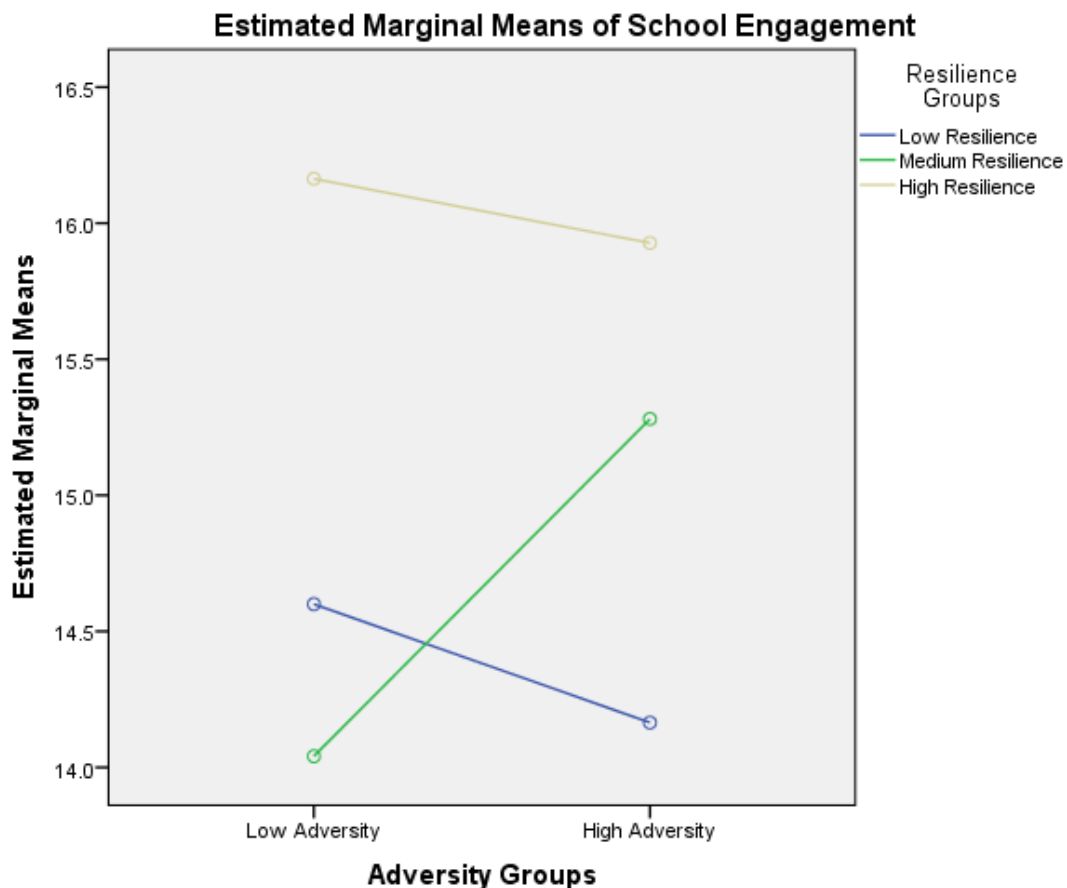
Figure 13. Line graph showing the interaction between levels of resilience and levels of adversity in the sub domain of school engagement.

The third variable showing interaction effect is school engagement and it is presented in figure 13. Though there was a main effect of resilience, adversity did not have any significant effect on school engagement. The yellow and blue lines indicating high and low resilience respectively can be seen to decline to some extent when there is an increase in adversity indicating minimal decrease in school engagement. But the green line of medium resilience is moving upwards sharply indicating an increase in school engagement in children when there is an increase in the adversity they have experienced.

The results presented above prove that there is clear effect of resilience on the health of children under institutional care. Resilience also had a main effect on almost all the sub domains and all the domains of health. So, the role of resilience in health cannot be disputed. Adversity on the other hand did not seem to have such a pervasive effect on health. The role of adversity could be seen only on certain sub domains and domains. Though there was an interaction effect of resilience and adversity on health, this effect was not seen across all domains and sub domains of health when detailed analyses were carried out. Results showed that in some instances there was an interaction between resilience and adversity which had an impact on health of children.

Predicting health of institutionalised children

The third objective of the study was to find out if resilience, level of adversity and impact of adversity predict health of institutionalised children. While considering adversity, besides level of adversity two additional dimensions were also assessed- the impact of the adversity which the child had experienced at the time of occurrence of adverse incidents and also the current impact the adverse incident has on that child. The

reason for considering the past and present impact of adverse incidents is that adversity has effects that go beyond the event itself to affect core beliefs about the self and the world (Janoff- Bulman, 1989). More than the actual number of adversities experienced it is the impact of these adversities which may have greater and a more prolonged impact on the individual.

First, paired t test was carried out on past and present impact of adversities to determine if the two were statistically different from one another, in order to establish each as a distinct variable on its own in the regression analysis. There was a difference in the impact of adversities reported by the children, varying impact of adversities (t [399] = 11.6, p < .001). Institutionalised children reported greater levels of past impact of adversities (M = 17.31, SD = 11.6) than present impact of adversities (M = 15.36, SD = 10.83), indicating that there was a slight dissipation in the effect that adversities had with the passing of time.

Regression analysis enables one to predict the dependent variable from the independent variables based on the relationship between the variables. As there are multiple independent variables multiple regression analysis was thought to be suitable for the present study. The extent of impact of these variables would be explored in the regression analysis. At the same time the individual contribution of each variable in predicting the criterion variable should also be known. Thus, stepwise multiple regression analysis was employed for further data analysis.

The criterion variable in the study is health - its various domains and sub domains. These include six domains and sixteen sub domains. The six domains of health

are comfort, energy, resilience, risk avoidance, subjective well being and achievement. The domain of comfort has the subdomains of physical comfort, emotional comfort and negative stress reactions. The domain of energy has the subdomains of physical activity and vitality. The domain of health resilience has the subdomains of peer connectedness, caretaker connectedness, teacher connectedness and active coping. The domain of risk avoidance has the subdomains of, aggression/bullying and peer hostility/bully victim. The domain of subjective well being has the subdomains of life satisfaction, self-worth and body image. The domain of achievement has the subdomains of academic performance and school engagement. The predictor variables include resilience, number of adversities experienced by a child, the past impact of adversities, that is, the impact of the adversity at the time of occurrence and finally the present impact of adversities on the child.

The summary of regression analysis is presented in table number 18. Resilience was a significant predictor of health, its domains and sub domains barring body image. Level of adversities was a predictor of health, energy, physical activity, achievement and academic performance. Past impact of adversities was a predictor of health, emotional comfort, negative stress reaction, health resilience, teacher connectedness, risk avoidance and bully victim. Present impact of adversities was a predictor of comfort, physical comfort, energy, health resilience, bullying/aggression, achievement and academic performance. However, each of the domains and sub domains are presented and discussed in detail from table number 19 to 25.

Table18. *Summary stepwise regression table showing the predictors for health, its domains and sub domains*

Criterion variable	β				Change in R²				Total Adjusted R²
	Resilience	Level of adversities	Past impact of adversities	Present impact of adversities	Resilience	Level of adversities	Past impact of adversities	Present impact of adversities	
Health	**.443***	**.207**	**-.325***	NS	**.238***	**.013**	**.021***	NS	**.266***
Comfort	**.360***	NS	NS	**-.210***	**.170***	NS	NS	**.041***	**.207***
Physical comfort	.195***	NS	NS	-.246***	.036***	NS	NS	.087***	.122***
Emotional comfort	.323***	NS	-.136**	NS	.126***	NS	.017**	NS	.144***
Negative stress reactions	.348***	NS	-.109*	NS	.140***	NS	.011*	NS	.147***
Energy	**.215***	**.266***	NS	**-.187***	**.048***	**.014***	NS	**.012***	**.066***
Physical activity	.115*	.189***	NS	NS	.013*	.029***	NS	NS	.037***
Vitality	.272***	NS	NS	NS	.074***	NS	NS	NS	.071***
Health resilience	**.413***	NS	**-.498***	**.424**	**.182***	NS	**.008***	**.015****	**.200***
Peer connectedness	.114*	NS	NS	NS	.013*	NS	NS	NS	.011*
Caretaker connectedness	.362***	NS	NS	NS	.131***	NS	NS	NS	.129***
Teacher connectedness	.302***	NS	-.171***	NS	.118***	NS	.027***	NS	.141***
Active coping	.367***	NS	NS	NS	.135***	NS	NS	NS	.132***
Risk avoidance	**.227***	NS	**-.209***	NS	**.077***	NS	**.041***	NS	**.113***
Aggression/bullying	.102*	NS	NS	-.204***	.010*	NS	NS	052***	.057***
Peer hostility/bully victim	.313***	NS	-.117*	NS	.116***	NS	.013*	NS	.125***
Subjective well being	**.229***	NS	NS	NS	**.053***	NS	NS	NS	**.050***
Life satisfaction	.239***	NS	NS	NS	.057***	NS	NS	NS	.055***
Self-worth	.264***	NS	NS	NS	.070***	NS	NS	NS	.067***
Body image	NS	NS	NS	NS	NS	NS	NS	NS	NS
Achievement	**.264***	**.203***	NS	**-.268***	**.089***	**.014***	NS	**.010***	**.106***
Academic performance	.209***	.186*	NS	-.261**	.060***	.012*	NS	.011*	.076***
School engagement	.271***	NS	NS	NS	.074***	NS	NS	NS	.071***

Note. *p < 0.05, **p < 0.01, ***p < 0.001, N= 400

A stepwise multiple regression analysis was undertaken to evaluate whether resilience, the level of adversities experienced by a child, the impact of adversity at the time of occurrence of incident in the past and the impact of adversity on the child at present are able to predict health of an institutionalised child. The results are presented in table 19. Looking at the summary table of stepwise regression it is clearly evident that resilience is a major predictor of health of institutionalised children (F= 124.26, $p <$ 0.001). The contribution of resilience is 23.8 %. Next to resilience, the past impact of adversities was significant, (F= 11.26 $p < 0.001$)), and the respective change in variance is 2.1%. The last variable that was contributing in prediction of health was the level of adversities (F= 6.84, $p < 0.01$) and the resultant change in variance was 1.3%.

Table 19
Stepwise regression analyses showing various models predicting health of institutionalised children

Predictor	R	ΔR^2	β
Criterion - Health			
Model 1	.488	.238***	
1. Resilience			.488***
Model 2	.509	.021***	
1. Resilience			.452***
2. Past impact of adversities			-.149***
Model 3	.521	.013**	
1. Resilience			.443***
2. Past impact of adversities			-.325***
3. Level of adversities			.207**
Total R^2		.266***	

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, $\Delta R^{2=}$ change in R squared

The variable of impact of adversities in the present did not have a significant impact in predicting health of institutionalised children. Thus, as evident from the

explanatory power (i.e. β values), resilience makes the biggest contribution followed by past impact of adversities and level of adversities in predicting health of institutionalised children and they are together able to explain 26.6% of the variance in health.

Stepwise regression analysis was carried out to determine the predictors of comfort and its sub domains. The results are presented in table 20. The results show that there are two clear predictors of comfort in institutionalised children. These include resilience and present impact of adversities. The other variables – level of adversities and the past impact of adversities were not predictors of comfort. Resilience emerged as the largest predictor (F= 81.46, $p < 0.001$), with variance of 17.0 %. The positive β value of resilience shows a positive correlation with comfort. Besides resilience the next significant predictor was the present impact of adversities (F= 20.76, $p < 0.001$) and it explained variance of 4.1%. The negative β value indicates toward a negative correlation between comfort and present impact of adversities. Thus, resilience and present impact of adversities contribute to 20.7% variance in comfort domain of health.

Table 20

Stepwise regression analyses showing various models predicting health of institutionalised children in the comfort domain and its sub domains

Predictor	R	ΔR^2	β
Comfort			
Model 1	.412	.170***	
1. Resilience			.412***
Model 2	.459	.041***	
1. Resilience			.360***
2. Present impact of adversities			-.210***
Total R^2		.207***	
Physical comfort			
Model 1	.295	0.087***	
1. Present impact of adversities			-0.295***
Model 2	.350	0.036***	
1. Present impact of adversities			-0.246***
2. Resilience			0.195***
Total R^2		0.122***	
Emotional comfort			
Model 1	.356	.126***	
1. Resilience			.356***
Model 2	.379	.017**	
1. Resilience			.323***
2. Past impact of adversities			-.136**
Total R^2		.144***	
Negative stress reactions			
Model 1	.374	.140***	
1. Resilience			.374***
Model 2	.389	.011*	
1. Resilience			.348***
2. Past impact of adversities			-.109*
Total R^2		.147***	

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, ΔR^2 = change in R squared

Under comfort, there are three sub domains- physical comfort, emotional comfort and negative stress reaction. In the sub domain of physical comfort, the first major predictor was present impact of adversities (F= 37.79, $p < 0.001$). The β values were negative indicating that the relationship between present impact of adversities and physical comfort was negative. The variance in physical comfort that can be attributed to the present impact of adversities was 8.7%. Resilience was found to be a significant predictor (F= 27.71, $p < 0.001$) as it made a significant change in variance of 3.6% bringing the total variance explained by the two predictors to 12.2%. The other predictors – level of adversities and impact of adversities in the past, were not found to be significant and were thus excluded from the final regression model.

In order to predict emotional comfort, the variables that were found significant in the stepwise regression include resilience (F= 57.80, $p < 0.001$) and past impact of adversities (F= 8.04, $p < 0.01$). Resilience had higher explanatory power (β = .323) than past impact of adversities (β = -.136). Also positive β values of resilience indicate a positive relationship with emotional comfort and negative β values of past impact indicate negative relationship with emotional comfort. The total variance explained by the two predictors is 14.7%. In this the contribution of resilience was significantly higher at 12.6 % and the contribution of past impact of adversities was 1.7%. No other predictors, such as level of adversities and present impact of adversities, were further added to the model as they did not have a significant impact on the criterion variable, that is, emotional comfort.

The third sub domain of comfort was negative stress reactions. Among the four variables in the regression equation only two were significant predictors of negative

stress reactions. Resilience was found to be the most significant predictor (F= 64.87, $p <$ 0.001) with the β = .323, $p < 0.001$. The variance explained by resilience was a substantial 14%. The next significant predictor was found to be past impact of adversities (F= 5.22, $p < 0.05$) and the variance was 1.1%. Further the negative β = -.136, $p < 0.05$, indicates a negative relationship between past impact of adversities and negative stress reactions. The total variance in the sub domain of negative stress reactions explained by the two significant predictors was 14.7%.

The next domain of health under consideration is energy and it consists of two sub domains- physical activity and vitality. Results from the stepwise regression analysis for this domain and its sub domains are shown in table 21. In the health domain of energy, three variables were found to be significant predictors. First, resilience was the largest predictor (F= 20.05, $p < 0.001$) and the change in variance of Energy was 4.8%. There was a positive relation between resilience and Energy as evident from the positive β value, β = .219, $p <.001$. The next predictor of energy was level of adversities (F= 5.71, $p < 0.05$) and the change in variance of energy was 1.4%. There was a positive relation between resilience and Energy as evident from the positive β value, β = .118, $p <.05$. The last significant predictor was present impact of adversities (F= 4.95, $p < 0.05$) and the change in variance of energy as a result of it was 1.2%. Also, its relationship with Energy was negative as found from the negative β value. Thus, the total variance in energy predicted by the three significant predictors was 6.6%. The fourth variable - the past impact of adversities was not a significant predictor of energy.

Table 21

Stepwise regression analyses showing various models predicting health of institutionalised children in the Energy domain and its sub domains

Predictor	R	ΔR^2	β
Energy			
Model 1	.219	.048***	
1. Resilience			.219***
Model 2	.248	.014*	
1. Resilience			.238***
2. level of adversities			.118*
Model 3	.270	.012*	
1. Resilience			.215***
2. level of adversities			.266***
3.Present impact of adversities			-.187*
Total R^2		.066***	
Physical activity			
Model 1	.171	.029***	
1. level of adversities			.171***
Model 2	.205	.013*	
1. level of adversities			.189***
2. Resilience			.115*
Total R^2		.037***	
Vitality			
Model 1	.272	.074***	
1. Resilience			.272***
Total R^2		.071***	

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, $\Delta R^2 =$ change in R squared

The domain of energy has two sub domains - physical activity and vitality. Analysis of the predictors of physical activity was carried out. Level of adversities was found to be a significant predictor (F= 11.93, $p < 0.001$) of physical activity. The change in variance of physical activity from level of adversities was 2.9%. The second predictor

was resilience (F= 5.35, $p < 0.05$) as the β value was also found to be significant. The contribution of variance of resilience in physical activity was 1.3%. Both the β values were positive indicating positive relationship between the predictors and the criterion variable. So the predictors of physical activity were level of adversities experienced by a child and his resilience level.

The next sub domain analyzed was vitality. Out of the four variables - level of adversities, present impact of adversities, past impact of adversities and resilience, only resilience emerged as a significant predictor of vitality (F= 31.68, $p < 0.001$). Also, there was a positive relationship between vitality and resilience evident from the positive β value. Finally the amount of variance in vitality that can be attributed to resilience was 7.4%.

The next domain is health resilience and it consists of four sub domains – peer connectedness, caretaker connectedness, teacher connectedness and active coping. The results of the stepwise regression analysis are shown in table 22. The first predictor of health resilience found to be significant was resilience (F= 88.78, $p < 0.001$) and it explained 18.2% of the variance. The past impact of adversities was another significant predictor (F= 4.1, $p < 0.05$). It was second highest contributor to variance and the change in variance from it was 0.8%. The next significant predictor was present impact of adversities (F= 7.42, $p < 0.01$) and the change in variance of health resilience was 1.5%. The overall variance of health resilience explained by the three predictors was 20%. Level of adversities was not found to be a significant predictor of health resilience.

Table 22

Stepwise regression analyses showing various models predicting health of institutionalised children in the Health Resilience domain and its sub domains- Peer Connectedness, Caretaker Connectedness, Teacher Connectedness and Active Coping

Predictor	R	ΔR^2	β
Health Resilience			
Model 1	.427	.182***	
1. Resilience			.427***
Model 2	.437	.008*	
1. Resilience			.405***
2. Past impact of adversities			-.094*
Model 3	.453	.015**	
1. Resilience			.413***
2. Past impact of adversities			-.498***
3. Present impact of adversities			.424**
Total R^2		.200***	
Peer Connectedness			
Model 1	.114	.013*	
1. Resilience			.114*
Total R^2		.011*	
Caretaker Connectedness			
Model 1	.362	.131***	
1. Resilience			.362***
Total R^2		.129***	
Teacher Connectedness			
Model 1	.343	.118***	
1. Resilience			.343***
Model 2	.381	.027***	
1. Resilience			.302***
2. Past impact of adversities			-.171***
Total R^2		.141***	
Active Coping			
Model 1	.367	.135***	
1. Resilience			.367***
Total R^2		.132***	

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, ΔR^2 = change in R squared

Analysis of the predictors of peer connectedness found only one significant predictor, that is, resilience. Level of adversities, past impact of adversities and present impact of adversities were all excluded as they were not significant predictors. Resilience was found to be a significant predictor (F= 5.25, $p < 0.05$) and the change in variance of peer connectedness from it was 1.3%. Further, the positive β value demonstrates a positive relationship with increase in resilience resulting in increase in peer connectedness.

The second sub domain was caretaker connectedness and the level of adversities, past impact of adversities and present impact of adversities were not significant predictors of Caretaker connectedness. Resilience was again a significant predictor (F= 60.15, $p < 0.001$) and the amount of variance change was a substantial 13.1%. The positive relationship found between the two shows that highly resilient children have higher degrees of caretaker connectedness.

Analysis of teacher connectedness as the criterion variable in the regression analysis found that resilience was the first significant predictor followed by the past impact of adversities. Resilience was a significant predictor (F= 53.01, $p < 0.001$) with 11.8% variance. The relationship was also positive with an increase in resilience bringing an increase in teacher connectedness. The next significant predictor of teacher connectedness was past impact of adversities (F= 12.76, $p < 0.001$), which brought a 2.7% change in variance of teacher connectedness. The negative β value shows that past impact of adversities has a negative relation with teacher connectedness. The other variables such as level of adversities and present impact of adversities were not significant predictors of teacher connectedness. Thus, there were two significant

predictors – resilience and past impact of adversities which together contributed to 14.1% variance in teacher connectedness.

The last sub domain was active coping. The only significant predictor for active coping was resilience (F= 61.91, $p < 0.001$). The change in variance attributed to resilience was 13.5%. Also, the relationship between resilience and active coping was positive. Out of the four variables analysed as possible predictors three were found to non significant and these were level of adversities, past impact of adversities and present impact of adversities.

Under the domain of risk avoidance there are two sub domains – aggression and peer hostility. Table 23 shows the stepwise regression results of this domain and sub domains. The domain of risk avoidance was evaluated and it was seen that resilience was a significant predictor (F= 33.08, $p < 0.001$) and the next significant predictor was the past impact of adversities (F= 18.47, $p < 0.001$). Resilience had a positive relationship with risk avoidance and the change in variance of risk avoidance contributed by it was 7.7%. Past impact of adversities had a negative relation with risk avoidance and the change in variance of risk avoidance contributed by it was 4.1%. Hence, the total variance explained by the two predictors was 11.3%. The other variables - level of adversities and present impact of adversities were not predictors of risk avoidance.

Table 23

Stepwise regression analyses showing various models predicting health of institutionalised children in the Risk Avoidance domain and its sub domains - Aggression/ bullying, Peer hostility/ bullying victim

Predictor	R	ΔR^2	β
Risk Avoidance			
Model 1	.277	.077***	
1. Resilience			.277***
Model 2	.343	.041***	
1. Resilience			.227***
2. Past impact of adversities			-.209***
Total R²		.113***	
Aggression/ bullying			
Model 1	.228	.052***	
1. Present impact of adversities			-.228***
Model 2	.249	0.010*	
1. Present impact of adversities			-.204***
2. Resilience			.102*
Total R²		.057***	
Peer hostility/ bullying victim			
Model 1	.341	.116***	
1. Resilience			.341***
Model 2	.359	.013*	
1. Resilience			.313***
2. Past impact of adversities			-.117*
Total R²		.125***	

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, ΔR^2 = change in R squared

Risk avoidance had two subdomains – aggression and peer hostility. Evaluation of the sub domain of aggression showed that there were two significant predictors of aggression in institutionalised children. The first predictor was present impact of

adversities (F= 21.91, $p < 0.001$) which brought a 5.2% change in variance of aggression. The relationship between the two variables was negative. A high score on the aggression sub domain indicates lower aggression levels, which is an indicator of good health. Thus, increased present impact of adversities results in an increase in aggressive behaviour. Resilience was the next significant predictor of aggression (F= 4.16, $p < 0.05$) and its variance contribution was 1%. A positive relationship was found between Resilience and Aggression. Thus, the overall variance change in aggression from the two predictors was 5.7%.

The next sub domain analysed was peer hostility or bullying victim. Resilience was the first predictor (F= 52.38, $p < 0.001$) and it made the most contribution in the variance of peer hostility. The variance explained by resilience was 11.6%. A positive relationship was also found between the two variables. Past impact of adversities was the next significant predictor (F= 5.88, $p < 0.05$). The variance change in peer hostility was 1.3%. The β value indicates a negative relationship between the two variables which means that increased past impact of adversities would result in decreased health in peer hostility. The two significant predictors explained one-eighth or 12.5% of the variance in peer hostility. The other variables, which are, level of adversities and present impact of adversities were not significant.

The fifth domain of health is subjective wellbeing and it has three sub domains – life satisfaction, self worth and body image. The results of the stepwise regression analyses are shown in table 24. Subjective well being had one significant predictor, which was resilience (F= 22.07, $p < 0.001$). The change in variance as a result of

resilience was 5%. A positive correlation was found between the two, suggesting that as

resilience increases so does subjective well being.

Table 24
Stepwise regression analyses showing various models predicting health of
institutionalised children in the subjective wellbeing domain and its sub domains- life
satisfaction, self worth and body image

Predictor	R	ΔR^2	β
Subjective Well being			
Model 1	.229	.053***	
1. Resilience			.229***
Total R^2		.050***	
Life Satisfaction			
Model 1	.239	.057***	
1. Resilience			.239***
Total R^2		.055***	
Self worth			
Model 1	.264	.070***	
1. Resilience			.264***
Total R^2		.067***	
Body Image			
no variable entered as F too low to enter			
F level was insufficient for computation			

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, ΔR^2 = change in R squared

For life satisfaction there was only one significant predictor, that is, resilience (F=

24.03, $p < 0.001$). The variance explained by resilience in life satisfaction was 5.7%. A

positive relation was found between the two variables, so life satisfaction increases with

increase in resilience. The remaining three variables, which were level of adversities, past

impact of adversities and present impact of adversities, were not significant predictors of life satisfaction.

The next sub domain was self worth and it also had only one significant predictor, that is, resilience. The remaining three variables - level of adversities, past impact of adversities and present impact of adversities, were not significant. Resilience which was the significant predictor (F= 29.75, $p < 0.001$) had a positive relation with self worth showing that both improve simultaneously. Further, the variance change from resilience in self worth was 7%.

The last sub domain of the subjective wellbeing domain is body image. However, as the F level was too low for computation it can be inferred that there were no predictors of body image.

The last domain of Health under consideration is the achievement domain which further has two sub domains- academic performance and school engagement. The stepwise regression results of this domain and subdomains are presented in table 25. For the domain of achievement, there were three significant predictors – resilience (F= 38.81, $p < 0.001$), present impact of adversities (F= 4.3, $p < 0.05$) and level of adversities (F= 6.31, $p < 0.05$). Past impact of adversities was not a significant predictor of achievement. Resilience was the first significant predictor and showed 8.9% change in variance in achievement. The next predictor was present impact of adversities which resulted in a 1.0% change in variance of achievement. Finally, there was 1.4% change in variance from the third predictor – level of adversities. Thus, the total variance in achievement was 10.6%. The relationship between resilience and achievement and between level of

adversities and achievement was positive. While the correlation between present impact

of adversities and achievement was negative.

Table 25

Stepwise regression analyses showing various models predicting health of institutionalised children in the Achievement domain and its sub domains- academic performance and school engagement

Predictor	R	ΔR^2	β
Achievement			
Model 1	.298	.089***	
1. Resilience			.298***
Model 2	.314	.010*	
1. Resilience			.273***
2. Present impact of adversities			-.102*
Model 3	.336	.014*	
1. Resilience			.264***
2. Present impact of adversities			-.268***
3. level of adversities			.203*
Total R^2		.106***	
Academic Performance			
Model 1	.244	.060***	
1. Resilience			.244***
Model 2	.266	.011*	
1. Resilience			.217***
2. Present impact of adversities			-.109*
Model 3	.287	.012*	
1. Resilience			.209***
2. Present impact of adversities			-.261**
3. Level of adversities			.186*
Total R^2		.076***	
School Engagement			
Model 1	.271	.074***	
1. Resilience			.271***
Total R^2		.071***	

Note. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, N= 400, β = Standardized Beta Coefficient, R = co-efficient of correlation, ΔR^2 = change in R squared

For academic performance there were three predictors. First, resilience was a significant predictor (F= 25.19, $p < 0.001$), the present impact of adversities was also a significant predictor (F= 4.75, $p < 0.05$) and the last predictor of academic performance was level of adversities (F= 5.13, $p < 0.05$). The past impact of adversities was not found to be a significant predictor of academic performance. The variance in academic performance from resilience was 6%. The amount of variance in academic performance from present impact of adversities was 1.1%. The next predictor was level of adversities and the variance explained by it was 1.2%. So, the total variance explained by the three predictors was 7.6%. The relationship between resilience and academic performance was positive. The relationship between level of adversities and academic performance was also positive. However, the present impact of adversities and academic performance had a negative relationship.

For school engagement barring resilience the other variables were not significant predictors. Resilience was a significant predictor of school engagement (F= 31.62, $p < 0.001$) with 7.4% variance being explained by it. Further, increase in resilience resulted in increase in school engagement as well, as they had positive correlation.

The discussion of the obtained results and its implications are presented in the next chapter.

CHAPTER V

DISCUSSION

DISCUSSION

The first objective of the study was to explore the levels of resilience, adversities and their types and health status experienced by institutionalised children. The second objective of the study was to analyze the role of resilience and adversity in the health of institutionalised children. The three groups of low resilience, medium resilience and high resilience institutionalised children were compared on various domains of health and differences were found between the three groups. The children with low and high adversity were also compared to examine the role of adversity. The study also looked into how the interaction between these two affected the children's health and their ability to predict health. This was done using two way ANOVA followed by post hoc Tukey's analyses.

The third objective of the study was to determine the predictors of health among institutionalised children vis-à-vis resilience, level of adversity and impact of adversity. Stepwise regression analyses showed the unique contributions of adversity and resilience in predicting health in institutionalised children. Regression analyses also showed the extent to which resilience and adversity had an impact on each specific domain of health.

In the present study 25% of the children were taken to be highly resilient. Research studies on at risk children have found that the prevalence of resilience ranges from 25% to 70%. British psychiatrist Michael Rutter (1985, 1987) conducted a series of epidemiological studies on inner-city London youth and on the island of Wight and found that one quarter of the children were resilient. Werner (1989) found that of the 200 children who were at risk 36% or 72 children were doing very well despite the risk

factors and were resilient. Similarly, a study that took psycho-social well-being as indicators of degree of resilience in a sample of emancipated youth, found that (47%; n = 77) exhibited a resilient profile despite marked adversity (Yates & Grey, 2012). After an exhaustive review of the literature, Bernard (1991) stated, "when tracked into adulthood, research worldwide has documented the amazing finding that at least 50% and usually closer to 70% of these 'high-risk' children grow up to be not only successful by societal indicators but confident, competent, and caring"

The prevalence of different types of adversities was assessed in the present study. A study by the Ministry of Women and Child Development of India (2012) that assessed the prevalence of physical abuse, emotional abuse, sexual abuse and girl child neglect and the present study show consensus on some of the findings. The reported levels of physical abuse, emotional abuse by boys in the above mentioned and the current study was on par with each other. However, the abuse levels as reported by the girls in the present study were much higher. The levels of sexual abuse were significantly higher in the ministry study than the present study. The present study was carried out in private institutions and no government institution was included. Further, there are some NGOs that provide institutional care to only victims of sexual abuse and sexual assault which were not included in the present study. This could account for the low numbers reported in the present study.

Accidents, illness and death were reported by majority of the children. As one of the leading reasons for putting children under institutional care is being orphaned or losing either one of the parent, the high prevalence of this adversity is understandable. Children in institutions generally are from a highly risk laden background. They may be

from extremely poor families, which could increase the risk for living in violence and disturbance prone neighbourhoods. This could also be a reason for the children being engaged in child labour. No other study till date, in India and abroad, has looked into the prevalence of these adversities in institutionalised children and thus estimates of the prevalence rates cannot be compared.

In the case of health, its domains and sub domain scores of the institutionalised children were in the average range or just above the average scores. This clearly indicates that there is scope for increasing resilience levels and improving health of institutionalised children across domains and sub domains. Research studies on health of institutionalised children show that the children display poor health across various domains. Children in institutions experience emotional problems, difficulties with their peers, conduct problems or bullying behaviour (Padmaja, Sushma, & Agarwal, 2014). In the present study, children were low on emotional comfort, peer connectedness and risk avoidance. Studies also state that children in institutions have difficulty in forming secure attachment (Nowacki & Schoelmerich, 2010) which in turn affects their relationships with others around them. This is in line with the findings of the present study where children had low levels of connectedness with their teachers, caretakers and peers. The present study also showed that institutionalised children used low levels of active coping. A study on the coping strategies used by institutionalised children found that they engaged in maladaptive coping to deal with the stressors in their lives (Mullan, Mcalister, Rollock, & Fitzsimmons, 2007).

The other findings of the current study about the health of institutionalised children though in line with theoretical expectations have not been specifically explored

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by any other researcher in India. It was seen that institutionalised children report physical ailments such as pain, discomfort, fatigue, etc. They also reported low levels of physical activity and vitality. Many studies on institutionalised children report high rates of psychological problems. Well being and quality of life are negatively correlated to distress, thus supporting the low levels of life satisfaction, self worth and subjective well being found in the current study. It was found that institutionalised children had less than optimum levels of academic performance, school engagement and overall achievement.

Results clearly show that there is a role of resilience in the health of institutionalised children. The role of resilience extended across all the domains of health also. This result is in line with existing studies linking resilience and health (Bartone, Hystad, Eid, & Brevik, 2012; Kimhi, Hantman, Goroshit, Eshel, & Zysberg, 2012; Scali, Gandubert, Ritchie, Soulier, Ancelin, & Chaudieu, 2012). Though these studies were on adult population, researchers working on resilience in children also acknowledge that resilience does have a positive effect on health. Initial resilience research, by Werner (1989), Garmezy (1991), Rutter (1985), etc., has found that children at risk for possible mental health problems displayed good mental health outcomes as a consequence of being resilient. However, not many studies have looked into the details of this resilience and health association in children, which the present study does. Resilience was analyzed in depth to examine its role on each of the domains of health as well.

The first domain to be analysed was comfort which consists of three sub domains physical comfort, emotional comfort and negative stress reactions. This domain is characterized by low distress on physical and emotional aspects among children. Psychological distress in children often manifests in the form of physical symptoms

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though adolescents also report and display emotional symptoms. These could be strong indicators of physical and mental health problems in children. It is evident from the current study that resilience has a significant role in comfort with comfort levels being better in children with higher levels of resilience than in low resilient children.

Physical comfort has been defined by the tool developers (Bevans, Riley, & Forrest, 2010) as physically experienced distress such as pain, fatigue, and somatic complaints and absence of these would indicate greater level of physical comfort. High resilient children had high level of physical comfort. This is in line with the existing research which has found that highly resilient people do tend to report less pain (Karoly and Ruehlman, 2006), and fewer somatic issues. In the present study, there was an increase in the levels of physical comfort from low to medium to high resilient groups. The positive relationship between resilience and health has also been seen earlier by Gayton and Lovell (2012). These studies were on older adults and young adults respectively. An early adolescent based study has also found a positive relation between resilience and physical health (Swanson, Valiente, Lemery-Chalfant, & O'Brien, 2011) corroborating the findings of the present study.

Emotional comfort, which is the psychological distress in emotions and mood with particular emphasis on anxiety, anger, and depression, also showed an impact of resilience. A steady increase in emotional comfort was seen from low, medium to high resilient groups indicating decreasing levels of anger, depression, and anxiety among the children. Research studies have found that low and medium resilience are often characterized by anxiety (Min et al., 2013) and higher resilience is associated with lower anxiety and depressive symptoms (Mealer et al., 2012).

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The third sub domain of comfort is called negative stress reaction and is related to one's reactions to stressors. These are the involuntary responses that are distressing to the individual when faced with challenges in social and interpersonal areas of one's lives. They are an important aspect of child health. Bevans, Riley and Forrest (2010) state that "responses such as ruminating about problems and having intrusive thoughts are indicators of prolonged and maladaptive mental, behavioral, and physiological responses to stressors, an important but rarely assessed aspect of health". Results from the present study clearly show that the low resilient children display more of such distressing response than the medium resilient children. The high resilient children are better able to handle stressors as they display less distressing reactions to stressors than low resilient children. This shows the competence of resilient children in handling unexpected events (Hariharan, 1991) and ability to regulate one's emotions and behaviour when required. Resilient people have been known to cope better with acute, prolonged or consistent stressors of lives such as negative life events, combat situations, etc (Daniels et al., 2012; Peng & Zhang, 2012; Scali et al., 2012).

The role of resilience was seen in other domains of health also. The domain of Energy has been described by the tool developers as consisting of the two sub domains of physical activity and vitality. Physical activity is defined as 'Involvement in activities that promote physical fitness' and vitality has been defined as 'Feelings of vim, vigor, pep, energy, and healthfulness'. Resilience did have a significant role in the levels of energy reported by the institutionalised children. Further, the role of resilience was evident in the sub domain of vitality and not physical activity. This indicates that resilience creates feelings of being healthy, active and having the energy to engage in

physical activities. A study by Gooding, Hurst, Johnson and Tarrier (2012), though carried out on an adult population, has found that high resilience was associated with better perceptions of one's general health and high energy levels. Interestingly, resilience did not have an effect on the actual levels of physical activity among children.

The next domain of health is Health resilience and it has four sub domains which are Peer Connectedness, Caretaker connectedness, Teacher Connectedness and Active Coping. Peer Connectedness is defined by the tool developers, Bevans, Riley and Forrest (2010) as "making friends, quality of friendships, having friends you can trust". Caretaker connectedness is a feeling of belonging with one's caretaker. As per Bevans, Riley and Forrest, Teacher Connectedness is "perception that teachers care about you as a person and about your learning". Finally Active Coping has been defined by them as "Social problem-solving such as how you manage conflict with a friend or getting a bad grade". Resilience played a role in this domain with a contribution of at least 18% in the total Health Resilience. Even within each of the sub domains - Caretaker connectedness, Teacher Connectedness and Active Coping, resilience contributed to a change of around one eighth.

As the resilience level among the children increased so did their connectedness with their caretakers, teachers and to some extent with their peers. Early resilience researchers such as Werner, Rutter, and others have found that resilient children do have at least a significant adult in their lives with whom they are attached and who is a source of support for them. In the case of institutionalised children, in the absence of parents, the teachers and caretakers become dominant adults and parental figures in the children's lives. The significant others for these children may also be acting as role models to whom

they can look up to or to have a reference point. The sense of relatedness that children experience towards their guardians, teachers and peers was found to have an effect on their emotional and behavioral engagement in school (Furrer & Skinner, 2003). These results were found to be consistent for teacher report of children's engagement or children's self report. Furrer and Skinner (2003) also state that children's academic motivation and subsequent academic performance is also affected by children's connectedness to significant people in their lives.

Resilience level also increased the use of active coping strategies in dealing with various life stressors. Wu, Sheen, Shu, Chang and Hsiao (2013) assessed pediatric cancer patients and found that there is a positive association between resilience and cognitive and problem- oriented coping which are forms of active coping. Hence the results from the study are not far from existing literature.

The fourth domain of health was Risk Avoidance. It consists of two sub domains aggression or bullying and peer hostility or being a victim of bullying. The role of resilience was clearly evident in this domain and its sub domains. High resilient children did not engage in bullying behaviour and also had less experiences of being bullied by others when compared to low resilient children. This can have long term consequences. Researchers (Sourander, et al., 2007) studying the long term effects of bullying, both in the bully and the victim, have found that it predicted adult psychiatric disorders in individuals. Bullies were at increased risk for antisocial personality disorder, victims were at risk for anxiety disorders and those who were both bully and victim were at risk for both antisocial personality disorder and anxiety disorders. If highly resilient children have lower levels of bullying behaviour and also reduce the possibility of being a victim,

then it can indirectly reduce the probability of mental health problems in adulthood such as those mentioned above. Thus, resilience can act as a preventive measure for adult mental health problems.

The next domain of health is Subjective Well being and it has three sub domains – Life Satisfaction, Self Worth and Body Image. A clear role of resilience was observed in Subjective Well being. Gana (2001) assessed if sense of coherence, a related concept of resilience, played a mediating role between adversity and well being. The author found that sense of coherence did buffer the negative effects of adversity and promoted psychological well being. However, this study was on an adult sample. In the sub domains resilience's role was evident in Life Satisfaction and Self Worth but not Body Image. Other studies have also found similar results (Liu, Wang, & Lu, 2013). Liu, Wang and Li (2012) found that resilience did result in greater life satisfaction and this relationship was mediated by the presence of positive affect in the individuals. In a study on Indian teenagers, Rani and Midha (2014) found that there was a positive correlation between resilience and life satisfaction. Through their study they stated that, positive emotions lead to greater life satisfaction in people by building resilience in them and hence resilient people have greater life satisfaction.

The last domain of Health is Achievement and it has the two sub domains of Academic Performance and School Engagement. Academic Performance is "Assessment of how well you do in academic endeavors like school work, reading, math". School Engagement is "The degree to which children are interested and invested in learning and strive for knowledge and mastery" A study on adolescents has found a significant association between resilience and achievement (Swanson, Valiente, Lemery-Chalfant, &

O'Brien, 2010). In the present study the role of resilience was starkly evident with better Academic Performance and increased School Engagement seen in high resilient children. An Indian study by Deb and Arora (2012) has found that resilience and academic achievement had a positive relationship with high resilient adolescents showing better academic performance than low resilient adolescents. This study also used a self report tool to measure resilience level of adolescents. Resilience can be used to increase academic achievement and school engagement in institutionalised children. Institutionalised children have fewer resources at their disposal after leaving institutional care. One of the means by which they can improve their lives is attaining education and occupation. In this regard early academic performance and school engagement can pave the way for future achievement (Schoon, 2006).

Thus, from the above discussion it is evident that resilience does have a role in the health of institutionalised children and it was evident across all the domains of health. Increasing resilience resulted in better health in the children, thus showing that there is a positive influence of resilience on health and its domains.

Hence, the first hypothesis of the study that there will be a positive impact of resilience on health and its domains among institutionalised children is accepted.

The next hypothesis to be examined is that there will be a negative effect of level of adversities in health and its domains among institutionalised children. For this the role of adversity in health and its domains among institutionalised children was examined. Two way ANOVA was used to determine if adversity played a role in the health of

institutionalised children. From these results it was seen that adversity did not have a role in the overall health of institutionalised children.

Looking at the role of adversity in each domain and the respective sub domains it was observed that adversity had an effect on particular domains and sub domains. The first domain where the effect of adversity was seen was Comfort. Among the sub domains of comfort the role of adversity was seen in emotional comfort, but the effect of adversity was not evident in the other sub domains, physical comfort and negative stress reaction.

In the domain of energy there was no role of adversity. Among the sub domains of energy there was no role of adversity in Vitality. However, the role of adversity was observed in Physical Activity. Similarly, adversity did not have a role in the domain of Health Resilience as well as some of its sub domains- Peer Connectedness, Caretaker connectedness and Active coping. But in the sub domain of teacher connectedness the role of adversity was present. The next domain of health, which is Risk Avoidance did show a role of adversity. Within this domain, there are two sub domains. There was a role of adversity in one of them that is, bullying and there was no role of adversity on bullying victim.

In the last two domains of Subjective well being and Achievement, the role of adversity was not seen in the domains or any of the sub domains under these domains. Thus, there was no role of adversity in the sub domains of Life Satisfaction, Self worth and Body Image. There was also no role of adversity in Academic performance and School Engagement.

It was seen that adversity did not have a role in the overall health of institutionalised children. Further analysis of the role of adversity on the domains of health showed that adversity had a role in specific domains of health which are Comfort and Risk Avoidance. The other domains of health- Energy, Health Resilience, Subjective well being and Achievement did not have any effect of level of adversity, indicating no role of adversity in these domains of health.

Hence, the second hypothesis of the present study, there will be a negative effect of level of adversities in health and its domains among institutionalised children is partially accepted.

The interaction between resilience and adversity in their effect on health and its domains among institutionalised children was analyzed to accept or reject the third hypothesis – Resilience and adversity will interact with each other to influence the health of institutionalised children. A pattern of interaction between adversity and resilience was observed in this regard. The high resilient children had better health than the children in low and medium resilient groups. However, their health levels decreased when the levels of adversity increased from low to high. Children in the low resilient group had poorer health when the level of adversities increased. On the other hand the medium resilient children showed an improvement in their health levels when the levels of adversity increased. This may be because the medium resilient children are in the process of earning to cope with adversities. This ability to increasingly cope with adversities might be due to their realization that they have to face continuous stressors and they do not have any other options. Added to this, medium resilient children may be comparing themselves with their peers and particularly the high resilient children. They may then be emulating

the high resilient children to learn to cope better. This phenomenon is upward comparison in social comparison. This pattern was observed across the domains and sub domains of health as well, though the results were statistically significant in specific domains and sub domains.

The results show that there is an interaction between resilience and adversity in emotional comfort. Increase in adversities reduced the levels of emotional comfort among low and high resilient children but not the medium resilient group. The drop in emotional comfort was more significant in the high resilient group though the level of emotional comfort was still higher than that of the other two groups. Resilience appears to buffer the effect of adversity on emotional comfort of institutionalised children.

The above mentioned phenomenon where low and high resilient children showed poorer health with increase in adverse experiences and medium resilient children had better health with increased adverse experiences was observed in the sub domain of peer connectedness. Social support - in the form of instrumental, information, appraisal and esteem support, in the face of adversity results in more active coping efforts, better psychological and health outcomes (Aspinwall, 2003). Children may have reached out to their friends for support when they were faced with ncreasing adversities in their lives and this might have increased their resilience levels.

An interaction effect was also observed in the domain of Achievement and one of its sub domains - School Engagement. A decrease in school engagement and overall achievement was seen with increased level of adversities among low and high resilient

children. Medium resilient children showed better scores in this domain of Achievement and sub domain of School Engagement.

In the face of increasing adversities, the medium resilient children might be looking at the goal of school engagement probably as a positive cognitive diversion and to gain objectivity and insights into managing/coping with adversities. These children might also have realized that they need to get going with the only ray of hope / sense of security of school engagement which will ultimately lead to positive outcomes in the long run. They may also cling to the only secure aspect of their lives at that given point of time, that is, school engagement which will increasingly facilitate peer connectedness.

Thus, the third hypothesis of the present study, resilience and adversity will interact with each other to influence the health of institutionalised children is partially accepted.

The last objective of the study was to find out if resilience, level of adversity and impact of adversity predict health of institutionalised children. It was hypothesized that resilience will contribute positively towards health of institutionalised children and level of adversity, past impact of adversity and present impact of adversity will predict health of institutionalised children.

To determine the predictors of health of institutionalised children stepwise regression analyses was carried out. It was evident that resilience was a significant predictor of health and its domains. With the exception of body image resilience was a significant predictor of each domain and sub domain of health. Cohn, Fredrickson,

Brown, Mikels and Conway (2009) had found that resilience levels predicted life satisfaction.

Health, and under health each domain and sub domain had its own set of predictors. Level of adversities was also a significant predictor of health. Level of adversities was also a significant predictor of energy, physical activity, achievement and academic performance. Past impact of adversities was found to be a significant predictor of health. Under health past impact of adversities was a predictor of emotional comfort, negative stress reactions, health resilience, teacher connectedness, risk avoidance and peer hostility. Present impact of adversities was a significant predictor of comfort, physical comfort, energy, health resilience, bullying, achievement and academic performance.

Existing literature on adversity and health states that there is a significant impact of adversity on health with increasing illness, and health problems seen in those who have experienced adversities (Shipman & Taussig, 2009). But as almost all the studies have been carried out on health in adults who report childhood experiences (Dong et al., 2004) it is difficult to ascertain the extent of health problems in children who have encountered adversities. The present study has looked into the level of adversities, past and present impact of adversities as possible predictors of child health. It was seen that unique contributions of the predictors is found on each of the health domains and sub domains.

The role of adversity in influencing child health was examined and it was seen that the level of adversities was a predictor of the overall health of institutionalized

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children. The past impact of adversities was another significant predictor of children's health. But the present impact of adversities did not seem to be playing a role in predicting changes in health of institutionalised children. As apparent from the results there appears to be domain specific effect of level of adversities, past and present impact of adversities.

Adversity had a role only in some areas of health, in particular, overall comfort and emotional comfort. With an increase in the level of adversities experienced by children there was a decrease in their level of emotional comfort. When the extent of the role of the level of adversity was looked into, it was seen that, more than the level of adversities it was the past and the present impact of adversities on children that brought about more change in the comfort levels. The effect of the adversities at the time of occurrence seemed to linger for longer particularly with reference to emotional distress. It may be because the children may not have been able to resolve the emotional, cognitive and behavioural issues emanating out of their adversities. Further, the emotional distress may hinder future reactivity to stressful situations. On the other hand, if the child still felt affected by his past adverse experiences, they would have an effect on his physical health and he would experience physical distress as well.

Looking at the role of adversity it did not appear to have any influence on Energy, with only marginal changes in it contributed by level of adversity and the present impact of adversities. But the role of adversity was more distinct in the sub domain of physical activity, where an increase in level of adversity increased the level of physical activity among the children.

The role of adversity was present only in one of the sub domains, which was, teacher connectedness. Further analysis showed that the past impact of adversities was a significant contributor to this sub domain with greater past impact of adversities resulting in lower connectedness of institutionalised children with their teachers. This may be because the children might have developed insecurities in social aspects which may be a result of loss of a significant member in a traumatic incident. Early adverse experiences may have had an impact on the children's attachment formation.

The role of adversity on Risk Avoidance was also seen in the results with more adverse experiences leading to low Risk Avoidance. Regression analysis showed that the level of adversity was not significant predictor of Risk Avoidance, but the past impact of adversities and present impact of adversities were significant predictors. It was seen that if children had greater present impact of adversities, then they showed aggression and bullying behaviour. On the other hand greater past impact of adversities resulted in increased peer hostility and being a bullying victim. It could be that the bullying behaviour of children is a form of acting out and expression of the present impact of adversities.

Adversity did not have any influence on Subjective Well being and its sub domains. Neither was there any contribution of level of adversity, past impact and present impact of adversity in predicting this domain and the respective sub domains of Life Satisfaction, Self Worth and Body Image.

The effect of adversity was also seen in achievement through regression analysis. Higher level of adversities meant an increase in academic performance and achievement.

At the same time, if the child showed greater present impact of adversities then it had a negative effect with decreased academic performance and achievement. This clearly shows that current mental status has an impact on health of individuals. Institutionalised children who were upset and bothered about their adverse experiences were not able to become engaged in school activities. Their academic performance was affected and they had low achievement.

Research (Phillips, Hammen, Brennan, Najman, & Bor, 2005) has found that people experiencing childhood adversities are at increased risk for mood and anxiety disorders and early onset, that is in early adulthood, of such disorders is also commonly seen in victims of abuse and maltreatment. Emotional distress or low emotional comfort could be an early sign of later emotion and mood based problems. In order to examine the pathways of these links between adversity and emotional problems, studies examining the mediators have shown that early adverse childhood experiences alter the stress response in individuals by reducing threshold levels (Alciati, 2012; Lovallo, Farag, Sorocco, Cohoon, & Vincent, 2012; Hammen, Henry, & Daley, 2000). This altered stress response may lead to difficulty in coping with stressors in future. The present study has found that there is a slight influence of past impact of adversities on the negative stress reaction and an increased impact of adversities results in more negative stress response.

Results of the regression analyses showed that resilience was a significant predictor of health and its domains. The contribution of resilience in the health of institutionalised children was around 24% which is a significant amount. The extent of change in the domains of health as a result of resilience ranged from around 5% to 18%. The extent of change in the sub domains of health as a result of resilience ranged from

around 1% to 14%. This emphasizes the need for a resilience based intervention for institutionalised children. Most often the contribution of resilience was greater than the contribution of level of adversity, past and present impact of adversities on the child. The impact of resilience on health was greater than the impact of adversity. Research states that adversity negatively impacts child health but from the results it is evident that resilience acts as a buffer against the negative impacts on child health.

The strong influence of resilience on stress reaction shows that resilience may be a safeguard against the impact of adversity and may help in changing the course of future stress response (Garmezy, Masten, & Tellegen, 1984). Developing a stronger response to stressors and regulation of one's response to stressors could be a building block to preventing future mental health problems among these children. This underscores the fact that resilience does play a significant role in health of children and any resilience based intervention would result in marked improvement in the sub domains of health. Children in institutions show poor health as seen in the present study and so steps have to be taken to improve their health. The significant impact of resilience on child health signifies that a resilience improvement can be the basis of a health improvement plan for institutionalised children.

Present impact of adversities was a significant predictor of physical comfort. This suggests that those children who experience greater present impact of adversities report lower physical comfort and somatic complaints. Past impact of adversities predicted reactions to stressors with greater impact resulting in more negative stress reaction. Further, children with greater past impact of adversities reported decreased emotional comfort and more anxiety, sadness, worry. But the contribution of resilience in stress

reactivity and emotional comfort was more than that of past impact of adversities. Increased resilience is associated with less negative stress reaction and high emotional comfort. Resilience also was associated with higher physical comfort which means decreased somatic problems.

Present impact of adversities is associated with feelings of being energetic and healthy with more negative impact of adverse experiences in the present leading to less feelings of being energetic, healthy and active. Again resilience is a greater contributor of vitality and energy in institutionalised children.

Resilience was a significant predictor of peer, teacher and caretaker connectedness. Werner (1995, 1996) in her studies on resilient children found that they have a sociable personality which helps them garner social support. The findings from the current study which show that resilience contributes to at least a tenth of the variance in teacher and caretaker connectedness, support Werner's findings.

In the domain of risk avoidance present impact of adversities was a predictor of bullying behaviour or aggression in children and past impact of adversities was a predictor of peer hostility. This suggests that experiencing greater impact of adversities at the time of its occurrence increased the risk of being bullied by others, whereas, a greater impact of adversities at present may increase aggressive and bullying behaviour of children. The bullying behaviour could be a form of acting out by the children to cope with the emotional upheaval of their adverse experiences. Again, the contribution of resilience in both aggression and peer hostility shows that resilience can be a buffer to the negative impact of adversities in children.

Resilience was found to be a significant predictor of subjective well being including life satisfaction and self worth in line with existing literature. The role of positive emotions in the association between resilience and life satisfaction was found by Cohn, Fredrickson, Brown, Mikels and Conway (2009) also.

The present impact of adversities was a predictor of academic performance and achievement of institutionalised children. If the children are being affected at present by their past life experiences then, they are unable to devote the emotional and cognitive energy towards academic activities thus affecting their performance. Children with high present impact of adversities also reported more physical ailments which would further affect their academics. Resilience was also a significant predictor of school engagement, academic performance and achievement. Resilient children as suggested by Schoon (2006) realize that academics are the only means of upward mobility and breaking the cycles of risk for vulnerable children.

The above findings provide evidence for acceptance and rejection of the last two hypotheses first, that resilience will contribute positively towards health of institutionalised children and second, that level of adversity, past impact of adversity and present impact of adversity will predict health of institutionalised children.

Thus, the fourth hypothesis of the current study resilience will contribute positively towards health of institutionalised children is accepted. The fifth and last hypothesis of the present study that level of adversity, past impact of adversity and present impact of adversity will predict health of institutionalised children is partially accepted.

MAJOR FINDINGS OF THE STUDY

The outcomes of the present study add to the theoretical knowledge of health and positive psychology. This knowledge can be further used to develop intervention programmes that are beneficial to the vast number of children under institutional care.

It has been found that there is a scope for improving the health of institutionalised children. Health of institutionalised children is average and needs to be improved further to increase their well being. This also indicates that an increase in scores of health of the children is possible by implementing interventions to improve their health.

The study clearly establishes that resilience does play a significant role in the health of institutionalised children and this is evident across all the domains of health such as Comfort, Energy, Health Resilience, Risk Avoidance, Subjective Well Being and Achievement. Sub domains of health such as Physical Comfort, Emotional Comfort, Negative Stress Reactions, Vitality, Caretaker Connectedness, Teacher Connectedness, Active Coping, Aggression/Bullying, Peer Hostility/Bully Victim, Life Satisfaction, Self-Worth, Academic Performance and School Engagement also showed a significant influence of resilience.

Adversity was not found to have a significant role in the health of institutionalised children in the study. However, in depth analysis of the various domains and sub domains of health found that the effect of level of adversity was limited to the health domains of Comfort and Risk Avoidance. The effect of level of adversity was also found only in few sub domains of health such as Emotional Comfort, Physical Activity, Teacher Connectedness and Aggression/Bullying.

The study also found that there was an interaction between resilience and adversity and its influence was seen on health of institutionalised children. A consistent pattern was observed in health, its domains and sub domains, though it was found to be significant only in Health, specific domains – Achievement, and sub domains – Emotional Comfort, Peer Connectedness and School Engagement. It was seen that low resilient institutionalised children had poor health and it worsened with increase in level of adversity. High resilient institutionalised children had vastly better health and there was decrease in their health with an increase in the level of adversity. However, the health of highly resilient children was still better than the low resilient and medium resilient children irrespective of the level of adversity. Medium resilient children present a different picture. There was significant improvement in the health of medium resilient institutionalised children with an increase in the level of adversity. Their health levels almost reached the health level of the high resilient children.

Analysis of the variables which predicted health showed that resilience was a significant predictor of health and its domains among institutionalised children. Resilience was also a significant predictor of the sub domains of health, except body image. Moreover, the contribution of resilience was close to a quarter, highlighting the major change that can be brought in health with an increase in resilience among institutionalised children. Other significant predictors of health included level of adversities and past impact of adversities. Level of adversities was also a significant predictor of Energy, Achievement and Physical Activity. Past impact of adversities was a significant predictor of Health Resilience, Risk Avoidance, Emotional Comfort, Negative Stress Reactions, Teacher Connectedness and Peer Hostility/Bully Victim. Present impact

of adversities was a significant predictor of Comfort, Energy, Health Resilience, Achievement, Physical Comfort, Aggression/Bullying and Academic Performance.

LIMITATIONS

As with any research, there are some limitations of the study that need to be addressed in future research. The study was confined to only the twin cities of Hyderabad and Secunderabad. Further, the cross sectional nature of the study prevents the establishment of causal relationship between resilience, adversity and health.

CONCLUSION

Institutionalised children have been known to display poor health across physical, psychological and social domains as illustrated by the review of research studies presented in chapter 2. The present study has also found that the health of institutionalised children is not at the optimum level and there is vast scope for improvement of the children's health. Studies have also found that children in institutional care have experienced many adversities in their young lives which can have a negative impact on their health.

Existing research talks about how adverse experiences in childhood have long term repercussions on people's health (Wickrama, Conger, & Abraham, 2005). These poor health outcomes are mediated by the biological, cognitive, affective and behavioural aspects of an individual (Herrenkohl, et al., 2010; Matthews, Gallo, & Taylor, 2010; Romeo, Tang, & Sullivan, 2009). As the initial foundations of these three psychological aspects are laid in childhood itself the impact of adverse experiences may be evident in childhood also. The present study found that adversity has an impact on the health of

institutionalised children. Three aspects of adversity; which include the level of adversity, the past impact of adversity and the present impact of adversity; showed an effect on the sub domains, domains and health of institutionalised children. Thus, it is evident that adversities increase the risk of poor health among children in institutional care.

Research on children at risk has led to the discovery of the phenomenon of resilience. Resilience research states that resilience acts as a protective factor or buffer against the adversity and results in better than expected outcomes (Rutter, 2012; Masten et al., 1999). These good outcomes include absence of psychopathology/ mental health problems, academic achievement, occupational attainment, etc. However, few studies have analysed the impact of resilience on attainment of good health outcomes, particularly in children. Research on resilience in institutionalsied children is also sparse. The present study has found that increased resilience does result in better health among institutionalised children and this result is irrespective of the adversities that the children have experienced. Moreover, there is almost a 25 % improvement in health with increase in resilience. This result provides a strong support to the premise of a resilience based intervention for institutionalised children to improve their health across domains such as Comfort, Energy, Health Resilience, Risk avoidance, Subjective well being and Achievement.

RECOMMENDATIONS

Some suggestions are being made, based on the study, for application of the obtained findings and development of future research. Children under institutional care have to be provided with counseling to deal with the adverse experiences as the past impact was found to affect certain domains and sub domains of health. Moreover, the current impact of these adverse experiences also influenced health, some of its domains and sub domains. The lingering effect of the adverse experiences on a child's health has long term consequences. Poor health in childhood leads to poor health in adulthood. Thus, early interventions to avoid future health costs and correct the present health burden is prudent. Findings of the present study provide evidence for using resilience as the cornerstone for a health improvement programme. A resilience based intervention could be developed, based on the study findings that would also result in an improvement in the health of institutionalised children.

IMPLICATIONS OF THE STUDY

Though studies across the world have established the various health problems observed in institutionalised children very few studies, particularly in India, have made such a comprehensive assessment of children's health which includes aspects of physiological experiences, emotional, behavioural, social well being. The poor health of institutionalised children cannot be disputed and the need for a psychological intervention is strongly felt by all those who work with these children such as social workers, caretakers, psychologists, etc. By providing evidence for a resilience and health association, which was not found in the existing research on children, the present study

adds to the theoretical knowledge base about resilience and its influence on the health of institutionalised children. A resilience based intervention is a proactive, preventive measure to counteract past adverse experiences and initiate present and future good health.

"It is easier to build strong children than to repair broken men."

\- Frederick Douglass

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APPENDICES

RELIABILITY AND VALIDITY OF RESILIENCE CHECKLIST FOR CHILDREN

Content validity of resilience checklist for children

The resilience scale is a self report checklist to measure resilience in children. Based on existing literature on the concept and construct of resilience the researchers have developed this tool. The instrument was content validated by experts and after establishing the validity, the tool has 44 items.

For developing the resilience checklist a review of existing literature on resilience was carried out which was the basis for generating items that would be included in the checklist. Numerous revisions of the items were carried out to shortlist 60 items. Content validity of the checklist with these 60 items was carried out. The content validity of the checklist was carried out by consulting six experts from the field of psychology. They were asked to state whether each of the items included in the checklist was essential or not essential to measure resilience based on the operational definition of resilience. If they felt that an item was essential in measuring resilience in children they needed to tick essential and if it was not essential they had to tick not essential.

Lawshe's content validity ratio (CVR) was calculated for each of the items of the checklist. If an item was found to have less than the required ratio based on the table for required CVR values, then it was discarded. In other words, any item that had a CVR value of less than 0.99 was discarded. In this manner, content validity of the tool was established. Based on this quantitative method of content validity, 44 items were retained

from the original tool of 60 items and the remaining items were discarded. The Content

validity index (CVI) for the complete checklist was found to be 0.99.

A pilot study of the resilience checklist was conducted to establish reliability of

the tool. The tool was pilot tested on a sample of 120 children and the internal

consistency reliability of the tool was also established using Cronbach's alpha. This was

found to be 0.66 and the item total statistics are presented in the table number 26 below.

Split half reliability of the tool was computed using SPSS 20.0 and was found to 0.66

with the Spearman Brown correction.

Table 26. Item total statistics for reliability of the Resilience checklist for children

S. No.	Item no.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	*S1*	27.03	22.680	.259	.650
2	*S2*	27.59	22.210	.290	.646
3	*S4*	27.48	23.008	.088	.661
4	*S5*	27.03	22.990	.159	.655
5	*S6*	27.01	22.815	.234	.652
6	*S7*	27.32	21.983	.308	.644
7	*S8*	27.58	22.850	.138	.657
8	*S12*	27.13	22.043	.357	.642
9	*S13*	27.33	22.829	.123	.658
10	*S14*	27.44	22.366	.223	.651
11	*S15*	27.28	21.869	.338	.642
12	*S16*	27.22	22.877	.125	.658
13	*S18*	27.17	22.863	.139	.657
14	*S19*	27.08	22.951	.144	.656
15	*S20*	27.13	22.251	.299	.646

16	*S21*	27.32	22.369	.223	.651
17	*S22*	26.95	23.023	.242	.653
18	*S23*	27.22	22.714	.160	.655
19	*S25*	27.07	23.021	.133	.657
20	*S26*	27.17	21.737	.409	.638
21	*S27*	27.23	23.004	.094	.660
22	*S29*	26.92	23.690	-.032	.662
23	*S30*	27.10	22.225	.326	.645
24	*S32*	27.33	24.457	-.211	.683
25	*S35*	26.97	23.696	-.039	.664
26	*S36*	27.09	23.260	.061	.661
27	*S37*	27.03	22.856	.199	.653
28	*S38*	27.26	22.933	.107	.659
29	*S40*	27.79	24.385	-.280	.675
30	*S41*	27.41	23.067	.072	.662
31	*S42*	27.32	22.285	.241	.649
32	*S43*	27.28	23.751	-.068	.672
33	*S44*	27.38	21.684	.370	.639
34	*S45*	27.14	22.459	.244	.650
35	*S46*	27.22	21.163	.524	.628
36	*S47*	27.29	23.418	.001	.667
37	*S48*	27.06	22.240	.356	.644
38	*S49*	27.54	22.284	.257	.648
39	*S50*	27.68	23.580	-.019	.666
40	*S51*	27.58	22.749	.161	.655
41	*S53*	27.48	22.017	.305	.644
42	*S55*	27.03	23.125	.120	.658
43	*S56*	27.12	23.465	.005	.665
44	*S57*	27.18	23.171	.065	.662

Note. *S* stands for statement

APPENDIX - II

RELIABILITY AND VALIDITY OF LIFETIME INCIDENCE OF TRAUMATIC EVENTS

The research instrument to measure adversity is a checklist titled Lifetime Incidence of Traumatic Events (LITE). LITE was developed by Greenwald and Rubin (1999). The original tool has 16 items with a self rating and a parent rating form. This has been adapted to the Indian scenario by the researcher and the tool covers 10 categories of adversities. These categories include physical abuse, emotional abuse, sexual abuse, neglect, accidents, illnesses & death, natural disasters, community violence, child labour, domestic disturbance, and other adversities. The reliability and validity of the adapted Indian version has been established by the present researchers.

Content validity of the adapted tool was established by eliciting experts' opinion and calculating content validity ratio (CVR) for the same using Lawshe's method (1975). The content validity index for the complete checklist was determined and it was based on the CVR values of each of the items. Before establishing content validity the checklist had 49 items. The CVR for each item was calculated. Any item that had a CVR of less than 0.99 was discarded. Based on the CVR values 41 items were retained from the original 49 items. The Content validity index for the complete checklist was found to be 0.99.

The average inter-item correlation was 0.24 and the average item-total correlation was 0.34. According to Clark and Watson (1995) this is within the acceptable range of correlation for a tool that measures a broad concept of adversity by assessing the number of traumatic events that has been experienced. The internal consistency reliability arrived

at by calculating Cronbach's alpha was found to be 0.85. The Cronbach's alpha did not

increase after deletion of any item and hence all items were retained for the main study.

The detailed item statistics are presented in the table 27.

Table 27. Item-Total Statistics for reliability of the Lifetime incidence of traumatic events

S no.	Item No.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1.	Q2	47.17	27.592	.377	.821
2.	Q3	46.87	27.568	.206	.826
3.	Q5	46.87	27.775	.165	.828
4.	Q6	46.83	26.075	.498	.815
5.	Q8	47.00	29.655	-.197	.839
6.	Q9	47.10	25.886	.742	.809
7.	Q10	47.00	28.345	.072	.830
8.	Q11	46.77	27.564	.200	.827
9.	Q12	47.10	29.266	-.126	.834
10.	Q13	47.13	27.982	.216	.825
11.	Q15	47.03	28.102	.133	.828
12.	Q16	47.00	28.207	.101	.829
13.	Q17	47.13	28.464	.083	.828
14.	Q18	47.20	27.890	.350	.822
15.	Q19	47.10	28.645	.025	.830
16.	Q20	47.17	28.144	.202	.825
17.	Q21	47.00	26.207	.539	.814
18.	Q22	46.93	28.064	.118	.829
19.	Q23	47.03	26.930	.398	.819
20.	Q24	47.13	27.154	.449	.818
21.	Q25	47.10	27.128	.410	.819
22.	Q27	47.07	26.478	.537	.815
23.	Q28	47.17	27.799	.311	.822

24.	Q29	47.07	25.995	.658	.811
25.	Q32	47.13	27.637	.312	.822
26.	Q33	47.17	26.764	.644	.814
27.	Q34	47.23	29.151	-.148	.830
28.	Q35	46.93	26.547	.428	.818
29.	Q36	47.20	27.683	.429	.820
30.	Q37	47.20	27.131	.642	.816
31.	Q38	47.00	28.414	.058	.831
32.	Q39	47.20	27.131	.642	.816
33.	Q40	47.20	27.200	.615	.817
34.	Q42	47.20	28.028	.298	.823
35.	Q43	47.07	26.892	.435	.818
36.	Q44	47.20	28.717	.041	.828
37.	Q45	47.17	26.351	.782	.811
38.	Q46	47.23	29.151	-.148	.830
39.	Q47	47.20	27.269	.588	.817
40.	Q48	47.20	27.890	.350	.822
41.	Q49	47.17	27.523	.399	.820

Note. Q stands for Question

RESILIENCE CHECKLIST FOR CHILDREN

Name: _____   Class:

_____

Date of Birth: _____   Age:

_____

Gender: Boy / Girl

Instructions - Given below is a list of statements. On the right hand side of each statement there are two options – 'Yes' and 'No'. Read each statement carefully and respond if the statement applies to you. There are no right or wrong answers. For ex, if you think the statement is true for you then tick the option 'Yes' but if you think the statement does not apply to you and is not true for you then tick 'No'. In this manner, respond to all the statements given.

1.	I always prefer to do any task by myself.	Yes	No
2.	I don't need others' help even while doing difficult tasks.	Yes	No
3.	I always need others' help for solving a problem.	Yes	No
4.	I believe I can do any task/work that I want to.	Yes	No
5.	I can handle any obstacles that come in the way of reaching my goals.	Yes	No
6.	I can do any work, given to me, without any mistakes.	Yes	No
7.	I can manage many tasks at the same time.	Yes	No
8.	I have the ability to come out of difficult situations.	Yes	No
9.	It is difficult for me to come up with solutions for problems.	Yes	No
10.	It is very difficult for me to request someone for help.	Yes	No
11.	I always finish the tasks in the time given.	Yes	No
12.	I don't give excuses of obstacles for not achieving a goal.	Yes	No
13.	When there are too many difficulties in achieving a goal, I give up.	Yes	No
14.	I believe in working continuously on a task till it is completed.	Yes	No
15.	I feel uncomfortable (out of place) among people of my age.	Yes	No
16.	I do not fit in with the people I am with right now.	Yes	No
17.	I feel like I belong at my school.	Yes	No
18.	I feel different from everyone else.	Yes	No
19.	I and my friends help each other in times of any need (exams, projects, etc.)	Yes	No
20.	I think people are good.	Yes	No
21.	I believe (my) problems will not last forever.	Yes	No
22.	I have learned something from my difficulties.	Yes	No
23.	I can make friends easily.	Yes	No
24.	In times of difficulty I can rely only on myself	Yes	No
25.	I want to achieve a lot of things in life.	Yes	No
26.	I don't know what I want to be when I grow up.	Yes	No
27.	Every time I complete one task I start thinking about completing the next task.	Yes	No

28.	Negative thoughts don't bother me.	Yes	No
29.	I do what I want when I want to do it.	Yes	No
30.	I jump into action before thinking too much about it.	Yes	No
31.	I am impatient.	Yes	No
32.	I do the work allotted to me, even if the task is not interesting.	Yes	No
33.	I tend to postpone doing things.	Yes	No
34.	I am a talented person.	Yes	No
35.	I don't like myself.	Yes	No
36.	I feel proud of my accomplishments.	Yes	No
37.	I have more good qualities than bad qualities.	Yes	No
38.	I don't believe my work is good unless someone tells me so.	Yes	No
39.	I get nervous when I face unexpected events.	Yes	No
40.	I get frustrated when I am stuck with a problem.	Yes	No
41.	When I am working on one task I worry about how to complete the next task.	Yes	No
42.	I often tell jokes.	Yes	No
43.	It is easy to make me laugh.	Yes	No
44.	I generally don't laugh at jokes as I am a very serious person.	Yes	No

THANK YOU

Scoring –for the items each 'Yes' is scored as 1 and each 'No' is scored as 0.

Items for forward scoring – 1, 2, 4, 5, 6, 7, 8, 11, 12, 14, 17, 19, 20, 21, 22, 23, 25, 27, 28, 32, 34, 36, 37, 42, 43.

However, the following items have reversescoring, where each 'Yes' is scored as 0 and each 'No' is scored as 1.

Items for reverse scoring – 3, 9, 10, 13, 15, 16, 18, 24, 26, 29, 30, 31, 33, 35, 38, 39, 40, 41, 44.

పిల్లల యొక్క స్థితి స్థాపక శక్తి పట్టిక

పేరు ....   తరగతి ....

పుట్టిన తేది ....   వయస్సు ....

లింగము – మగ / ఆడ

సూచనలు – క్రింద కొన్ని వాక్యములు ఇవ్వబడినవి. ప్రతి వాక్యము యొక్క కుడి ప్రక్కన రెండు సమాధానములు (అవును / కాదు) ఇవ్వబడినవి. ప్రతి వాక్యమును జాగ్రత్తగా చదివి, అది ఎంతవరకు మీకు వర్తిస్తుందో ఆలోచించి, మీరు ఒక సమాధానమును ఎంచుకోవాలి. (ప్రతి వాక్యానికి తప్పు, ఒప్పు అనే సమాధానాలు లేవు) ఉదాహరణకు, మొదటి వాక్యము మీకు వర్తించినచో, మీరు 'అవును' అనుసమాధానమును ఎంచుకోవాలి, లేనిచో 'కాదు' అను సమాధానము ఎంచుకోవాలి. ఈ విధముగా, అన్ని వాక్యములను చదివి, మీ సమాధానమును ఎంచుకోండి.

1.	నేను ఎటువంటి పనినైనా సొంతముగా చేయదలచుకుంటాను.	అవును	కాదు
2.	ఎంతటి కష్టమైన పనైనాగాని, ఇతరుల సహాయము ఆశించక నేను చేసుకుంటాను.	అవును	కాదు
3.	సమస్యలను పరిష్కరించుకునేటపుడు, నాకు ఎల్లపుడు ఇతరుల సహాయము అవసరమవుతుంది.	అవును	కాదు
4.	నేను తలపెట్టిన ఎటువంటి పనినైనా చేయగలనని నమ్ముతాను.	అవును	కాదు
5.	నేను లక్ష్యాలను సాధించే క్రమములో, ఎటువంటి అడ్డంకులనైనా ఎదుర్కొనగలను.	అవును	కాదు
6.	నాకు ఇచ్చిన ఎటువంటి పనినైనా, తప్పులు లేకుండా చేయగలను.	అవును	కాదు
7.	నేను పలు పనులను / కార్యములను ఒకే సమయమున చేయగలను.	అవును	కాదు
8.	నాకు కష్టమైన పరిస్థితుల నుంచి బయటకు వచ్చే సామర్థ్యము కలదు / వుంది.	అవును	కాదు
9.	సమస్యలకు పరిష్కారములను వెతకటము నాకు కష్టమైన పని.	అవును	కాదు
10.	ఇతరులను సహాయము అడగటము నాకు చాలా కష్టము.	అవును	కాదు
11.	నేను ఎల్లపుడు పనులను, కేటాయించిన సమయములో పూర్తి చేస్తాను.	అవును	కాదు
12.	ఒక లక్ష్యమును సాధించలేనపుడు, అడ్డంకుల సాకు చెప్పను.	అవును	కాదు
13.	ఒక లక్ష్యాన్ని సాధించే క్రమంలో పలు అడ్డంకులు ఎదురైనపుడు, అడ్డంకుల ఒత్తిడికి లొంగిపోతాను.	అవును	కాదు
14.	ఏదైనా ఒక కార్యము పూర్తిచేయడానికి ఎడతెగకుండా పని చేయాలని నమ్ముతాను.	అవును	కాదు
15.	నా తోటి వయస్సు వారితో నాకు ఇబ్బందిగా ఉంటుందని భావిస్తాను.	అవును	కాదు
16.	నేను ఇపుడు నివసిస్తున్న నాతోటి వారికంటె భిన్నముగా వుంటాను.	అవును	కాదు
17.	నేను చదువుకునే పాఠశాలకి నేను చెందుతానని భావిస్తాను.	అవును	కాదు
18.	ఇతరులతో పోలిస్తే నేను భిన్నముగా వున్నానని భావిస్తాను.	అవును	కాదు
19.	నేను, నా స్నేహితులు ఒకరికి ఒకరు అవసరమైనపుడు సహాయము చేసుకుంటాము. (పరీక్షలు మున్నగునవి)	అవును	కాదు

20.	నేను మనుషులు / వ్యక్తులు మంచివారని అనుకుంటాను.	అవును	కాదు
21.	నా సమస్యలు ఎల్లకాలము ఉండవని నేను నమ్ముతాను.	అవును	కాదు
22.	నేను అనుభవించిన కష్టాల నుంచి ఏదో ఒక విషయము నేర్చుకున్నాను.	అవును	కాదు
23.	నేను సులభముగా ఇతరులతో స్నేహము చేయగలను.	అవును	కాదు
24.	కష్టసమయములో నేను కేవలము నాపైనే ఆధారపడతాను.	అవును	కాదు
25.	నేను జీవితములో చాలా విషయాలలో / అంశాలలో గెలుపు సాధించాలని అనుకుంటున్నాను.	అవును	కాదు
26.	నేను పెద్దవాడిని అయినపుడు, ఏమి అవ్వాలనుకుంటున్నానో నాకు తెలియదు.	అవును	కాదు
27.	ప్రతి సారి నేను ఒక పని పూర్తిచేసిన తరువాత, వెంటనే చేయవలసిన మరొక పని గురించి ఆలోచిస్తాను.	అవును	కాదు
28.	వ్యతిరేకమైన ఆలోచనలు నన్ను ఎక్కువగా ఇబ్బంది పెట్టవు.	అవును	కాదు
29.	నేను చేయదలచుకున్న ఏ పనినైనా, చేయాలనుకున్నపుడు చేస్తాను.	అవును	కాదు
30.	ఏదైనా పని / కార్యము చేయాలన్నపుడు, దాని గురించి ఎక్కువగా ఆలోచించక వెంటనే పని మొదలుపెడతాను.	అవును	కాదు
31.	నాకు సహనము చాలా తక్కువ.	అవును	కాదు
32.	నాకు కేటాయించిన పనిమీద ఆసక్తి లేకపోయినా, ఆ పనిచేస్తాను.	అవును	కాదు
33.	నేను సాధారణముగా పనులను చేయడము వాయిదావేస్తాను.	అవును	కాదు
34.	నేను ప్రతిభావింతుడిని / ప్రతిభావంతురాలిని.	అవును	కాదు
35.	నాకు నేనంటే ఇష్టము లేదు.	అవును	కాదు
36.	నేను పరిపూర్ణముగా చేసినపనులకు గర్వపడుతున్నాను.	అవును	కాదు
37.	నాలో చెడు గుణాలకన్నా, మంచి గుణాలు ఎక్కువ వున్నాయి.	అవును	కాదు
38.	నేను చేసే పని మంచిదని వేరొకరు చెప్పినపుడె నమ్ముతాను.	అవును	కాదు
39.	నాకు అనుకోని సంఘటనలు ఎదురైనపుడు ఉద్రేక పడతాను.	అవును	కాదు
40.	ఏదైన ఒక సమస్య పరిష్కారము కానిచో, నేను ఆశాభంగము చెందుతాను.	అవును	కాదు
41.	నేను ఒక పని / కార్యము చేస్తున్నప్పుడు, తరువాత పూర్తిచేయవలసిన పని గురించి ఆందోళన చెందుతాను.	అవును	కాదు
42.	నేను తరచుగా నవ్వుపుట్టించు మాటలు మాట్లాడగలను.	అవును	కాదు
43.	నన్ను నవ్వించడము సులభము.	అవును	కాదు
44.	నేను సాధారణముగా హాస్యానికి స్పందించను, ఎందుకంటే నేను గంభీరమైన ఆలోచనలతో నిండిన వ్యక్తిని.	అవును	కాదు

बच्चों के लिए समुत्थान-शक्ति चिन्हांकन - सूची

नाम : _____   कक्षा: _____

जन्मतिथि: _____   उमर / आयु: _____

लिंग: लड़का / लड़की

<u>अनुदेश</u> : नीचे कुछ वाक्यों की सूची दी गई है। हर एक / प्रत्येक वाक्य के दाहिने हाथ पर / तरफ दो विकल्प - हाँ और ना , दिए गए हैं। प्रत्येक वाक्य को ध्यान से पढ़िए और जिस प्रकार वह वाक्य आप पर लागू होता है उस प्रकार जवाब / उत्तर दीजिए। कोई भी जवाब सही या ग़लत नहीं है। उदाहरण के लिए , अगर / यदि आप को लगता है की वह वाक्य आप के लिए उपयुक्त है और सटीक / सही है तो ' हाँ ' पर चिन्ह लगाए, मगर आप को लगता है की वह वाक्य आप के लिए उपयुक्त और सही नहीं है तो ' नहीं ' पर चिन्ह लगाए। इसी प्रकार सारे दिए गए वाक्यों का जवाब दीजिए।

1.	मैं हमेशा मुझे दिए गये कार्य / काम स्वयं करना पसंद करता / करती हूँ।	हाँ	नहीं
2.	मुश्किल कार्य करते समय भी, मुझे दूसरों की मदद / सहयता की ज़रूरत नही पडती।	हाँ	नहीं
3.	मुझे समस्या को हल करने में हमेशा दूसरों की मदद की ज़रूरत पडती हैं।	हाँ	नहीं
4.	मुझे विश्वास है कि मैं कोई भी कार्य कर सकता। सकती हूँ।	हाँ	नहीं
5.	लक्ष्य की प्राप्ति के लिए जो भी अड़चने आए मैं उन्हें सम्भाल सकता / सकती हूँ।	हाँ	नहीं
6.	मुझे दिया गया कोई भी कार्य मैं बिना किसी ग़लती के कर सकता / सकती हूँ।	हाँ	नहीं
7.	मैं कई सारे कार्य एक हि समय पर सम्भाल सकता / सकती हूँ।	हाँ	नहीं
8.	मुझमें आपत्त्तीयों से उभरने कि क्षमता है।	हाँ	नहीं
9.	समस्या के समाधान ढूंढना मेरे लिए आसान है।	हाँ	नहीं
10.	किसी से सहायता के लिए अनुरोध करना मेरे लिए बहुत कठिन है।	हाँ	नहीं
11.	मैं हमेशा ही निधारित समय में अपना कार्य समाप्त कर लेता लेती हूँ।	हाँ	नहीं
12.	लक्ष्य की प्राप्ति न होने पर, मैं रूकावटों के बहाने नहीं देता / देती हूँ।	हाँ	नहीं
13.	जब कोई लक्ष्य प्राप्त करने में बहुत कठिनाई होती है तो मै हार मान लेता / लेती हूँ।	हाँ	नहीं
14.	मुझे लगता है कि किसी भी कार्य को समाप्त करने तक उस पर लगातार / निरन्तर काम करना चाहिए।	हाँ	नहीं
15.	मैं अपने उम्र ले लोगों के बीच स्वयं को असहज महसूस करता / करती हूँ।	हाँ	नहीं

16.	मैं आजकल जिनके साथ रहता / रहती हूँ, उनके साथ सामंजस्य (मेल - मिलाप) नहीं रख पाता / पाती ।	हाँ	नहीं
17.	मैं यह अनुभव करता / करती हूँ कि मैं अपने स्कूल का हिस्सा हूँ।	हाँ	नहीं
18.	मैं सबसे अलग महसुस करता / करती हूँ ।	हाँ	नहीं
19.	मैं और मेरे मित्र दोस्त आवश्यकता पड़ने पर (जैसे परीक्षा, होमवर्क, आदि में) एक दूसरे की मदद करते हैं ।	हाँ	नहीं
20.	मेरे विचार में लोग अच्छे होते हैं ।	हाँ	नहीं
21.	मुझे विश्वास है कि मेरी कठिनाइयाँ / मुश्किलें हमेशा ले किए नहीं रहेगी ।	हाँ	नहीं
22.	मैनें आप्तियों से कुछ ना कुछ सीखा है ।	हाँ	नहीं
23.	मैं बहुत आसानी से लोगों से मित्रता कर सकता / सकती हूँ ।	हाँ	नहीं
24.	आपत्तियों के समय में मैं केवल स्वयं पर निर्भर कर सकता / सकती हूँ ।	हाँ	नहीं
25.	मैं जीवन में बहुत कुछ उपलब्ध करना चाहता / चाहती हूँ ।	हाँ	नहीं
26.	मैं नहीं जानता कि बड़ा होकर मैं क्या बनना चाहता / चाहती हूँ ।	हाँ	नहीं
27.	एक कार्य समाप्त करते ही, मैं हमेशा अगले कार्य कोसमाप्त करने की सोचता / सोचती हूँ ।	हाँ	नहीं
28.	मुझे नकारात्मक विचार तंग नहीं करते ।	हाँ	नहीं
29.	मैं मनमौजी हूँ और अपनी मर्ज़ी / इच्छानुसार कार्य करता / करती हूँ ।	हाँ	नहीं
30.	मैं अधिक सोचे समझे बिना कार्य की शुरुवात करता / करती हूँ ।	हाँ	नहीं
31.	मैं अधिर / बेचैन व्यक्ति हूँ ।	हाँ	नहीं
32.	मुझे दिए गये कार्यों को मैं समाप्त करता / करती हूँ, चाहे वो कितने भी नीरस / अरुचिकर क्यूँ न हो ।	हाँ	नहीं
33.	मैं अक्सर काम को स्थगित / मुल्तवी करता / करती हूँ ।	हाँ	नहीं
34.	मैं प्रतिभाशाली (व्यक्ति) हूँ ।	हाँ	नहीं
35.	मैं स्वयं को पसंद नहीं करता / करती ।	हाँ	नहीं
36.	मुझे अपनी उपलब्धियों पर गर्व है ।	हाँ	नहीं
37.	मुझमे दुर्गुण से अधिक सगुण हैं ।	हाँ	नहीं
38.	दूसरों की अच्छी प्रतिक्रिया मिलने तक मुझे अपने कार्य पर विश्वास नहीं होता ।	हाँ	नहीं
39.	मैं अनुपेक्षित घटनाओं से उत्तेजित हो जाता / जाती हूँ ।	हाँ	नहीं
40.	जब मुझे समस्याओं का हल / समाधान नहीं मिलता, मैं निराश हो जाता / जाती हूँ ।	हाँ	नहीं
41.	मुझे एक कार्य करते समय, दूसरे कार्य समाप्त करने कि चिंता रहती है ।	हाँ	नहीं
42.	मैं अक्सर चुटकुले सुनाता / सुनाती हूँ । मैं अक्सर मज़ाक करता / करती हूँ।	हाँ	नहीं

43.	मुझे हँसाना बहुत आसान है ।	हाँ	नहीं
44.	आमतौर पर मुझे मज़ाक पसंद नहीं हैं क्योंकि मैं गम्भीर व्यक्ति हूँ ।	हाँ	नहीं

धन्यवाद

HEALTHY PATHWAYS CHILD-REPORT SCALES

Name: Gender: Male / Female

Date of Birth: Age:

Class:

In the following pages there are a set of statements related to your health. These statements are intended to learn more about you and how your health has been in the past some time. Each statement has 5 options written below it. After reading the statement or the questions, choose one of the five options given which fits best, as applied to you.

1. In the past 4 weeks, how often did you wake up feeling tired?	Always	Almost always	Sometimes	Almost never	Never
2. In the past 4 weeks, how often did you have a cough?	Always	Almost always	Sometimes	Almost never	Never
3. In the past 4 weeks, how often did you have trouble falling or staying asleep?	Always	Almost always	Sometimes	Almost never	Never
4. In the past 4 weeks, how often did you have pain that really bothered you?	Always	Almost always	Sometimes	Almost never	Never
5. In the past 4 weeks, how often did you have a head ache?	Always	Almost always	Sometimes	Almost never	Never
6. In the past 4 weeks, how often did you have a bad stomach ache?	Always	Almost always	Sometimes	Almost never	Never
7. In the past 4 weeks, how often did you have a sore throat?	Always	Almost always	Sometimes	Almost never	Never
8. In the past 4 weeks, how often did you have trouble breathing?	Always	Almost always	Sometimes	Almost never	Never
9. In the past 4 weeks, how often did you feel grouchy?	Always	Almost always	Sometimes	Almost never	Never
10. In the past 4 weeks, how often were you moody?	Always	Almost always	Sometimes	Almost never	Never
11. In the past 4 weeks, how often did you have trouble relaxing?	Always	Almost always	Sometimes	Almost never	Never
12. In the past 4 weeks, how often did you feel really worried?	Always	Almost always	Sometimes	Almost never	Never
13. In the past 4 weeks, how often did you feel really sad?	Always	Almost always	Sometimes	Almost never	Never
14. In the past 4 weeks, how often did you feel nervous?	Always	Almost always	Sometimes	Almost never	Never
15. In the past 4 weeks, how often did you feel afraid?	Always	Almost always	Sometimes	Almost never	Never
Whenever I have problems ….					
16. Thoughts about the problems would just pop into my head.	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikel

					y
17. It's really hard for me to concentrate or pay attention when I have problems in class.	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
18. When I try to sleep, I would not be able to stop thinking about the problem.	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
19. When things get bad in school, I can get so upset that I can't remember what happened or what I did.	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
20. My mind would go blank I wouldn't be able to think at all.	Very Likely	Likely	Somewhat Likely	Unlikely	Very Unlikely
21. In the past 4 weeks, how often did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting?	No days	Very few days	Some days	Almost every day	Every day
22. In the past 4 weeks, how often did you play hard enough to start sweating and breathing hard?	No days	Very few days	Some days	Almost every day	Every day
23. In the past 4 weeks, how often did you run hard when you played or did sports?	No days	Very few days	Some days	Almost every day	Every day
24. In the past 4 weeks, how often did you play active games or sports?	No days	Very few days	Some days	Almost every day	Every day
25. How much of the time do you feel physically fit?	Never	Almost Never	Sometimes	Almost Always	Always
26. How often do you feel *really* strong?	Never	Almost Never	Sometimes	Almost Always	Always
27. How often do you feel *really* healthy?	Never	Almost Never	Sometimes	Almost Always	Always
28. How is your health?	Poor	Fair	Good	Very Good	Excellent
29. How much of the time do you feel full of energy?	Never	Almost Never	Sometimes	Almost Always	Always
30. Thinking about the past 4weeks, have you been able to talk about everything with your friends?	Never	Almost Never	Sometimes	Almost Always	Always
31. Thinking about the past 4 weeks, have you been able to rely on your friends?	Never	Almost Never	Sometimes	Almost Always	Always
32. How good are you at making friends?	Poor	Fair	Good	Very Good	Excellent
33. Thinking about the past 4 weeks, have you spent time with your friends?	Never	Almost Never	Sometimes	Almost Always	Always
34. Thinking about the past 4 weeks, have you and your friends helped each other?	Never	Almost Never	Sometimes	Almost Always	Always
35. Thinking about the past 4 weeks, have you had fun with your friends?	Never	Almost Never	Sometimes	Almost Always	Always
36. How often do you get along *well* with your friends?	Never	Almost Never	Sometimes	Almost Always	Always

37. How many friends do you have?	No one	A few	Some	Many	A lot
38. In the past 4 weeks, how often did you talk to your caretaker about what you are going to do the next day?	Never	Almost Never	Sometimes	Almost Always	Always
39. In the past 4 weeks, how often did your caretaker talk to you about how you are feeling?	Never	Almost Never	Sometimes	Almost Always	Always
40. In the past 4 weeks, how often did your caretaker spend time with you doing something fun?	Never	Almost Never	Sometimes	Almost Always	Always
41. In the past 4 weeks, how often did your caretaker help you with your school work?	Never	Almost Never	Sometimes	Almost Always	Always
42. In the past 4 weeks, how often did your caretaker listen to your ideas?	Never	Almost Never	Sometimes	Almost Always	Always
43. In the past 4 weeks, how often did your caretaker eat meals with you?	Never	Almost Never	Sometimes	Almost Always	Always
44. Thinking about the past 4 weeks, has your caretaker treated you fairly?	Never	Almost Never	Sometimes	Almost Always	Always
45. In the past 4 weeks, how often did you get along well with your caretaker?	Never	Almost Never	Sometimes	Almost Always	Always
46. In the past 4 weeks, on how many days did teachers at your school have enough time for you?	No days	Very few days	Some days	Almost every day	Every day
47. In the past 4 weeks, on how many days did teachers at your school, listen to your suggestions?	No days	Very few days	Some days	Almost every day	Every day
48. In the past 4 weeks, on how many days did teachers at your school, respect your ideas and opinions?	No days	Very few days	Some days	Almost every day	Every day
49. In the past 4 weeks, on how many days did teachers at your school, treat you fairly?	No days	Very few days	Some days	Almost every day	Every day
50. In the past 4 weeks, on how many days did teachers at your school care about you as a person?	No days	Very few days	Some days	Almost every day	Every day
51. In the past 4 weeks, on how many days did teachers at your school, care about your learning?	No days	Very few days	Some days	Almost every day	Every day
If I have problems…					
52. I would talk with the teacher or someone else who could help	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely
53. I would tell myself that things will get better	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely
54. I would try to see the good that could come out of the situation	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely
55. I would try to think of ways to fix the problem or change the situation	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely

56. I would turn to my family or other adults to help me feel better	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely
57. I would keep my feelings under control when I needed to	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely
58. I would try to calm myself down	Very Unlikely	Unlikely	Somewhat Likely	Likely	Very Likely
59. When was the last time you picked n other kids at school?	In the past week	In the past month	In the past year	More than a year ago	Never
60. When was the last time you told someone at school you were going to hurt them?	In the past week	In the past month	In the past year	More than a year ago	Never
61. When was the last time you physically attacked someone at school?	In the past week	In the past month	In the past year	More than a year ago	Never
62. When was the last time you destroyed something belonging to someone else at school?	In the past week	In the past month	In the past year	More than a year ago	Never
63. Thinking about the past four weeks, have you been afraid of other girls and boys?	Always	Almost always	Sometimes	Almost never	Never
64. Thinking about the past four weeks, have other girls and boys made fun of you?	Always	Almost always	Sometimes	Almost never	Never
65. Thinking about the past four weeks, have other girls and boys bullied you?	Always	Almost always	Sometimes	Almost never	Never
66. Thinking about the past 4 weeks, has your life been enjoyable?	Not at all	Slightly	Moderately	Very	Extreme ly
67. How often do you feel happy?	Never	Almost Never	Sometimes	Almost Always	Always
68. How much of the time do you feel satisfied with your life?	Never	Almost Never	Sometimes	Almost Always	Always
69. How often do you have a lot of fun?	Never	Almost Never	Sometimes	Almost Always	Always
70. Thinking about the past 4 weeks, have you felt pleased that you are alive?	Not at all	Slightly	Moderately	Very	Extreme ly
71. How often are you *really* proud of yourself?	Never	Almost Never	Sometimes	Almost Always	Always
72. Thinking about the past 4 weeks, have you been happy with the way you are?	Never	Almost Never	Sometimes	Almost Always	Always
73. How often do you *really* like yourself?	Never	Almost Never	Sometimes	Almost Always	Always
74. Thinking about the past 4 weeks, have you felt like changing something about your body	Never	Almost Never	Sometimes	Almost Always	Always
75. Thinking about the past 4 weeks, have you been worried about the way you look?	Never	Almost Never	Sometimes	Almost Always	Always
76. How often do you *really* like the way you look?	Always	Almost always	Sometimes	Almost never	Never

77. Thinking about the past 4 weeks, have you felt jealous of the way other girls and boys look?	Always	Almost always	Sometimes	Almost never	Never
78. Thinking about the past 4 weeks, have you been happy with your clothes?	Always	Almost always	Sometimes	Almost never	Never
79. During the past 12 months, how would you describe your grades in school?	Below average	Average	Good	Very good	Excellent
80. In the past 4 weeks, how good were you at remembering things you learned in school?	Poor	Fair	Good	Very Good	Excellent
81. In the past 4 weeks, how did you do in math?	Poor	Fair	Good	Very Good	Excellent
82. In the past 4 weeks, how did you do in reading?	Poor	Fair	Good	Very Good	Excellent
83. In the past 4 weeks, how did you do on your homework?	Poor	Fair	Good	Very Good	Excellent
84. In the past 4 weeks, how did you do in your schoolwork?	Poor	Fair	Good	Very Good	Excellent
85. In the past 4 weeks, how often did you feel bored in school?	Always	Almost always	Sometimes	Almost never	Never
86. In the past 4 weeks, how often did you feel excited by the work in school?	Never	Almost Never	Sometimes	Almost Always	Always
87. In the past 4 weeks, how often were you interested in the work at school?	Never	Almost Never	Sometimes	Almost Always	Always
88. In the past 4 weeks, how often did you look forward to going to school?	Never	Almost Never	Sometimes	Almost Always	Always

THANK YOU

Scoring – for all items the scoring is such that on the five point scale starting from left to right, the first response on the left is scored 1, the second is 2, the third is 3, the fourth is 4 and the last on the right is 5. Higher scores indicate better health.

NORMS FOR HEALTHY PATHWAYS CHILD REPORT SCALE

Dimension	Item nos.	No. of items	Score range
Physical Comfort	1-8	8	8-40
Emotional Comfort	9-15	7	7-35
Negative Stress Reactions	16-20	5	5-25
Comfort	1-20	20	20-100
Physical Activity	21-24	4	4-20
Vitality	25-29	5	5-25
Energy	21-29	9	9-45
Peer Connectedness	30-37	8	8-40
Family Connectedness	38-45	8	8-40
Teacher Connectedness	46-51	6	6-30
Active Coping	52-58	7	7-35
Health Resilience	30-58	29	29-145
Aggression	59-62	4	4-20
Bullying Victim	63-65	3	3-15
Risk Avoidance	59-65	7	7-35
Life Satisfaction	66-70	5	5-25
Self Worth	71-73	3	3-15
Body Image	74-78	5	5-25
Subjective Well Being	66-78	13	13-65
Academic Performance	79 -84	6	6-30
School Engagement	85-88	4	4-20
Achievement	79-88	10	10-50
HEALTH	**1-88**	**88**	**88-440**

పిల్లల యొక్క స్థితిస్థాపక శక్తి పట్టిక

పేరు : ....   తరగతి : ....

పుట్టిన తేది : ....   వయస్సు : ....

లింగము : మగ / ఆడ

సూచనలు : క్రింద మీ ఆరోగ్యానికి సంబంధించిన కొన్ని వాక్యాలున్నాయి. మీ గురించి, గత కొద్దికాలంగా మీ ఆరోగ్యాన్ని గురించి తెలుసుకోవడం ఈ వాక్యాల ఉద్దేశ్యం. ప్రతి వాక్యానికి ఐదు సమాధానాలు మీ ఎంపికకోసం ఇవ్వబడ్డాయి. ప్రతి వాక్యాన్ని / ప్రశ్నను జాగ్రత్తగా చదివి ఈ ఐదు సమాధానాల్లో మీకు ఏది బాగా సరిపోతుందో దాన్ని ఎంపికచేసుకోండి.

1.	గత నాలుగు వారాలలో, మీకు నిద్రలేచినప్పుడ ఎన్నిసార్లు నీరసంగా అనిపించింది.	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
2.	గత నాలుగు వారాలలో, మీకు ఎన్నిసార్లు దగ్గువచ్చింది?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
3.	గత నాలుగు వారాలలో, ఎన్నిసార్లు మీరు నిద్రపోవడానికి లేదా నిద్రపోవడానికి కష్టపడ్డారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
4.	గత నాలుగు వారాలలో, ఏదైనా నొప్పి మమ్మల్ని ఎంత తరచుగా బాధించింది?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
5.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు తలనొప్పితో బాధపడ్డారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
6.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు కడుపునొప్పితో బాధపడ్డారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
7.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు గొంతు నొప్పితో బాధపడ్డారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
8.	గత నాలుగు వారాలలో, మీకు తీరికలేకుండాపోవడానికి (తీసుకోవడానికి) ఎన్నిసార్లు ఇబ్బంది కలిగింది?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
9.	గత నాలుగు వారాలలో, మీకు ఎన్నిసార్లు విరామగా అనిపించింది?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
10.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు అస్వస్థతగా ఉన్నారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
11.	గత నాలుగు వారాలలో మీకు విశ్రాంతి తీసుకోవడానికి ఎన్నిసార్లు ఇబ్బంది కలిగింది?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు

12.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు ఆటుపడ్డరు లేదా చింతించారు ?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
13.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు విసారంగా ఉన్నారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
14.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు అంటోకన / కుంగను పడ్డారు ?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
15.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు భయానికి గురయ్యారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడూ లేదు
	నాకు సమస్యలెదురైనప్పుడు					
16.	సమస్యలకు సంబంధించిన ఆలోచనలు నాకు అకస్మాత్తుగా వస్తాయి.	చాలా ఎక్కువగా	ఎక్కువగా	కొంతవరకు	తక్కువగా	దాదాపుగా లేనట్టే
17.	సమస్యలందే నాకు తరగతిలో జరిగే పాఠాలమీద సక్రమగత, ధ్యాసమాసడం కష్టంగా ఉంటుంది.	చాలా ఎక్కువగా	ఎక్కువగా	కొంతవరకు	తక్కువగా	దాదాపుగా లేనట్టే
18.	నేను నిద్రపోవడానికి ప్రయత్నించినా, సమస్యలకు సంబంధించిన ఆలోచనలు మానవేను.	చాలా ఎక్కువగా	ఎక్కువగా	కొంతవరకు	తక్కువగా	దాదాపుగా లేనట్టే
19.	ఇంటిలో పనులు సరిగ్గా జరిగేవప్పుడు, వ్యాపకంతతో కాగా ఒత్తిడికి గురై నాకు ఏమి జరిగిందో, ఏమి చేశానో నాకే గుర్తుండదు.	చాలా ఎక్కువగా	ఎక్కువగా	కొంతవరకు	తక్కువగా	దాదాపుగా లేనట్టే
20.	నా మెదడు ఖాళీగా అయిపోయి ఏమి ఆలోచిన లేకపోతాను.	చాలా ఎక్కువగా	ఎక్కువగా	కొంతవరకు	తక్కువగా	దాదాపుగా లేనట్టే
21.	గత నాలుగు వారాలలో, మీ కండరాలు బలోపేతము చెయ్యడానికి ఎంత తరమగా వ్యాయామం చేశారు? ఉదాగా బరువులు మోయడం, గుంజీలు, బిగ్గేలు తీయడం	ఎప్పుడు లేదు	చాలాతక్కువ రోజులు	కొన్నిరోజులు	దాదాపు రోజూ	రోజూ
22.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు వెనుకుు పట్టేలగా దీర్ఘంగా శ్వాసతీసుకొనే విధంగా ఆటలు ఆడారు?	పరోజు లేదు	చాలాతక్కువ రోజులు	కొన్నిరోజులు	దాదాపు రోజూ	రోజూ
23.	గత నాలుగు వారాలలో, నీవు ఆటలాడేటప్పుడు ఎన్నిసార్లు వేగంగా పరిగెట్టావు?	పరోజు లేదు	చాలాతక్కువ రోజులు	కొన్నిరోజులు	దాదాపు రోజూ	రోజూ
24.	గత నాలుగు వారాలలో, మీరు ఎన్నిసార్లు ఉత్సాహంగా ఆటల (లేదా) క్రీడలలో పాల్గున్నావా?	పరోజు లేదు	చాలాతక్కువ రోజులు	కొన్నిరోజులు	దాదాపు రోజూ	రోజూ
25.	మీరు దృఢమైన ఆరోగ్యంతో ఉన్నట్లు ఎంత తరమగా అనుకుంటారు?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపు ఎల్లప్పుడు	ఎల్లప్పుడు
26.	ఎంత తరమగా మీరు నిజంగా దృఢంగా / బలంగా ఉన్నారనుకుంటున్నారు?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
27.	ఎంత తరమగా మీరు ఆరోగ్యంగా ఉన్నట్లు భావిస్తారు?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు

28.	మీ ఆరోగ్యం ఎలా ఉంది?	బాగాలేదు	పరవాలేదు	బాగుంది	చాలాబాగుంది	అద్భుతంగా
29.	మీరు ఎన్నిసార్లు ఎంత సేపు శక్తి, సత్తువతో ఉన్నట్టు భావిస్తారు?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
30.	గత నాలుగు వారాలలో, మీరు మీ ప్రతి విషయం స్నేహితులతో మాట్లాడగలిగారా?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
31.	గత నాలుగు వారాలుగా, ఆలోచిస్తేనీవు నీ స్నేహితులపై ఆధారపడగలిగారా?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
32.	మీరు ఎంత బాగా ఇతరులతో స్నేహం చేయగలిగారు?	బాగా తక్కువ	పరవాలేదు	బాగా చేయగలిగారు	చాలాబాగా చేయగలిగారు	అద్భుతంగా చేయగలిగారు
33.	గత నాలుగు వారాలుగా, ఆలోచిస్తే మీరు మీ స్నేహితులతో ఎంత సమయం గడిపారు	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
34.	గత నాలుగు వారాలలో మీరు, మీ స్నేహితులు ఒకరికొకరు కష్టంలో ఆదుకున్నారా (లేదా) సహకరించుకున్నారా?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
35.	గత నాలుగు వారాలుగా, ఆలోచిస్తే మీరు మీ స్నేహితులతో ఉత్సాహంగా, సరదాగా కాలం గడిపారా?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
36.	మీరు ఎంత తరచుగా మీ స్నేహితులతో బాగా కలిసిపోతారు?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	ఎక్కువే ఎల్లప్పుడు	చాలా ఎక్కువన
37.	మీకు ఎంత మంది స్నేహితులు (నేస్తాలు) ఉన్నారు?	ఎవరూ లేదు	చాలా తక్కువ	కొంతవరకు	ఎక్కువే	చాలా ఎక్కువన
38.	గత నాలుగు వారాలలో, మీరు మీ సంరక్షకుడు/ సంరక్షకురాలితో ఎన్నిసార్లు మీ మరుసటి రోజు పనివర్క గురించి మాట్లాడారు.	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు ఎక్కువన
39.	గత నాలుగు వారాలలో, ఎంత తరచుగా మీ సంరక్షకుడు/ సంరక్షకురాలు మీ భావాలు గురించి మీతో మాట్లాడారు?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
40.	గత నాలుగు వారాలలో, మీ సంరక్షకులు మీతో ఎంత సమయం సరదాగా గడిపారా ?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
41.	గత నాలుగు వారాలలో, మీ సంరక్షకులు మీ బడికి సంబంధించిన పరువు (పనుల)లో మీకు ఎంత తరచుగా సహాయపడ్డారు?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
42.	గత నాలుగు వారాలలో, మీ సంరక్షకులు మీ ఆలోచనలను ఎంత తరచుగా విన్నారు?	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
43.	గత నాలుగు వారాలలో, మీ సంరక్షకులు ఎంత తరచుగా మీతో కలిసి భోజనం చేసారు	ఎప్పుడూ లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు

44.	గత నాలుగు వారాలలో ఇలోవిస్తే, మీ సంరక్షకులు మీతో న్యాయముగా వ్యవహరించారా?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
45.	గత నాలుగు వారాలలో, మీరు మీ సంరక్షకునితో ఎంతగా కలిసిపోయారు?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
46.	గత నాలుగు వారాలలో, ఎన్ని రోజులు మీ ఉపాధ్యాయులు మీతో తగినంత సమయం గడిపారు ?	పరోజూ లేదు	వాఽరతక్కువ రోజులు	కొద్దిరోజులు	దాదాపు రోజు	ప్రతిరోజు
47.	గత నాలుగు వారాలలో, ఎన్ని రోజులు (సార్లు) మీ ఉపాధ్యాయులు మీ సంతోషాన్ని పెంచారు?	పరోజూ లేదు	వాఽరతక్కువ రోజులు	కొద్దిరోజులు	దాదాపు రోజు	ప్రతిరోజు
48.	గత నాలుగు వారాలలో, ఎన్ని రోజులు (సార్లు) మీ ఉపాధ్యాయులు మీ అభిప్రాయాలను గౌరవించారు?	పరోజూ లేదు	వాఽరతక్కువ రోజులు	కొద్దిరోజులు	దాదాపు రోజు	ప్రతిరోజు
49.	గత నాలుగు వారాలలో, ఎన్ని రోజులు మీ ఉపాధ్యాయులు మీతో న్యాయముగా వ్యవహరించారు?	పరోజూ లేదు	వాఽరతక్కువ రోజులు	కొద్దిరోజులు	దాదాపు రోజు	ప్రతిరోజు
50.	గత నాలుగు వారాలలో, ఎన్ని రోజులు మీ ఉపాధ్యాయులు మిమ్మల్ని ఒక మనిషిగా గౌరవించారు? (తలచబోయారు)	పరోజూ లేదు	వాఽరతక్కువ రోజులు	కొద్దిరోజులు	దాదాపు రోజు	ప్రతిరోజు
51.	గత నాలుగు వారాలలో, ఎన్ని రోజులు మీ ఉపాధ్యాయులు మీ చదువుపై (శ్రద్ధ చూపించారు?	పరోజూ లేదు	వాఽరతక్కువ రోజులు	కొద్దిరోజులు	దాదాపు రోజు	ప్రతిరోజు
	నాకు సమస్యలుంటే......					
52.	నేను నా గురువుతోనైనా లేదా నా సహియము అంటే పరిచయస్తునితోనైనా మాట్లాడతాను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
53.	పరిశీలనలు / విషయాలు మెరుగ పడతాయని నాకు నేనే చెప్పుకుంటాను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
54.	ఏ పరిస్థితుల్లోనైనా అందులోని మంచిని చూసే ప్రయత్నందేస్తాను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
55.	ఏ సమస్యనైనా పరిష్కరించటానికి లేదా ఆ పరిస్థితిని మార్చడానికి మార్గాలకోసం ప్రయత్నిస్తాను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
56.	నేను నా బాగు కొరకు నా కుటుంబం లేదా పెద్ద వారి సాయం కోరతాను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
57.	నేను నా భావాలను నాకు కావలసినప్పుడు అదుపులో ఉంచుకోగలను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
58.	నన్ను నేనే శాంత పరచుకోవడానికి ప్రయత్నం చేస్తాను.	చాలా తక్కువ	తక్కువ	కొంతవరకు అవకాశం	సాధారణంగా	ఎక్కువగా
59.	మీరు ఆఖరిసారి ఇతరులతో లేదా పిల్లలతో ఎప్పుడు ఆటలాడించారు?	గత వారంలో	గతనెలలో	గత సంవత్సరంలో	సంవత్సరం కంటేఎక్కువ	ఎప్పుడులేదు

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60.	మీరు ఆఫీసౌల ఎప్పుడు ఇటీలో ఎవరినైనా కొడతానని హెచ్చరించారు?	గత వారంలో	గతనెలలో	గత సంవత్సరంలో	సంవత్సరం కంటె ఎక్కువ	ఎప్పుడులేదు
61.	మీరు ఆఫీసౌల ఇటీలో వేరొకరిపై ఎప్పుడు దాడి చేశారు?	గత వారంలో	గతనెలలో	గత సంవత్సరంలో	సంవత్సరం కంటె ఎక్కువ	ఎప్పుడులేదు
62.	మీరు ఆఫీసౌల ఇటీలో వేరొకరి వస్తువులను ఎప్పుడు విరగొట్టారు / పాడు చేశారు?	గత వారంలో	గతనెలలో	గత సంవత్సరంలో	సంవత్సరం కంటె ఎక్కువ	ఎప్పుడులేదు
63.	గత నాలుగు వారాలలో ఆలోచిస్తే, మీరు మిగతా అమ్మాయిలు / అబ్బాయిల గురించి భయపడ్డారా?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు
64.	గత నాలుగు వారాలలో ఆలోచిస్తే, మిగతా అమ్మాయిలు / అబ్బాయిల మిమ్మల్ని బయపెట్టారా దేశారా?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు
65.	గత నాలుగు వారాలలో, మిగిలిన అమ్మాయిలు / అబ్బాయిల మిమ్మల్ని బెదిరించారా / భయపెట్టారా?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు
66.	గత నాలుగు వారాలుగా, మీ జీవితం ఆనందమయంగా / ఉల్లాసంగా ఉందా?	ఏమాత్రం లేదా	కొద్దిగా	మధ్యస్థంగా	చాలా	చాలా ఎక్కువ
67.	మీరు ఎంత తరచుగా ఆనందంగా ఉంటారు?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎప్పుడు
68.	మీరు మీ జీవితంలో తృప్తి చెందానని ఎన్నిసార్లు భావించారు?	ఎల్లప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
69.	మీరు ఎంత తరచుగా సరదాగా ఉంటారు?	ఎల్లప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
70.	గత నాలుగు వారాలుగా ఆలోచిస్తే, మీరు జీవించి ఉన్నందుకు మీరు ఆనందిస్తున్నారా?	ఏమాత్రం లేదు	కొద్దిగా	మధ్యస్థంగా	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
71.	మీరు ఎంత తరచుగా మీ గురించి మీరు గర్విస్తారు ?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
72.	గత నాలుగు వారాలుగా ఆలోచిస్తే, మీరున్న స్థితికి మీరు ఆనందిస్తున్నారా?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
73.	ఎంత తరచుగా మిమ్మల్ని మీరు ఇష్టపడతారు?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
74.	గత నాలుగు వారాలుగా ఆలోచిస్తే, మీ శరీరంలో ఏదైనా మార్పు కావాలనిపించిందా?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
75.	గత నాలుగు వారాలుగా ఆలోచిస్తే, మీ అందం (ఆకృతి) గురించి ఇందోళన చెందారా?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
76.	మీరు ఎంత తరచుగా మీ అందం / ఆకృతిని ఇలాగే ఇష్టపడతారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు

77.	గత నాలుగు వారాలలో, మీరు వేరే అమ్మాయి / అబ్బాయిల అంతరం / ఆకర్షించుకోని కార్య చెందారా?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు
78.	గత నాలుగా వారాలలో ఆలోచిస్తే, మీరు మీ అట్టల విషయంలో సంతోషంగా ఉన్నారా?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు
79.	గత 12 నెలల సమయంలో బడిలో మీ మార్కులు గ్రేడు గురించి ఎలా వివరిస్తారు?	సగటుకన్న తక్కువ	సగటు	బాగుంది	చాలా బాగుంది	అత్యుత్తమం
80.	గత నాలుగు వారాలుగా, బడిలో మీరు నేర్చుకున్న పాఠాలను ఎంత బాగా గుర్తుంచుకున్నారు?	బాగా తక్కువ	బాగానే	బాగా	చాలాబాగా	అత్యుత్తమం
81.	గత నాలుగు వారాలలో, మీరు గణితంలో ఎలా రాణించారు?	బాగా తక్కువ	బాగానే	బాగా	చాలాబాగా	అత్యుత్తమం
82.	గత నాలుగు వారాలలో, చదవడంలో మీరెలా ఉన్నారు?	బాగా తక్కువ	బాగానే	బాగా	చాలాబాగా	అత్యుత్తమం
83.	గత నాలుగు వారాలలో, ఉపాధ్యాయులు మీకు ఇంటికి ఇచ్చిన పనిని ఎలా చేశారు?	బాగా తక్కువ	బాగానే	బాగా	చాలాబాగా	అత్యుత్తమం
84.	గత నాలుగు వారాలలో, ఉపాధ్యాయులు మీకు బడిలో ఇచ్చిన పనిని ఎలా చేశారు?	బాగా తక్కువ	బాగానే	బాగా	చాలాబాగా	అత్యుత్తమం
85.	గత నాలుగు వారాలలో, మీరు ఎంత తరచుగా బడిలో విసుగు చెందారు?	ఎల్లప్పుడు	దాదాపుగా ఎల్లప్పుడు	అప్పుడప్పుడు	దాదాపుగా లేదు	ఎప్పుడులేదు
86.	గత నాలుగు వారాలలో, ఎంత తరచుగా బడిలో పనులు చెయ్యాల్సి ఉత్తేజ పరిచాయి?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	చాలా ఎల్లప్పుడు	ఎల్లప్పుడు
87.	గత నాలుగు వారాలలో, మీరు ఎంత తరచుగా బడి పనులలో ఆసక్తి చెందారు?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు
88.	గత నాలుగు వారాలలో, మీరు ఎంత తరచుగా బడికి వెళ్ళడానికి ఎదురుచూశారు ?	ఎప్పుడు లేదు	దాదాపుగా లేదు	అప్పుడప్పుడు	దాదాపుగా ఎల్లప్పుడు	ఎల్లప్పుడు

HPCRS

नाम :   लड़का / लड़की

जन्मतिथि :_____   उम्र / आयु :
_____

कक्षा : _____   आई. डि. न.:
_____

अगले पन्नो मे आपके स्वास्थय से संबंधित कुछ वाक्य है । इन वाक्यों या प्रश्नों का उद्देशय यह जानना है कि पिछले कुछ समय में आपका स्वास्थय कैसा था । प्रत्येक वाक्य के दाईने हाथ पर पाँच विकल्प हैं । वाक्य या प्रशण को पढ़ने के बाद उस विकल्प को चुनिये जो आप के लिए उपयुक्त है और सबसे अच्छा लागू होता है । सारे वाक्य और प्रशण आप के जीवन से संबंधित है इसलिए इनका कोई सही या ग़लत उत्तर नहीं है ।

1. पिछले 4 हफ्तों में, नींद से जागने पर आपको कितनी बार थकान महसूस हुई ?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
2. पिछले 4 हफ्तों में , कितनी बार आपको खाँसी थी?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
3. पिछले 4 हफ्तों में, कितनी बार आपको नींद आने में / सोने में तकलीफ़ / मुश्किल हुई ?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
4. पिछले 4 हफ्तों में, कितनी बार आपको दर्द था, जिसके कारण आपको परेशानी हुई?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
5. पिछले 4 हफ्तों में, कितनी बार आपके सिर में दर्द हुआ?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
6. पिछले 4 हफ्तों में, कितनी बार आपको पेट में दर्द हुआ?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
7. पिछले 4 हफ्तों में, कितनी बार आपको गले में खराश हुई?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
8. पिछले 4 हफ्तों में, कितनी बार आपको साँस लेने में तकलीफ हुई?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं

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9. पिछले 4 हफ्तों में, आपने कितनी बार चिड़चिड़ापन महसूस किया?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
10. पिछले 4 हफ्तों में, कितनी बार आप तुनकमिज़ाज़ (मूडी) थे?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
11. पिछले 4 हफ्तों में कितनी बार आपको आराम करने में परेशानी हुई?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
12. पिछले 4 हफ्तों में कितनी बार आप वास्तव में चिंतित थे?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
13. पिछले 4 हफ्तों में कितनी बार आप वास्तव में उदास थे?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
14. पिछले 4 हफ्तों में कितनी बार आप बेचैन थे?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
15. पिछले 4 हफ्तों में, आपको कितनी बार डर लगा?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
जब भी मेरे जीवन में समस्याएँ होती है, तब…					
16. उन समस्याओं के बारे में मेरे मन में विचार आते रहते हैं	बहुत हद तक संभावना	थोड़ी संभावना	कुछ हद तक संभावना	कोई संभावना नहीं	बिल्कुल भी कोई संभावना नहीं
17. जब मेरे जीवन में कोई समस्याएं उठती हैं, तब मुझे कक्षा में ध्यान देने में परेशानी होती हैं	बहुत हद तक संभावना	थोड़ी संभावना	कुछ हद तक संभावना	कोई संभावना नहीं	बिल्कुल भी कोई संभावना नहीं
18. जब मैं सोने की कोशिश करता / करती हुँ तब मैं समस्याओं के बारे में सोचने से खुद को रोक नहीं सकता / सकती	बहुत हद तक संभावना	थोड़ी संभावना	कुछ हद तक संभावना	कोई संभावना नहीं	बिल्कुल भी कोई संभावना नहीं
19. जब स्कूल में कुछ बुरा होता हैं, मैं इतना परेशान होता हूँ कि मुझे याद नहीं रहता की मैने क्या किया या क्या हुआ.	बहुत हद तक संभावना	थोड़ी संभावना	कुछ हद तक संभावना	कोई संभावना नहीं	बिल्कुल भी कोई संभावना नहीं
20. समस्याओं के समय मुझे कुछ नहीं सूझता	बहुत हद तक संभावना	थोड़ी संभावना	कुछ हद तक संभावना	कोई संभावना नहीं	बिल्कुल भी कोई संभावना

				नहीं
21. पिछले 4 हफ्तों में कितनी बार आपने अपने माँसपेशियों को मज़बूत बनाने के लिए व्यायाम किया?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
22. पिछले 4 हफ्तों में कितनी बार आपने इतना खेल कूद किया की आपको पसीना आया और आपकी साँस फूलने लगी?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
23. पिछले 4 हफ्तों में कितनी बार खेलते समय आप ज़ोर से भागे?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
24. पिछले 4 हफ्तों में कितनी बार आपने क्रीड़ा (स्पोर्ट्स) में भाग लिया?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
25. कितनी बार आप शारीरिक रूप से स्वस्थ महसूस करते हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
26. कितनी बार आप वास्तव में शक्तिशाली / बलवान महसूस करते हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
27. कितनी बार आप वास्तव में स्वस्थ महसूस करते हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
28. आपका स्वास्थ्य कैसा हैं?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
29. आप कितनी बार स्वयं को शक्ति से भरा महसूस करते हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
30. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप अपने दोस्तों से किसी भी विषय में बात करने में सफल रहें हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
31. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप अपने दोस्तों पर निर्भर हो पाए हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
32. आप दोस्त बनाने में कितने अच्छे हैं?	बुरे	ठीक	अच्छे	बहुत अच्छे	अत्युत्तम
33. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप अपने दोस्तों के साथ	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा

समय बिता पाए हैं?				
34. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप और आपके दोस्तों ने एक दूसरे की मदद की हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
35. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप और आपके दोस्तों ने मज़ा किया हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
36. कितनी बार आपकी अपने दोस्तों के साथ अच्छी पटती हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
37. आपके कितने दोस्त हैं?	एक भी नहीं	एक -दो	थोडे	ज़्यादा	बहुत ज़्यादा
38. पिछले 4 हफ्तों में कितनी बार आपने अपने देखभालकर्ता / सरंक्षक से अगले दिन के कामों के बारे में बात की हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
39. पिछले 4 हफ्तों में कितनी बार आपके देखभालकर्ता / सरंक्षक ने आप से आपकी भावनाओ के बार में बात की हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
40. पिछले 4 हफ्तों में कितनी बार, आपने और आपके देखभालकर्ता / सरंक्षक ने साथ में मज़ा किया हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
41. पिछले 4 हफ्तों में कितनी बार आपके देखभालकर्ता / सरंक्षक ने आपकी स्कूल के कामों में मदद की?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
42. पिछले 4 हफ्तों में कितनी बार आपके देखभालकर्ता / सरंक्षक ने आपके विचारों को सुना हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
43. पिछले 4 हफ्तों में कितनी बार आपके देखभालकर्ता / सरंक्षक ने आपके साथ भोजन किया हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
44. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपके देखभालकर्ता / सरंक्षक ने आपके साथ निष्पक्ष	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा

व्यवहार किया हैं?					
45. पिछले 4 हफ्तों में कितनी बार आपकी आपके देखभालकर्ता / सरंक्षक के साथ अच्छी पटी हैं?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
46. पिछले 4 हफ्तों में कितने दिन, आपके स्कूल में, आपके शिक्षकों के पास आपके लिए पर्याप्त समय था?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
47. पिछले 4 हफ्तों में कितने दिन, आपके स्कूल में, आपके शिक्षकों ने आपके सुझावों को सुना?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
48. पिछले 4 हफ्तों में कितने दिन आपके स्कूल में, आपके शिक्षकों ने आपके विचारों और राय का सम्मान किया है?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
49. पिछले 4 हफ्तों में कितने दिन आपके स्कूल में, आपके शिक्षकों ने आपके साथ निष्पक्ष व्यवहार किया हैं?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
50. पिछले 4 हफ्तों में कितने दिन आपके स्कूल में आपके शिक्षकों ने व्यक्तिगत रूप से आपका ध्यान रखा?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
51. पिछले 4 हफ्तों में कितने दिन आपके स्कूल में, आपके शिक्षकों ने आपके सीखने का ख़याल रखा है?	कभी नहीं	बहुत कम दिन	कुछ दिन	लगभग हर रोज	हर रोज
अगर मुझे कोई समस्याएँ होती है, तब मैं.......					
52. मैं किसी शिक्षक या किसी और से बात करूँगा / करूँगी जो मेरी मदद कर सके	बिल्कुल भी कोई संभावना नहीं	कोई संभावना नहीं	कुछ हद तक संभावना	थोड़ी संभावना	बहुत हद तक संभावना
53. मैं खुद से कहूँगा कि हालत बेहतर हो जाएगे	बिल्कुल भी कोई संभावना नहीं	कोई संभावना नहीं	कुछ हद तक संभावना	थोड़ी संभावना	बहुत हद तक संभावना
54. मैं उस स्थिति से अगर कुछ अच्छा	बिल्कुल	कोई	कुछ हद तक	थोड़ी	बहुत हद

निकल सकता हूँ उस बारे में सोचूँगा / सोचूँगी	भी कोई संभावना नहीं	संभावना नहीं	संभावना	संभावना	तक संभावना
55. मैं समस्या को ठीक करने के लिए या उसको बदलने के तरीके सोचूँगा / सोचूँगी	बिल्कुल भी कोई संभावना नहीं	कोई संभावना नहीं	कुछ हद तक संभावना	थोड़ी संभावना	बहुत हद तक संभावना
56. मैं अपने परिवार या किसी बड़ों की मदद लूँगा ताकि मुझे बेहतर लगे	बिल्कुल भी कोई संभावना नहीं	कोई संभावना नहीं	कुछ हद तक संभावना	थोड़ी संभावना	बहुत हद तक संभावना
57. आवश्यकता पड़ने पर मैं अपनी भावनाओ को नियंत्रण में रखूँगा / रखूँगी	बिल्कुल भी कोई संभावना नहीं	कोई संभावना नहीं	कुछ हद तक संभावना	थोड़ी संभावना	बहुत हद तक संभावना
58. मैं खुद को शांत रखने की कोशिश करूँगा / करूँगी	बिल्कुल भी कोई संभावना नहीं	कोई संभावना नहीं	कुछ हद तक संभावना	थोड़ी संभावना	बहुत हद तक संभावना
59. आपने पिछली बार कब स्कूल में किसी दूसरे बच्चे को तंग किया?	पिछले एक सप्ताह में	पिछले एक महीने में	पिछले एक साल में	एक वर्ष से अधिक पहले	कभी नहीं
60. आपने स्कूल में पिछली बार कब किसी दूसरे बच्चे को कहा की तुम उन्हे चोट पहुँचाओंगे?	पिछले एक सप्ताह में	पिछले एक महीने में	पिछले एक वर्ष/साल में	एक वर्ष/साल से अधिक पहले	कभी नहीं
61. आपने स्कूल में पिछली बार कब, किसी दूसरे बच्चे को मारा?	पिछले एक सप्ताह में	पिछले एक महीने में	पिछले एक साल में	एक वर्ष से अधिक पहले	कभी नहीं
62. आपने स्कूल में पिछली बार कब किसी दूसरे की चीज़ को नष्ट कर दिया?	पिछले एक सप्ताह में	पिछले एक महीने में	पिछले एक साल में	एक वर्ष से अधिक पहले	कभी नहीं
63. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपको किसी लड़के या लड़की से डर लगा है?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
64. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या अन्य लड़के या लड़कियों ने	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं

आपका मज़ाक बनाया है?				
65. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या अन्य लड़के या लड़कियों ने आपको तंग किया है?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
66. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपका जीवन आनन्ददायक रहा है?	बिल्कुल नहीं	थोड़ा बहुत	मध्यम	बहुत	अत्यंत
67. कितनी बार आपको खुशी महसूस हुई?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
68. किस हद तक आप जीवन से संतुष्ट हो?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
69. कितनी बार आपने बहुत मस्ती की?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
70. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपको खुशी हैं कि आप जीवित है?	बिल्कुल नहीं	थोड़ा बहुत	मध्यम	बहुत	अत्यंत
71. कितनी बार आपने खुद पर गर्व महसूस किया?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
72. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप खुद जिस तरह है, उस बात पर क्या आपको खुशी है?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
73. कितनी बार आप वास्तव में खुद को पसंद करते है?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
74. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपका मन किया है अपने शरीर के बारे में कुछ बदलने का?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
75. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपको अपने रूप को लेकर चिंता हुई है?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
76. कितनी बार आपको वास्तव में अपना रूप पसंद है?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
77. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आपको अन्य लड़के या लड़कियों के रूप से जलन महसूस हुई	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं

है?					
78. पिछले 4 हफ्तों को ध्यान में रखते हुए, क्या आप अपने कपड़ों से खुश थे?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
79. पिछले 12 महीनों के दौरान, स्कूल में आपके अंक कैसे थे?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
80. पिछले 4 हफ्तों में स्कूल में सीखी हुई चीज़ों को याद रखने में आप कितने अच्छे थे?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
81. पिछले 4 हफ्तों में स्कूल में आपने गणित में कैसा किया?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
82. पिछले 4 हफ्तों में स्कूल में आपने पढ़ने में कैसा किया?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
83. पिछले 4 हफ्तों में आपने अपना गृहकार्य (होमवर्क) कैसा किया?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
84. पिछले 4 हफ्तों में आपने स्कूल में अपना काम कैसा किया?	बुरा	ठीक	अच्छा	बहुत अच्छा	अत्युत्तम
85. पिछले 4 हफ्तों में कितनी बार स्कूल में आपको ऊब महसूस हुई?	हमेशा	लगभग हमेशा	कभी कभी	शायद ही कभी	कभी नहीं
86. पिछले 4 हफ्तों में कितनी बार आपको स्कूल के काम से उत्साहित महसूस हुआ?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
87. पिछले 4 हफ्तों में कितनी बार आपको स्कूल के काम में रूचि महसूस हुई?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा
88. पिछले 4 हफ्तों में कितनी बार आप स्कूल जाने के लिए उत्सुक थे?	कभी नहीं	शायद ही कभी	कभी कभी	लगभग हमेशा	हमेशा

धन्यवाद

Name:_____   Age
:_____

Lifetime Incidence of Traumatic Events

Given below is a list of events. Read each event carefully and state if the event has happened to you or not. If the event has happened to you then tick 'Yes', if the event has not happened to you then tick 'No'. If the event has happened and you have ticked yes, then answer the remaining questions on the right hand side. If you have ticked no, then go on to the next event listed.

Incidence of events			Past impact of events scale			Present impact of events scale		
Did this ever happen to you?			How much did it upset you then?			How much does it upset you now?		
1. You were hurt very badly in some kind of accident, like a car accident, fire accident, etc.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
2. You saw a family member or close friend in an accident.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
3. You were very sick that you needed hospitalization.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
4. A family member or close friend was very sick and needed to be hospitalized.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
5. A family member or close friend died.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
6. You were in a natural disaster like earthquake, storm, flood, etc.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
7. Your parents separated or divorced	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
8. Your parents fought with each other	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
9. Your parents hurt each other physically	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
10. Either of your parents left the house for a long period	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot

of time with no contact								
11. You were separated from your family for many days with no contact with them	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
12. You ran away from home	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
13. You were forcibly taken away from your family	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
14. You were kidnapped	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
15. Your family member was an alcoholic	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
16. Your family member was involved in some legal problems/ crime related problems	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
17. You were beaten by your parents	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
18. You were beaten by any family member other than parents	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
19. You were beaten by other people	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
20. You were threatened by any family member (including parents)	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
21. You were threatened by other people	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
22. You did not have enough food to eat/ went hungry for days	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
23. You had to live on the streets	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
24. You were left at home for days with no adults to take care of you	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
25. You were verbally abused by any family members	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
26. You were verbally abused by someone who is not a family member.	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
27. You were humiliated in front of a crowd	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
28. You saw people in your neighbourhood fight and hurt each other	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
29. You were in a riot	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot

30. You were in a terrorist attack	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
31. You were forced to work	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
32. You were forced to work in physically dangerous/ hazardous places	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
33. You were forced to work for long hours without proper food and care	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
34. You were forced to take drugs	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
35. You saw others take drugs	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
36. You tried to kill yourself	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
37. Someone tried to kill you	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
38. You were forced to see sexual acts	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
39. You were sexually molested	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
40. You were forced into criminal activities	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot
41. Any other traumatic event, specify _____	Yes	No	Not at all	Some	A lot	Not at all	Some	A lot

THANK YOU

Scoring – for each item on the incidence of the events a 'Yes is scored as 1 and a 'No' is scored as 0. The impact of events scale for an item is scored only if the respective item has been responded as 'yes' in the incidence of events, if the item has been answered as no, then the impact of events is not scored and has 0. For the impact of events scale, the scoring is as follows: 'Not at all' – 1, 'Some' – 2, 'A lot' – 3.

NORMS FOR LIFETIME INCIDENCE OF TRAUMATIC EVENTS

Domain	No. of items	Item nos.	Range of score	Range of score for past impact of adversity	Range of score for present impact of adversity
1. Physical abuse (PA)	4	17-19, 37	0-4	0-12	0-12
2. Emotional abuse (EA)	6	20-21, 25-27, 36	0-6	0-18	0-18
3. Sexual abuse (SA)	2	38-39	0-2	0-6	0-6
4. Neglect (NGT)	6	11-13, 22-24	0-6	0-18	0-18
5. Child labour (CL)	3	31-33	0-3	0-9	0-9
6. Domestic disturbance (DD)	6	7-10, 15-16	0-6	0-18	0-18
7. Natural disasters (ND)	1	6	0-1	0-3	0-3
8. Accidents and illnesses (AI)	5	1-5	0-5	0-15	0-15
9. Community violence (CV)	3	28-30	0-3	0-9	0-9
10. Others – (O)	5	14, 34-35, 40-41	0-5	0-15	0-15

జీవితకాలములో సంభవించిన ఉద్వేగఘూతమైన (భయం కలిగించే సంఘటనల పట్టిక

సూచనలు : క్రింద కొన్ని సంఘటనల యొక్క పట్టిక ఇవ్వబడినది. ప్రతి వాక్యములో ఉన్న సంఘటనలను జాగ్రత్తగా చదివి, అది మీకు జరిగినదో లేదో తెలుపండి. ఒక సంఘటన మీకు జరిగిన / వర్తించిన యెడల ఆ వాక్యము ప్రక్కన 'అవును' సమాధానమును టిక్ (Y) చేయండి. లేని యెడల 'కాదు' అను సమాధానముపై టిక్ (Y) చేయండి. మీరు ఒక సంఘటన ప్రక్కన 'అవును' సమాధానముపై టిక్ చేసినచో, ఆ వాక్యము యొక్క కుడి వైపు ఇవ్వబడిన మిగతా ప్రశ్నలకు సమాధానములు ఇవ్వండి. మీరు కాదు అను సమాధానమును టిక్ చేసినయెడల తరావత ఇవ్వబడిన వాక్యములను / సంఘటనలను చదవండి.

	ఇది మీకు ఎప్పుడైనా జరిగినది ?			దానివల్లమ మీరు అపుడు ఎంత చలించారు / మిమ్మల్ని అది ఎంతగా బాధించింది?			ఆ సంఘటన ఇపుడు ఎంతగా బాధపెడుతుంది?		
1.	మీరు ఏదైన ప్రమాదంలో తీవ్రంగా గాయపడిన సందర్భం, ఉదాహరణకు కారు ప్రమాదము, అగ్ని ప్రమాదము మున్నగునవి.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
2.	మీ యొక్క కుటుంబ సభ్యులను లేదా ప్రాణ స్నేహితులను ప్రమాదానికి గురి అయినవుడు చూడదము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
3.	మీరు తీవ్ర అనారోగ్యము వలన ఆసుపత్రిలో చేరవలసి రావడము	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
4.	కుటుంబ సభ్యులు లేదా ప్రాణ స్నేహితులు, తీవ్ర అనారోగ్యము వలన ఆసుపత్రిలో చేరవలసి రావటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
5.	మీ కుటుంబసభ్యుడు / సభ్యురాలు లేదా ప్రాణ స్నేహితుడు మరణించదము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
6.	మీరు ప్రకృతి వైపరిత్యాలను ఎదుర్కొనటము, ఉదాహరణకు భూకంపము, తుఫాను, వరదలు మున్నగునవి.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
7.	తల్లిదండ్రులు విడిపోవడము లేదా విడాకులు తీసుకోవడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
8.	తల్లిదండ్రులు ఒకరితో ఒకరు పోట్లాడుకోవటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
9.	తల్లిదండ్రులు ఒకరిని ఒకరు శారీరకంగా గాయపరుచుకోవడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా

	ఇది మీకు ఎప్పుడైనా జరిగినది ?			దానివల్లమ మీరు అప్పుడు ఎంత చలించారు / మిమ్మల్ని అది ఎంతగా బాధించింది?			ఆ సంఘటన ఇప్పుడు ఎంతగా బాధపెడుతుంది?		
10.	మీ తల్లిదండ్రులు ఒకరు, ఎవరికి చెప్పకుండా / వేరే చిరునామా ఈయకుండా చాలా కాలము ఇల్లు వదిలి వెళ్ళిపోవుట.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
11.	మీరు మీ కుటుంబముతో చాలా కాలము ఎవరికి చెప్పకుండా వేరే చిరునామా ఈయకుండా దూరంగా ఉండిపోవడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
12.	మీరు ఎప్పుడైనా ఇంటి నుంచి పారిపోవడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
13.	మీ కుటుంబము నుంచి మిమ్మల్ని బలవంతముగా దూరము చేయటము / వేరే చోటికి తీసుకుని వెళ్ళడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
14.	మీరు కిడ్నాప్ కాబడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
15.	మీ కుటుంబములో ఎవరైనా మందుకు అలవాటు పడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
16.	మీ కుటుంబములో ఎవరైనా న్యాయపరమైన సమస్యలు / నేర సంబంధమైన సమస్యలను ఎదుర్కొనటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
17.	మీ తల్లిదండ్రులు మిమ్మల్ని కొట్టడము / భధపెట్టడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
18.	మీ తల్లిదండ్రులు కాకుండా, ఇంట్లో వాళ్ళెవరైనా మిమ్మల్ని బాదటము / కొట్టడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
19.	మిమ్మల్ని ఇతరులు ఎవరైనా కొట్టడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
20.	మిమ్మల్ని కుటుంబ సభ్యులు ఎవరైనా బెదిరించి భయపెట్టడము (మీ తల్లిదండ్రులతో సహా).	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
21.	మిమ్మల్ని వేరే ఎవరైన బయటి వాళ్ళు భయపెట్టడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
22.	మీకు చాలారోజులు తగినంత ఆహారము దొరకక పస్తులుండటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
23.	మీరు రోడ్లమీద బ్రతకవలసి రావడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
24.	మీరు ఇంట్లో చాలారోజుల వరకు ఒంటరిగా / పెద్దవారు లేకుండా (సంరక్షణ లేకుండా) వదలి వేయబడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా

	ఇది మీకు ఎప్పుడైనా జరిగినది ?			దానివల్లము మీరు ఆపుడు ఎంత చలించారు / మిమ్మల్ని అది ఎంతగా బాధించింది?			ఆ సంఘటన ఇప్పుడు ఎంతగా బాధపెడుతుంది?		
25.	మీరు మీకుటుంబ సభ్యులయొక్క మాటలతో నిందించ బడటము వేధించబడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
26.	మీరు ఇతరుల ద్వారా మాటలతో నిందించబడటము / వేధించబడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
27.	మీరు జనసమూహము ముందు అవమానించబడటము	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
28.	మీరు మీ ఇంటి పక్కన వాళ్ళు గొడవపడటము / కొట్టుకోవడము మరియు గాయపరచుకోవడమం చూడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
29.	మీరు సంక్షోభము / కోలోహలములో ఉండటము / చూడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
30.	మీరు దౌర్జన్యానికి లేదా తీవ్రవాదుల దాడికి గురి అవడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
31.	మీరు బలవంతముగా పనిచేయవలసి రావడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
32.	మీరు అపాయకరమైన పనులను బలవంతముగా చేయవలసి రావడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
33.	మీరు సరైన ఆహరము మరియు వసతులు లేకుండా చాలా గంటలు బలవంతముగా పని చేయవలసిరావడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
34.	మిమ్మల్ని మత్తు మందు (డ్రగ్స్) తీసుకొనుటకు బలవంతం పెట్టడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
35.	మీరు ఇతరులు మత్తు మందు తీసుకొంటున్నప్పుడుచూడటం.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
36.	మీరు ఆత్మహత్యకు ప్రయత్నించడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
37.	ఎవరైన మిమ్మల్ని చంపడానికి ప్రయత్నించడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
38.	లైంగిక చర్యలను చూడమని మిమ్మల్ని ఎవరైనా బలవంతంచేయడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
39.	మీపై లైంగిక అత్యాచారము జరగడము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
40.	మీరు నేర కార్యక్రమాలు చేయాలని బలవంతం చేయబడటము.	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా
41.	వేరే ఏవైనా ఉద్వేగభరితమైన (భయం కలిగించునటువంటి) సంఘటనలు ఉన్నట్లయితే తెలపండి	అవును	లేదు	ఏమి లేదు	కొంత	చాలా	ఏమిలేదు	కొంత	చాలా

ధన్యవాదములు

Lifetime Incidence of Traumatic Events

नीचे कुछ घटनाओं की सूची दी गई है। हर एक घटना को ध्यान से पढिये और बताइये कि वह घटना आपके साथ हुई है या नहीं। यदि दी गयी घटनाओं में से कोई घटना आपके साथ हुई है, तो 'हाँ' पर चिंह लगाए, यदि नहीं हुई है तो 'ना' पर चिंह लगाए यदि कोई घटना आपके साथ हुई है तो उस घटना के दाहिने हाथ पर दिए गये शेष प्रशनो का उत्तर दिजिए , यदि वह घटना नहीं हुई है तो उसके निचे दिए गये अगली घटना को पढिये और बताइए कि वह आपके साथ हुई है या नहीं । ।

क्या तुम्हारे साथ ऐसा कभी हुआ है?			उस वक्त इस घटना ने तुम्हे कितना परेशान किया अथवा कष्ट दिया?			अब तुम्हें वोह घटना कितनी परेशान करती हैं या कष्ट देती हैं?		
1. तुम्हे किसी दुर्घटना में बहुत बुरी तरह चोट लगी जैसे कोई कार दुर्घटना, आग दुर्घटना, आदि	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
2. तुमने अपने परिवार के किसी सदस्य या किसी करीबी दोस्त का एक्सिडेंट होते हुए देखा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
3. तुम इतने बीमार थे कि तुम्हे अस्पताल में भरती करना पड़ा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
4. तुम्हारे परिवार का कोई सदस्य या कोई करीबी दोस्त बहुत बीमार था और उसको अस्पताल में भरती करना पड़ा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
5. तुम्हारे परिवार के कोई सदस्य या कोई करीबी दोस्त की मृत्यु हो गयी	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
6. तुम किसी प्राकृतिक आपदा जैसे भूकम्प, बाड़, तूफान आदि	हाँ	नहीं	बिलकुल	थोडा	बहुत	बिलकुल	थोडा	बहुत

में थे			नहीं		ज्यादा	नहीं		ज्यादा
क्या तुम्हारे साथ ऐसा कभी हुआ है?			उस वक्त इस घटना ने तुम्हे कितना परेशान किया अथवा कष्ट दिया?			अब तुम्हें वोह घटना कितनी परेशान करती हैं या कष्ट देती हैं?		
7. तुम्हारे माता-पिता अलग हुए या उनका तलाक हुआ	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
8. तुम्हारे माता - पिता एक दुसरे से झगड़ते थे	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
9. तुम्हारे माता - पिता ने एक दुसरे को शारीरिक चोट पहुंचाई	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
10. तुम्हारे माँ या पिता घर झोड़ कर चले गए और बहुत समय तक उनसे कोई संपर्क नहीं था	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
11. तुम अपने परिवार से कई दिनों के लिए बिछड़ गए और उनसे कोई संपर्क नहीं था	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
12. तुम घर से भाग गए	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
13. तुम्हे ज़बरदस्ती तुम्हारे परिवार से अलग किया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
14. तुम्हारा अपहरण हुआ	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
15. तुम्हारे परिवार में कोई शराबी था	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
16. तुम्हारे परिवार के किसी सदस्य को कोइ कानूनी समस्या थी	हाँ	नहीं	बिलकुल	थोडा	बहुत	बिलकुल	थोडा	बहुत

			नहीं		ज्यादा	नहीं		ज्यादा
क्या तुम्हारे साथ ऐसा कभी हुआ है?			उस वक्त इस घटना ने तुम्हे कितना परेशान किया अथवा कष्ट दिया?			अब तुम्हें वोह घटना कितनी परेशान करती हैं या कष्ट देती हैं?		
17. तुम्हे तुम्हारे माता - पीता ने पिटा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
18. तुम्हारे परिवार के किसी सदस्य (तुम्हारे माता - पिता के अलावा) ने तुम्हे पिटा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
19. तुम्हे किसी और ने पिटा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
20. तुम्हे तुम्हारे परिवार (माता - पिता) में किसी ने धमकाया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
21. तुम्हे किसी और ने धमकाया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
22. तुम्हारे पास खाने के लिये कुछ नहीं था और तुम कई दिनों तक भूके थे	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
23. तुम्हे सडक पर रहना पडा था	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
24. तुम्हें घर पर कई दिनों के लिये अकेला छोड दिया गया बिना किसी बडे के जो तुम्हारा ख्याल रखे	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
25. तुम्हारे परिवार के किसी सदस्य ने तुम्हें गाली दी	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा

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26. तुम्हें किसी व्यक्ति ने गाली दी	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
			क्या तुम्हारे साथ ऐसा कभी हुआ है?			उस वक्त इस घटना ने तुम्हे कितना परेशान किया अथवा कष्ट दिया?		अब तुम्हें वोह घटना कितनी परेशान करती हैं या कष्ट देती हैं?
27. तुम्हें एक भीड के सामने अपमानित किया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
28. तुमने तुम्हारे पडोस में लोगों को लडते झगडते और एक दूसरे को चोट पहुन्चाते हुए देखा	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
29. तुम कभी किसी दंगे में थे	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
30. तुम कभी किसी आतंकवादी हमले में थे	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
31. तुमसे जबर्दस्ती काम करवाया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
32. तुमसे जबर्दस्ती कोई हानिकारक या असुरक्षित जगह में काम करवाया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
33. तुमसे जबर्दस्ती बिना भोजन या सही देख - रेख के कई घंटो तक काम करवाया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
34. तुमसे ज़बरदस्ति नशा करवाया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
35. तुमने दूसरों को नशा करते हुए देखा.	हाँ	नहीं	बिलकुल	थोडा	बहुत	बिलकुल	थोडा	बहुत

			नहीं		ज्यादा	नहीं		ज्यादा
36. तुमने आत्महतया करने कि कोशिश की	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
क्या तुम्हारे साथ ऐसा कभी हुआ है?			उस वक्त इस घटना ने तुम्हे कितना परेशान किया अथवा कष्ट दिया?			अब तुम्हें वोह घटना कितनी परेशान करती हैं या कष्ट देती हैं?		
37. किसी ने तुम्हे मारने की कोशिश की	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
38. तुम्हें जबर्दस्ती यौण क्रिया दिखाया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
39. तुम्से जबर्दस्ती यौण क्रिया करवाया गया	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
40. तुमसे अपराधिक या गैरकानूनी काम करवाए गए	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा
41. और कोई दर्दनाक घटना निर्दिष्ट करें _____	हाँ	नहीं	बिलकुल नहीं	थोडा	बहुत ज्यादा	बिलकुल नहीं	थोडा	बहुत ज्यादा

धन्यवाद

APPENDIX - IIId

PERSONAL DATA SCHEDULE

Instructions: Given below are a list of questions related to the personal background and demographic aspects about the child residing in your institution. Please fill the details as per the records of your institution.

Personal details:

1. Name:

    _____

2. Age: _____years

3. Gender: O Male   O Female

4. Native Place: O Urban   O Semi urban   O Rural

    Specify:

    _____

5. Specify type of institution: O Orphanage   O Juvenile centre   O Rehabilitation home

    O Govt. short stay home   O Others specify _____

6. Is the institution -? O Govt. sponsored   O Private

    Specify the name of the institution:

    _____

7. Reason for residing in institution: O Poverty   O Truancy (Runaway)

    O Abandonment   O Orphan   O Child labour exploitation

    O Lost/ Displacement /Missing   O Abuse   O Others specify_____

8. How many years since he /she has been living in institutions?

    _____

9. How many years since he /she has been living in the present institution?

    _____

10. If he/ she is in contact with his/her family? O Yes   O No

Provide details related to contact with family

_____

11. Any other details:

_____

<u>Academic background details</u>:

12. If currently studying: O Yes   O No

13. Specify Grade or Class:

14. Age of admission to school: _____years _____months

15. Any other details (disrupted academic year – number of times, duration and its reason, repetition of class): _____
_____

16. If received any academic achievements (merit awards, scholarships, merit certificates, etc):

17. If received any awards or certificates in co- curricular activities: O sports   O Dance

O Music   O Painting   O Arts and Crafts   O any other
specify_____

<u>Health related details</u>:

18. Have he/she been diagnosed with any chronic illness /allergies/ disability (visual, hearing, physical, etc.)?   O Yes   O No

19. If yes, specify: _____

20. When was it diagnosed? _____month _____year

21. How many years has it been since it was diagnosed? _____years _____months

<u>Details related to legal problems</u>:

22. If has violated any laws, specify: _____
_____

23. Any other remarks or information: _____

_____

THANK YOU

సమాచార పత్రము

సూచనలు : క్రింద కొన్ని ప్రశ్నల ఇవ్వబడినవి. ఆ ప్రశ్నలు, మీ సంస్థలో ఉన్న పిల్లల యొక్క పలు విషయాలకు సంబంధించినవి. దయచేసి మీ సంస్థ యొక్క పిల్లల వివరములను, మీ యొక్క విషయ వర్తన సమోదు పత్రికల నుంచి వ్రాయండి.

వ్యక్తిగత వివరాలు

1. పేరు : ....

2. వయస్సు .... సంవత్సరాలు

3. లింగం : ◯ మగ ◯ ఆడ

4. నివాస స్థలము ◯ నగరము ◯ పట్టణము ◯ గ్రామము

    ప్రత్యేకముగా తెలుపుము ....

5. ఎటువంటి సంస్థయో తెలుపుము : ◯ అనాధ ఆశ్రమము ◯ బాల నేరస్తుల కేంద్రము ◯ పునర్వస గృహము

    ◯ ప్రభుత్వ లఘు వసతి గృహము ◯ వేరే వివరములు ....

6. ఆ సంస్థ : ◯ ప్రభుత్వ సహాకారము గలది ◯ ప్రభుత్వ సహాకారము లేనిది

7. సంస్థ పేరు స్పష్టముగా తెలుపుము : ....

8. సంస్థలో నివసించడానికి కారణము : ◯ పేదరికము ◯ ఇదిని / వనిన కారణము లేకుండా మానివేయుట,
    ◯ వదిలివేయబడుట ◯ అనాధ ◯ పిల్లల వెట్టివాకిరికి ◯ తప్పిపోవుట / స్థానచలనము
    ◯ చెడ్డగా ఉపయోగించుట లేదా మోసగించుట

    ఇతర కచ్చితమగు వివరములు ....

9. ఎన్ని పళ్ళ నుంచి అతను / ఆమె సంస్థలో నివసిస్తున్నారు? ....

10. ఎన్ని పళ్ళ నుంచి అతను / ఆమె ప్రస్తుత సంస్థలో నివసిస్తున్నారు? ....

11. అతను / ఆమె తన కుటుంబమును కలుస్తారా ? ◯ అవును ◯ కాదు

12. కుటుంబమును కలుసుకొనునప్పటి వివరములు ....

    ....

13. వేరే ఇతర వివరములు ....

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చదువుకి సంబంధించిన వివరాలు :

14. ప్రస్తుతము చదువుతున్నారా : ◯ అవును ◯ కాదు

15. ఏ తరగతిలో చదువుతున్నారు :

16. బడిలో ప్రవేశించినప్పుడు వయస్సు .... సంవత్సరములు .... నెలలు

17. వేరే ఇతర విషయములు విద్యా సంవత్సర భంగము - ఎన్ని సార్లు, ఎంతకాలము, కారణము, తరగతి మళ్ళీ చదవటము

    ....

    ....

18. చదువు / బడిలో విజయాలు సాధించారా (ఉచితముగా లేదా తక్కువ రుసుముతో విద్యాభ్యాసము, యోగ్యత ధ్రువపత్రము మున్నగునవి)

19. వేరే ఇతర (చదువుతాకుండ) కార్యక్రమాలలో విజయాలు లేక యోగ్యత ధ్రువపత్రాలు సాధించారా

    ◯ క్రీడలు   ◯ నాట్యము   ◯ సంగీతము   ◯ చిత్రికరణ   ◯ కళాకౌశలము

    ◯ వేరే ఇతర వివరములు ....

ఆరోగ్య వివరాలు

20. ఎప్పుడైన అతనికి / ఆమెకి దీర్ఘకాలిక ఇనారోగ్యము నిర్ధారించబడినదా శరీర తత్వమునకు సరిపడని / వికలాంగుడు / వికలాంగురాలు (చూపు , వినికిడి, శారీరకము మున్నగునవి)   ◯ అవును   ◯ కాదు

    అవును అయినచో వివరములు తెలుపుము ....

21. ఎప్పుడు వ్యాధి నిర్ధారణ జరిగింది ....సంవత్సరము .... నెల

22. వ్యాధి నిర్ధారణ జరిగి ఎన్ని సంవత్సరాలు గడిచింది................... సంవత్సరాలు .... నెలలు

చట్ట బద్ధమైన సమస్యల వివరములు

23. ఎప్పుడైన అతను / ఆమె చట్టాన్ని ఉల్లంఘించారా ? వివరాలు ....

24. వేరే ఇతర గమనికలు / వ్యాఖ్యానాలు లేదా సమాచారము...

    ....

ధన్యవాదములు

व्यक्तिगत जानकारी अनुसूची

<u>निर्देश:</u> आपकी संस्था में रहने वाले बच्चों के बारे में व्यक्तिगत पृष्ठभूमि और जनसांख्यिकीय पहलुओं से संबंधित प्रश्नों की एक सूची नीचे दी गई है। अपनी संस्था के रिकॉर्ड / आलेख के अनुसार विवरण भरें।

<u>वैयक्तिक जानकारी:</u> नाम: _____

उम्र/ आयु: _____ साल

लिंग: O लड़का   O लड़की

मूल निवासी स्थान: O शहरी x   O अर्ध शहरी   O ग्रामीण

_____

संस्था प्रकार निर्दिष्ट करें: O अनाथालय   O जुविनाइल सेनटर   O पुनर्वास घर (रीहैबिलिटेशन होम)

O सरकारी घर (अल्प अवधि के लिए)   O अन्य कोई, निर्दिष्ट करें _____

क्या यह संस्था -?   O सरकार प्रायोजित   O प्राइवेट

संस्था का नाम निर्दिष्ट करें: _____

सन्स्था में रहने का कारण बताइए: O गरीबी   O ट्रुअन्सि (भगोड़ा)   O परित्याग

O अनाथ   O बाल श्रम शोषण   O लापता   O दुर्व्यवहार / अब्युज़

O अन्य कोई, निर्दिष्ट करें _____

संस्थाओ में रहते हुए कितने वर्ष हुए है? _____

मौजूदा संस्था मे रहते हुए कितने वर्ष हुए है? _____

क्या परिवार के साथ सम्पर्क है? O हाँ   O नहीं

परिवार के साथ सम्पर्क से संबंधित विवरण दिजिए:

_____
_____

अन्य जानकारी: _____

_____

शैक्षिक/ विद्या विषयक संबंधी जानकारी :

क्या अभी पढ़ाई जारी है: ○ हाँ   ○ नहीं

कक्षा निर्दिष्ट करें:

विद्यालय / स्कूल में दाखिले की उम्र / आयु: _____ साल _____ महीने

अन्य ज़रूरी जानकारी (शैक्षणिक वर्ष में बाधा – कितनी बार, अवधि और कारण; कक्षा का दोहराना, आदि):

_____
_____
_____

कोई शैक्षिक उपलब्धियों प्राप्त की है (योग्यता पुरस्कार, छात्रवृत्ति, आदि):

सह पाठ्यक्रम गतिविधियों में उपलब्धियों प्राप्त की है: ○ खेल-कूद / स्पोर्ट्स   ○ नृत्य

○ संगीत   ○ चित्रकारी   ○ कला और शिल्प   ○ अन्य कोई, निर्दिष्ट करें
_____

स्वास्थ्य संबंधी जानकारी :

क्या उसे किसी रोग या बिमारी / एलर्जी / विकलांगता (दृश्य, श्रवण, शारीरिक, आदि) से निदान किया गया है? ○ हाँ   ○ नहीं

यदि हाँ, तो निर्दिष्ट करें : _____

रोग का निदान कब हुआ था? _____ साल _____ महीने

रोग निदान से अब तक कितने वर्श हुए है? _____ साल _____ महीने

कानून संबंधी जानकारी :

किसी भी कानून का उल्लंघन किया है तो निर्दिष्ट करें:

_____
_____

अन्य कोई जानकारी या टिप्पणी :

_____

_____

धन्यवाद

APPENDIX - IV

University of Hyderabad
Centre for Health Psychology
<u>Role of Resilience and Adversity in Health of Children under Institutional Care</u>

INFORMED CONSENT FORM FOR INSTITUTIONALISED CHILDREN

This informed consent is for the guardians of the children living in institutions participating in the study titled, 'Role of Resilience and Adversity in the Health of Children under Institutional Care'.

Investigators: Dr. B. Sushma and Swati Agarwal
Centre for Health Psychology, University of Hyderabad

This Informed Consent Form has two parts:
• Information Sheet (to share information about the study with you)
• Certificate of Consent (for signatures if you agree that your institution's children may participate)

You will be given a copy of the full Informed Consent Form

Part I: Information Sheet
Introduction: I am Swati Agarwal, doctoral scholar at the Centre for Health Psychology, University of Hyderabad. I am doing research on the health of children who are living in institutions, the role that resilience has on it and how health may be improved by promoting resilience in children. The health needs of children in institutions have to be addressed and our research is intended towards that.

Purpose: The present research is a study on the health of children who are currently residing in institutions and the role of adversity and resilience on their health. Adversities have an immense negative impact on the health of an individual- at the time of experience as well as later in life. Resilience is the ability to cope with adversities. This study is based on the premise that resilience may have a positive impact on the health of those who have experienced adversities or difficulties in life. The objective of the study is to determine the validity of this among children and also the extent of influence of resilience on children's health. Based on the information obtained an intervention is planned to be developed. This intervention can be later used to promote resilience in institutionalised children and also improve their health status.

Type of Research Intervention: A Questionnaire based study will be carried out to assess resilience and health of institutionalised children.

Selection of Participants: Various institutions in the city that provide residential care to children who are orphaned, abandoned, been rescued from adverse situations will be approached and children who are over the age of 13 years and below 18 years will be included in the study.

Voluntary Participation: Your participation in this study is voluntary. You can refuse to participate in the study or withdraw permission anytime during the study period.

Protocol: In this regard, the children included in this study, who will be in the age group of 13 to 18 years, will be given questionnaires to be filled by them. The first research tool is a resilience checklist which asks them if the statements of the checklist apply to them or not. The second

research tool is a scale that asks how the child's health has been in the past four weeks. The final research tool asks the children about various difficulties they have encountered in life and its impact on them.

If any child does not wish to answer any of the questions included in the questionnaire, she/he may skip them and move on to the next question. The information recorded is confidential, and no one else except the investigators mentioned will have access to her/his questionnaire. The questionnaires will be destroyed after a period of time.

Duration: There are three questionnaires to be filled by each child, which will be done in separate time gaps so as not to tire the child. We can do this outside of school/work hours. Also these can be filled in a group setting with 5-10 children being asked to fill the questionnaires at the same time. Altogether, we are requesting for about 2 hours of the child's time.

Risks and Discomforts: There is a slight risk that a child may feel uncomfortable talking about some of the topics. However, we do not wish this to happen, and he/she may refuse to answer any question or not take part in a portion of the questionnaire if he/she feels the question(s) are too personal or if talking about them makes him/her uncomfortable.

Benefits: There will be no immediate and direct benefit to your child or to you. However, an intervention is planned based on the information collected and with your permission this may be applied in your institution so as to benefit the children.

Confidentiality: We will not be sharing information about the children outside of the research team. The information that we collect from this research project will be kept confidential. Information about your children that will be collected from the research will be put away and no-one but the researchers will be able to see it. Any information about your children will have a number on it instead of his/her name. Only the researchers will know what his/her number is and it will not be shared with or given to anyone. The name of your institution will also be kept confidential and not shared with anyone.

Sharing of Research Findings: We will also publish the results in order that other interested people may learn from our research. However, the name of the institution and the participants involved will be kept confidential and not disclosed in any publication.

Who to Contact: If you have any questions you may ask them now or later, even after the study has started. If you wish to ask questions later, you may contact any of the following:

Swati Agarwal   Dr. B.Sushma
Doctoral Scholar   Assistant Professor
Centre for Health Psychology   Centre for Health
Psychology
University of Hyderabad   University of Hyderabad
Prof. C. R. Rao road,   Prof. C. R. Rao road,
Gachibowli,   Gachibowli,
Hyderabad – 500 046   Hyderabad – 500 046
Tel: 0 900 00 80 372   Tel: 040 2301 3228
Email:swati.agarwal.nakshatra@gmail.com

PART II: Certificate of Consent

I have been asked to give consent for the children residing in the institution _____ to participate in this research study which will involve them completing three questionnaires. I understand that they will also be asked to give permission and that their wishes will be respected. I have been informed that the risks are minimal and may include only discomfort at answering some questions about their past. I am aware that there may be no direct benefit to either the children or me personally. I have been provided with the name of a researcher who can be easily contacted using the number I was given for that person.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily for the institution's children to participate as a participant in this study and understand that I have the right to withdraw any of them from the study at any time without any repercussions.

Name of Guardian _____

Signature of Guardian_____

Date _____

Place _____

APPENDIX - V

CASE STUDIES

There were many children in the study who had experienced high adversity but displayed high levels of resilience despite this. A brief glimpse about some of these children is presented as case studies below.

*(Note - * Name changed for ethical reasons to maintain anonymity)*

Case study 1 – John* is a 14 year old boy studying in class 8. He has been living in institutions since the age of 6 years. His mother lives and works as a daily wage earner in Warangal. She placed him in the institution after she felt that she could not provide adequate care for him. She also cannot come for frequent visits as she lives in a different city. His father left home some years back, never to return, leaving his mother and him to fend for themselves. Before his father abandoned them, the environment at home was very disturbing. His father was an alcoholic. He would fight with his mother, often resulting in violence between the two, that upset John greatly. His father would also beat him quite often. After his father's abandonment, his mother had to work harder. He would sometimes be left at home all alone. Today, John is in class 8, and though he does not participate in many extra curricular activities he is interested in academics. He is able to do things on his own and doesn't give up easily. He has lots of friends and spends his free time with them.

Case study 2 – Bhavana* is 14 years old and is in class 9. She has been under institutional care for the past 9 years. She was placed in the institution when she was 5 years old by her maternal grandmother. Her parents had abandoned her and it was her

grandmother who was her guardian. Bhavana's home environment was unstable. Her parents often quarreled with one another that some time became violent. Even the neighbourhood where they lived was disruptive with frequent fights. Since she has been placed under institutional care in class 1, she visits her grandmother sometimes during holidays. She loves dancing. She is optimistic and looks at the positive side of things. She has many friends with whom she spends time, jokes and shares her problems with.

Case study 3 – Nagender* is a 14 year old boy who has been living in institution for the past 9 years. When his father passed away his mother became solely responsible for his welfare and care. He has been in four different institutions over the years moving from one institution to another as his mother moves for work. He was in the first institution for 4 years and in the next one for a year. The third institution was for 3 years and he has been in the present one for a year. He also has a younger sister in the same institution. He is resourceful and can manage things on his own. He is confident and doesn't let things bog him down.

Case study 4 – Shwetha* is a 15 year old girl studying in class 10. She comes from a very poor family. It was due to extreme poverty that her parents placed her in institutional care. Her home and neighborhood environment also had been disturbing. Her parents sometimes fought with each other. They also have been living separately from one another. She has been in institutional care for the last 5 years. She likes it in the institution and attends an English medium school close by. She has many friends and

spends time with them. She believes in herself and her abilites. She is confident that she can take care of any difficulty that comes her way. She also likes to dance.

Case study 5 – Srinivas* is a 13 year old boy studying in class 6. He has been placed in institutional care as his family is very poor and cannot provide good care for him and his three siblings. He has lost his mother as a young child and his father and elder sister would take care of him. His father also would drink heavily sometimes and the home environment was not the most stable with frequent fights. The extreme poverty resulted in their not having enough food to eat. Since he has been in institutional care for the last 4 years, he has been doing well. Srinivas is interested in many activities such as sports and painting and has also won prizes in the same. He is always smiling and his disposition is cheerful.